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iSCAPE

Stakeholder management plan and local citizen engagement strategy for the living labs

WP2 / Deliverable D2.4

June 2017

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Short Description	This document includes a set of tools to manage all stakeholders involved in the living lab in each city, and for engaging citizens in the topics of air pollution and climate change. It should be considered as a practical guide for citizen engagement by iSCAPE living labs and is intended to be used by the living lab leads in each city.		
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List of abbreviations

ARPAE: Agenzia Regionale Per La Prevenzione, L'ambientee L'energia Dell'emilia-Romagna (Regional Agency for Prevention, Environment and Energy of Emilia-Romagna)

ENoLL: European Network of Living Labs

EU: European Union

FCC: Future Cities Catapult

FMI: Finnish Meteorological Institute

iSCAPE: Improving the Smart Control of Air Pollution in European cities

LBW: Low Boundary Wall

UCD: University College Dublin

TCD: Trinity College Dublin

TUDO: Technical University Dortmund

UH: Universiteit Hasselt

UNIBO: University of Bologna

UoS: University of Surrey

VLL: Virtual living lab

WP: Work Package

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1 Executive summary

This document includes a set of tools for managing the stakeholders involved in the iSCAPE living lab in each city and for engaging citizens in the topics of air pollution and climate change. It should be considered as a practical guide for citizen engagement by iSCAPE living labs and is intended to be used by the living lab leads and their teams in each of the cities.

There are five sections in this report:

- **Stakeholder management plan**: This will enable the living lab leads of each city to manage the stakeholders within the living lab as well as recording any communication and engagement activities
- **Living lab mindset**: This will help to embed 'a living lab mindset' in most iSCAPE activities and teach citizens about living labs
- **Getting people involved in the living labs**: This will provide a set of suggestions to help living labs recruit participants for their research and citizen engagement activities. It offers advice on who each living lab should be involving as well as how to approach them
- **Air pollution engagement tools**: This will help the living lab leads to communicate and engage with citizens on the topics of air pollution and climate change
- **Local citizen engagement strategy**: This will give individual recommendations to each city about how to engage citizens in their city and what sort of activities they should focus on going forward.

FCC have attempted to make this document as practical as possible for the iSCAPE partners. In addition to the tools and instructions provided here, we will work closely with our partners to ensure that they are confident in using them when managing the living labs in their city. A training session will be provided as part of task 2.3 'Managing the living labs' – this will be a training for all the living lab leads taking place in September 2017.

FCC are intending to add all the available documents and tools we are creating to the 'Virtual living lab' website (VLL) so they are free for others to use in similar projects and to widen the impact of these tools.

This report is a snapshot of a point in time. The partners will regularly add updates and progress from their living lab to the 'Stakeholder management plan' as well as to the 'Virtual living lab'. The idea is that all partners add material and share project learnings over time, which is a critical aspect of the living lab approach.

2 Introduction to the report

2.1 Aims and objectives

This report forms Task 2.2.3 of the second work package (WP) in the iSCAPE project. Below is a description of the aims for the WP in general as well as the objectives of the task taken from the Annex I of the iSCAPE Grant Agreement.

"WP2: Living lab set-up and management

Aims:

- Ensure an inclusive development process of technological options and strategies for air quality and climate change;
- Promote a sense of ownership of the living labs amongst local communities and stakeholders, thus ensuring that the interventions will outlive the project;
- Understand the risks of implementation of the measures in each city;
- Adapt neighbourhood-level and city-level physical and behavioural intervention plans to minimise the risks, challenges and barriers identified;
- Set up and manage the relationship with the implementing cities and their local stakeholders.

Description of work:

The overarching purpose of WP2 is to ensure effective stakeholder management by bringing together key local actors and the scientific iSCAPE community.

The goal is to assess non-technical challenges to implementation of both the physical and behavioural interventions that will be deployed and/or assessed in WP3 and WP4. This will be done through the engagement of piloting cities and their local stakeholders in order to:

(i) identify risks (such as preconceptions and mismatched perceptions)
(ii) manage expectations
(iii) adjust implementation plans to accommodate such insights and
(iv) make sure that the technical implementation of the living labs runs smoothly

Task 2.2.3: **Identifying and setting up a 'Stakeholder management plan' for the living labs"**

We have previously identified risks regarding the non-technical implementation of the iSCAPE living labs (D2.1 Stakeholders analysis and risk assessment - non-technical challenges to implementation of interventions). In this document we will create several tools that will support each living lab lead to successfully manage the identified risks, manage and communicate with city stakeholders, and engage citizens in the living lab.

1. **Stakeholder management plan**: This document will include the following items:
    - **Communication channels for stakeholders**: Clear communication channels between signatory partners will be drawn up to facilitate the implementation and

the optimisation process of both physical and behavioural interventions. This will be part of the 'Stakeholder management plan'.

- **Appointment of the living lab lead:** A living lab lead will be appointed to be the point of contact between the iSCAPE consortium and the other local stakeholders. Their contact details will be noted in the 'Stakeholder management plan' and they are expected to use the tools provided in this document to manage the living lab in their city successfully.
- **Role of the Advisory Board:** The role of the iSCAPE Advisory Board is to provide strategic guidance and expertise and serve as a sounding board for project partners. The 'Stakeholder management plan' may include members of the Advisory Board and specify lines of communication with them. For any further information about the Advisory Board please consult 'iSCAPE Advisory Board - Terms of Reference'.

2. **Local citizen engagement strategy:** A clear local citizen engagement strategy will be outlined for each of the 6 living labs, capitalising on the information obtained during the insights workshops and outlined in the deliverable 2.1.

The 'Stakeholder management plan' and the 'Local citizen engagement strategy' will together form a plan for the living labs going forward. The 'Stakeholder management plan' for each living lab will also be inserted as an annex to D2.3 Living lab agreements (letter of intent from all stakeholders involved).

2.2 Our approach

This deliverable aims to build on the findings from the previous deliverables in this work package; 'The stakeholder analysis and risk assessment - non-technical challenges to implementation of interventions' (Deliverable 2.1) and 'The implementation plan for the iSCAPE living labs' (Deliverable 2.2).

This document includes a set of tools to manage all of the stakeholders involved in the living lab in each city, and for engaging citizens in the topics of air pollution and climate change. It should be considered as a practical guide for citizen engagement in the iSCAPE living labs and is intended for use by the living lab leads and their teams in each of the cities.

There are five sections in this report;

- **Stakeholder management plan**: This will enable the living lab leads of each city to manage the stakeholders within the living lab as well as recording any communication and engagement activities (Section 3.)
- **Living lab mindset**: This will help to embed 'a living lab mindset' in most iSCAPE activities and teach citizens about living labs (Section 4.)
- **Getting people involved in the living labs**: This will provide a set of tips to help each living lab recruit participants for their research and citizen engagement activities. It offers advice for who each living lab should be involving as well as how to approach them (Section 5.)
- **Air pollution engagement tools**: This will help the living lab leads to communicate and engage with citizens on the topics of air pollution and climate change (Section 6.)

- **Local citizen engagement strategy**: This will give individual recommendations to each city about how to engage citizens in their city and what sort of activities they should focus on going forward (Sections 7.-14.)

We have decided to structure the report in this way in an attempt to address the main challenges identified for the living labs in 'The stakeholder analysis and risk assessment - non-technical challenges to implementation of interventions' (Deliverable 2.1). The first of these was about 'embedding a living lab mindset' in all iSCAPE activities. We have, therefore, created a section to address these issues and provide tools to better explain the methodology. Secondly, we found that partners needed support with 'getting people involved' with the living lab. We have, therefore, included a specific section with tips for recruiting participants for research and citizen engagement activities. One of the other key findings from Deliverable 2.1 was the issue of 'communicating the project'. We have, therefore, focussed many of the 'air pollution engagement tools' on helping address this challenge.

We have attempted to make this document as practical as possible for our partners. In addition to the tools and instructions provided here, we will work closely with them to ensure they are confident using them to manage the living labs. A training session will be provided as part of task 2.3 'Managing the living labs'.

We are intending to add all the available documents and tools we are creating to the 'Virtual living lab' website (VLL) so they are free for others to use in similar projects and to widen the impact of these tools. We will collaborate with our partners in WP8 on the information hierarchy (sitemap) and content for the VLL website.

This report will be a snapshot of a point in time, but the partners will add progress of their living lab to the 'Stakeholder management plan' as well as to the 'Virtual living lab' as the project progresses. The intent is that all partners can add material and share project learnings over time – a critical aspect of the living lab approach.

3 Stakeholder management plan

3.1 The document

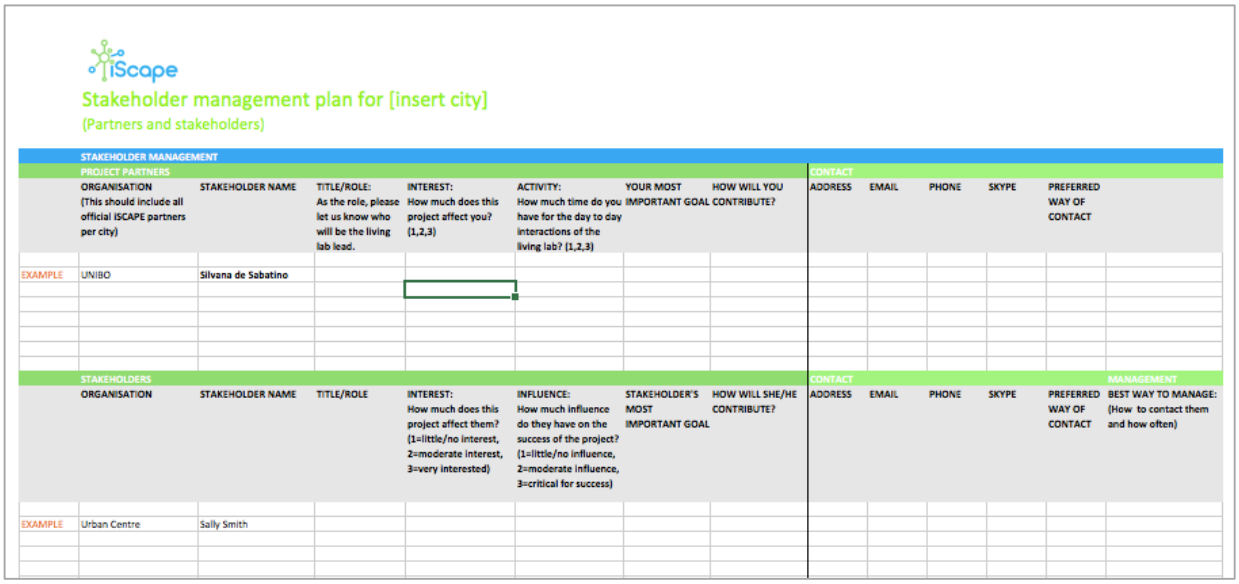
The 'Stakeholder management plan' has been designed to enable each iSCAPE living lab lead to report the progress of their living lab in this Excel sheet and share it with the each other to maximise learnings. The document is a record of stakeholder engagement that will be maintained throughout the lifecycle by each living lab. It includes an analysis of stakeholder needs, interests and potential impact on project success, and encourages regular contact with all critical stakeholders. The living lab lead in each city is responsible for completing this document on a monthly basis.

The 'Stakeholder management plan' consists of 4 sections:

- Partners and stakeholders
- Stakeholder contact log
- Progress report
- Engagement activities

The Excel version of this template, as well as all live versions of this document with updates by all partners will be available on the shared iSCAPE folder on Google Drive.

Partners and stakeholders: This tab of the document lists the names and contact details of the partners and stakeholders in each city. The living lab lead can evaluate how much interest and influence their stakeholders have in the project and list their goals and contribution for the project.



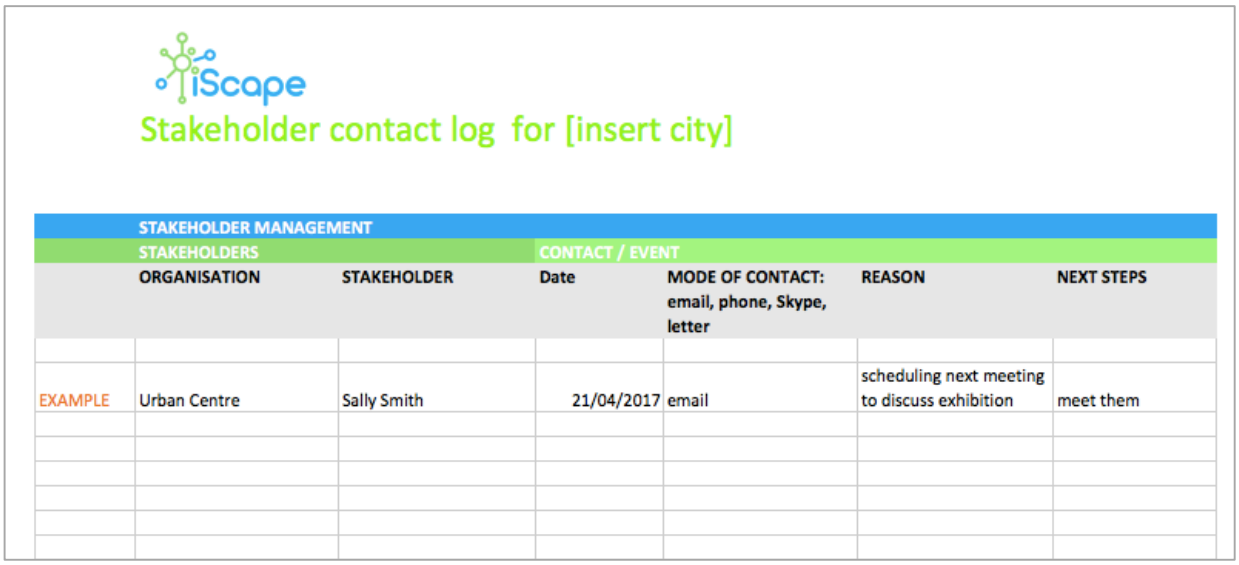
iScape

Stakeholder management plan for [insert city]

(Partners and stakeholders)

STAKEHOLDER MANAGEMENT														
PROJECT PARTNERS								CONTACT						
	ORGANISATION (This should include all official iSCAPE partners per city)	STAKEHOLDER NAME	TITLE/ROLE: As the role, please let us know who will be the living lab lead.	INTEREST: How much does this project affect you? (1,2,3)	ACTIVITY: How much time do you have for the day to day interactions of the living lab? (1,2,3)	YOUR MOST IMPORTANT GOAL	HOW WILL YOU CONTRIBUTE?	ADDRESS	EMAIL	PHONE	SKYPE	PREFERRED WAY OF CONTACT	
EXAMPLE	UNIBO	Silvana de Sabatino												
STAKEHOLDERS								CONTACT					MANAGEMENT	
	ORGANISATION	STAKEHOLDER NAME	TITLE/ROLE	INTEREST: How much does this project affect them? (1=little/no interest, 2=moderate interest, 3=very interested)	INFLUENCE: How much influence do they have on the success of the project? (1=little/no influence, 2=moderate influence, 3=critical for success)	STAKEHOLDER'S MOST IMPORTANT GOAL	HOW WILL SHE/HE CONTRIBUTE?	ADDRESS	EMAIL	PHONE	SKYPE	PREFERRED WAY OF CONTACT	BEST WAY TO MANAGE: (How to contact them and how often)	
EXAMPLE	Urban Centre	Sally Smith												

Stakeholder contact log: This tab of the document allows the living lab lead in each city to log the contacts they have had or are planning to have with their stakeholders.

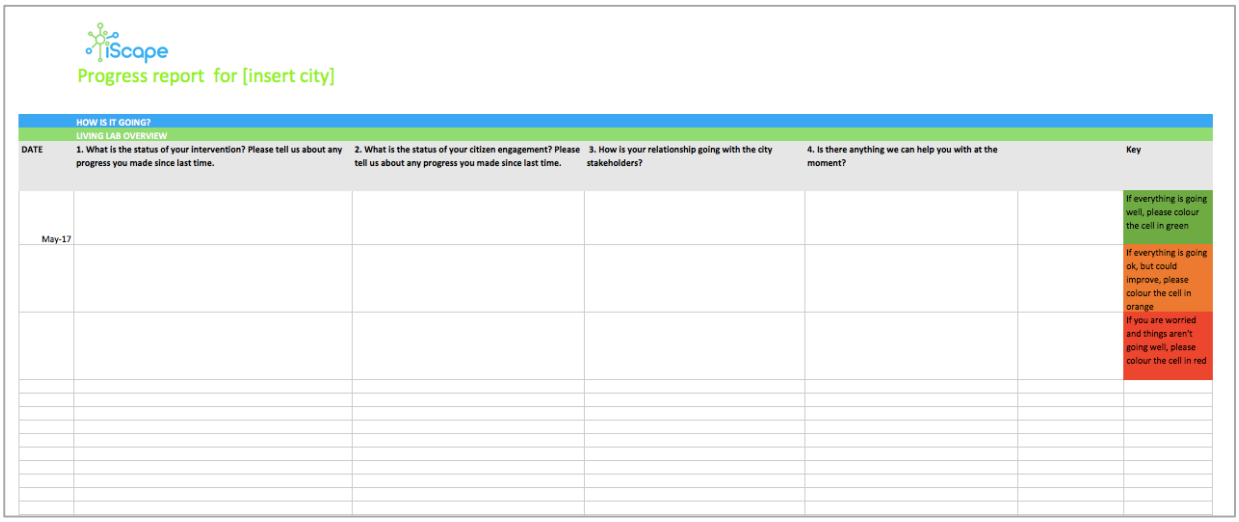


iScape

Stakeholder contact log for [insert city]

	STAKEHOLDER MANAGEMENT					
	STAKEHOLDERS		CONTACT / EVENT			
	ORGANISATION	STAKEHOLDER	Date	MODE OF CONTACT: email, phone, Skype, letter	REASON	NEXT STEPS
EXAMPLE	Urban Centre	Sally Smith	21/04/2017	email	scheduling next meeting to discuss exhibition	meet them

Progress report: This tab of the document allows the living lab lead to record the progress of their living lab, e.g. the status of the intervention, the status of the citizen engagement, the status of the relationship with the city stakeholders and if they require any support from FCC.

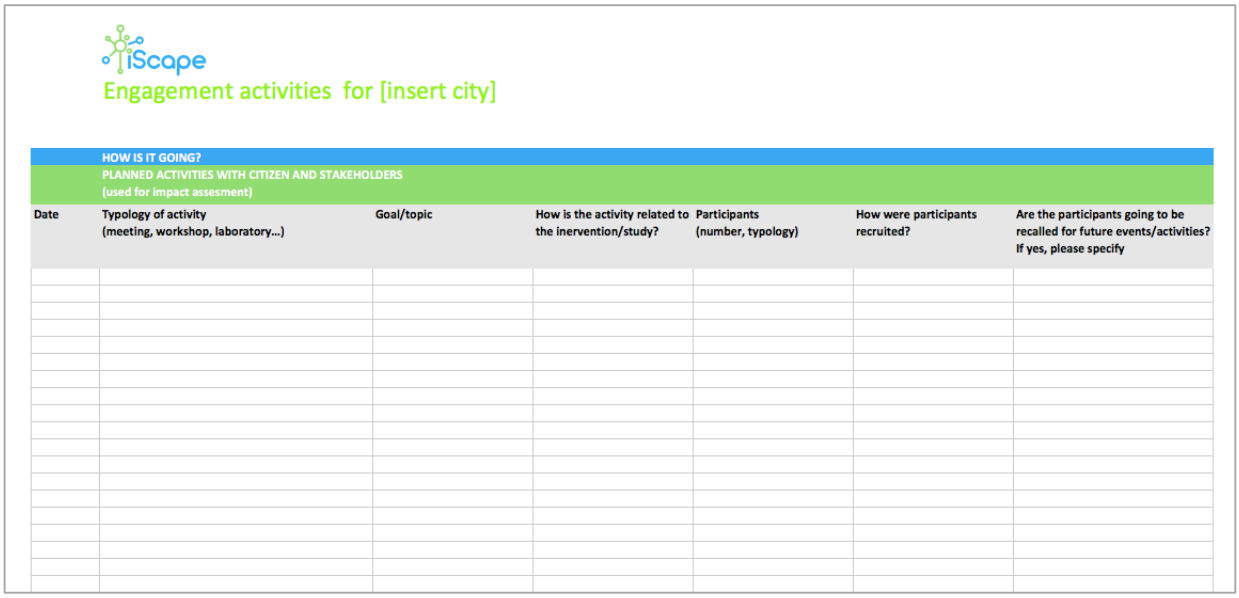


iScape

Progress report for [insert city]

	HOW IS IT GOING?					
	LIVING LAB OVERVIEW					
DATE	1. What is the status of your intervention? Please tell us about any progress you made since last time.	2. What is the status of your citizen engagement? Please tell us about any progress you made since last time.	3. How is your relationship going with the city stakeholders?	4. Is there anything we can help you with at the moment?		Key
May-17						If everything is going well, please colour the cell in green
						If everything is going ok, but could improve, please colour the cell in orange
						If you are worried and things aren't going well, please colour the cell in red

Engagement activities: This tab of the document allows the living lab lead to add details about their engagement with the different stakeholders of the living lab. This will be used for evaluating the impact of each living lab by T6 in WP 5 and for general communication and dissemination activities of the iSCAPE project in WP8.



iScape

Engagement activities for [insert city]

	HOW IS IT GOING?					
	PLANNED ACTIVITIES WITH CITIZEN AND STAKEHOLDERS (used for impact assesment)					
Date	Typology of activity (meeting, workshop, laboratory…)	Goal/topic	How is the activity related to the inervention/study?	Participants (number, typology)	How were participants recruited?	Are the participants going to be recalled for future events/activities? If yes, please specify

3.2 Roles within the living lab

Role of the living lab lead:

- The living lab lead will be our main point of contact. They will add information to the 'Stakeholder management plan' on a monthly basis, or more often if necessary. They will also take part in regular calls with FCC.
- They will attend a training session in September 2017 at FCC in London and disseminate the knowledge to the rest of their team.
- They will be responsible for planning and leading the citizen engagement activities within the living lab.
- They will also need to capture and send FCC a visual record of the activities taking place e.g. photos or videos of the citizen engagement.
- They are responsible for the data protection of participants of the living labs, e.g. informed consent forms etc.

FCCs role for all living labs:

- We will coordinate the 'Stakeholder management plans', playing a consultative role and prompting the living lab leads to add information on a regular basis.
- FCC will also be the point of contact for any issues or challenges the living lab leads face.

- We will conduct a 1 day training session in London for all living lab leads to enhance their citizen engagement skills and ensure they are familiar with all of the tools provided in this document.
- We will co-ordinate regular contact between all iSCAPE living lab leads, and share information between all partners so that everyone is kept up to date with what is going on in the living labs. This will take the form of monthly 'community feedback reports' that will be sent to all iSCAPE partners.

4 Living lab mindset

One key challenge that was identified in the 'Stakeholder analysis and risk assessment – non-technical challenges to implementation of interventions' (iSCAPE D2.1) was that, due to partners often coming from very different disciplines, many need support understanding this methodology, using these techniques and embedding a 'living lab mindset' in the project more generally. This section of the report aims to provide tools primarily for partners, but also for citizens and other stakeholders in the city, to understand the living lab approach, and in particular what the idea of a living lab means in the context of iSCAPE.

iSCAPE aims to reduce urban pollution and the negative impact of climate change by leveraging passive control systems, behavioural change, and a living lab approach. In order for this approach to have the greatest impact, we need to ensure any citizen or other stakeholder engagement activities are closely connected to the physical or behavioural interventions in each of the cities. The 'living lab', therefore, encompasses both the stakeholder engagement and intervention in each city.

STAKEHOLDER ENGAGEMENT + INTERVENTIONS IN REAL LIFE SETTINGS = LIVING LAB

4.1 Living lab principles

There has been some recognition in the literature that the living lab is a methodology that is not yet fully formed, and instead is a research domain in development (Schuurman, 2015). As a result of this, there is currently a lack of a coherent definition of the concept (see iSCAPE deliverable 2.2 for further exploration of the living lab literature).

In iSCAPE, we have considered the following characteristics as essential in defining our living lab activities:

- Active user involvement throughout the process
- Real life setting
- Multi-stakeholder participation
- Multi-method approach

- Co-creation (different stakeholders collaborating)

All of the above are common elements in living labs as defined by the European Network of Living Labs (ENoLL, 2017). However, for the purposes of citizen engagement and to help our partners and stakeholders further understand the concept, we have simplified this approach even further. Figure 1 shows the three iSCAPE principles of citizen engagement, which can be summarised in the following sentence, "A 'human centred approach, done in collaboration with others, to experiment in a real-life setting'". We believe this simplifies and encompasses all of ENoLL's elements of a living lab: Active User Involvement and Co-creation are about a 'human centred approach', Multi-stakeholder Participation, Multi-method and Co-creation are about 'doing things in collaboration with others' and Real Life Setting forms the last of the three principles 'to experiment in a real life setting'. These three principles are intended to be jargon-free, citizen-friendly descriptions of the living lab approach.

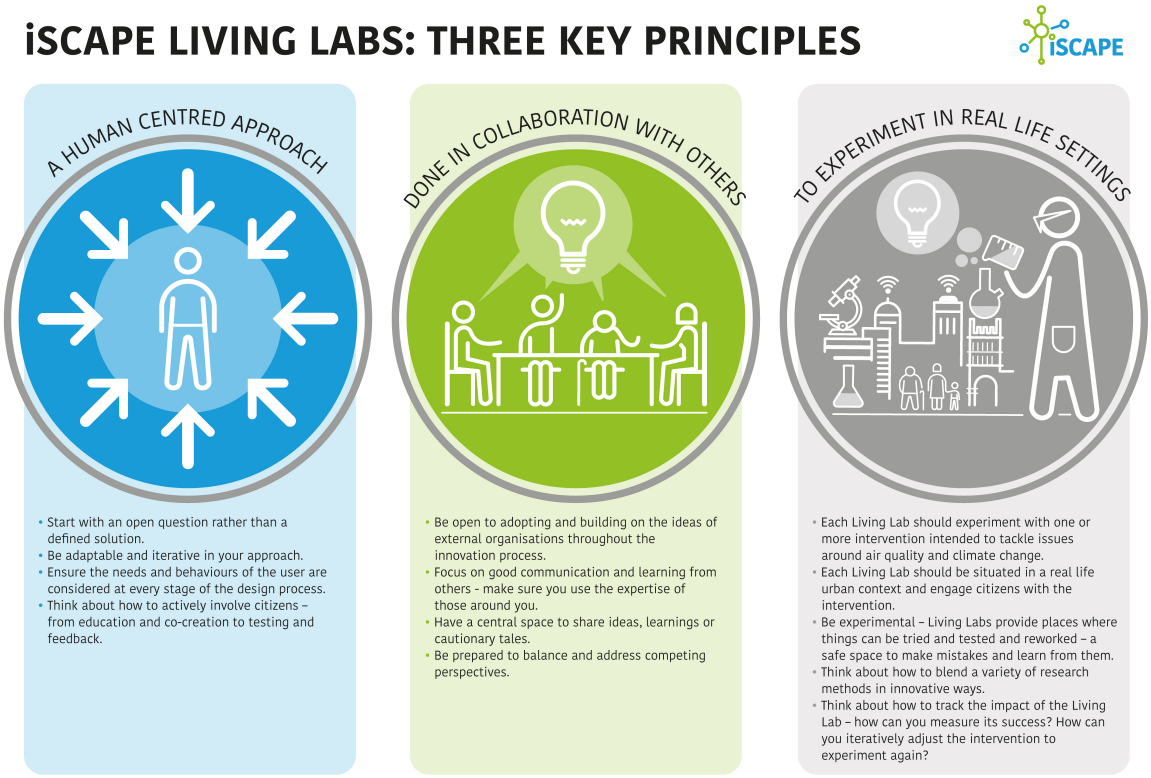


Figure 1: iSCAPE living lab key principles

4.2 Level of citizen engagement

There are different levels for communicating and engaging with people. Arnstein (1969) has elaborated on different types of engagement in her 'ladder of citizen participation'. This framework describes the different ways to engage citizens (see Figure 2) and is a useful point of

reference to understand the difference between simply informing citizens about a topic and actively empowering them to be able to change things.

The Horizon 2020 Sharing Cities project (2017) has further developed Arnstein's framework to map the level of complexity for different citizen engagement methods (see Figure 3). This is useful for partners to understand how much effort they will need to dedicate to different types of activity.

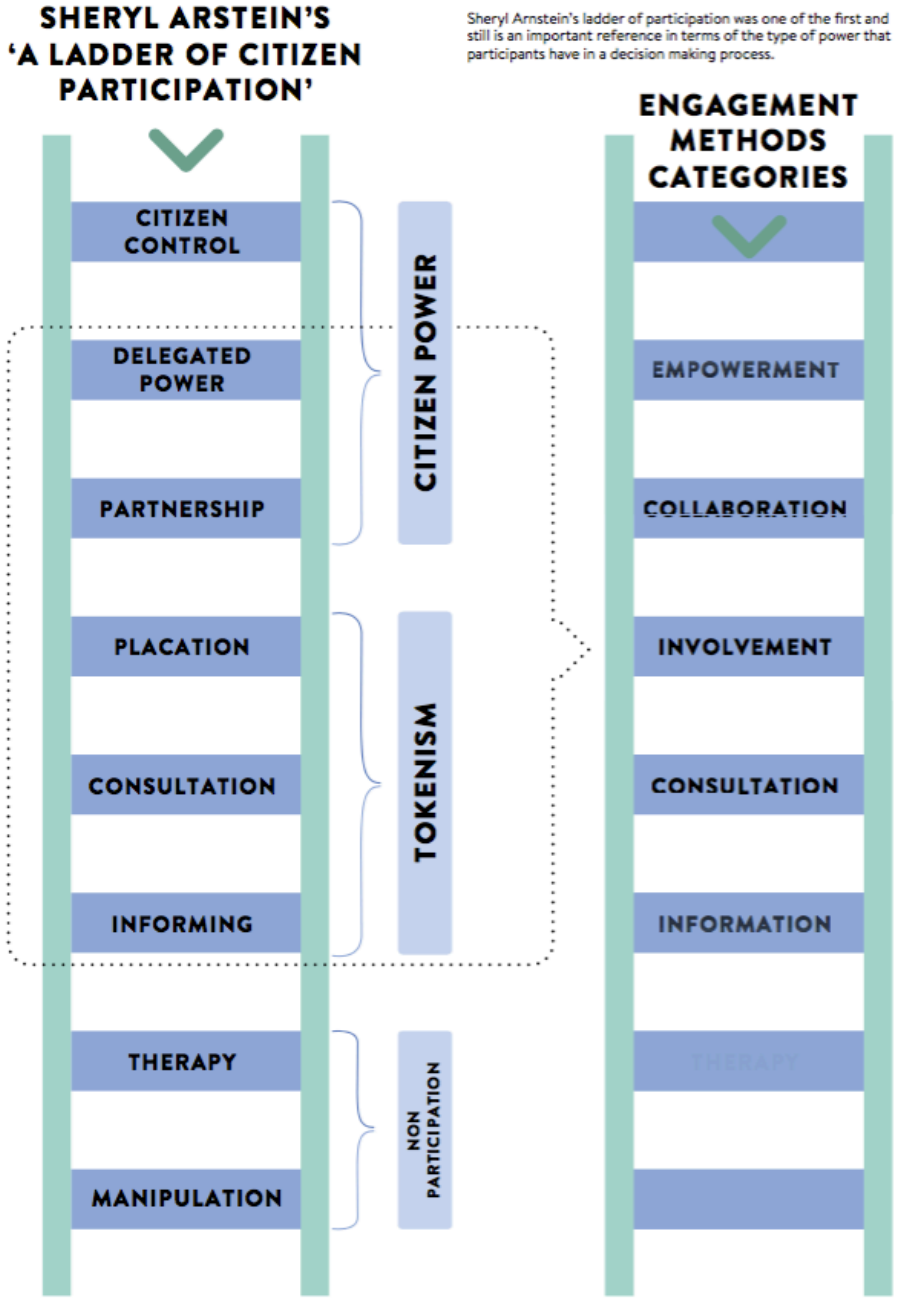


Figure 2: Arnstein's ladder of citizen participation (1969)

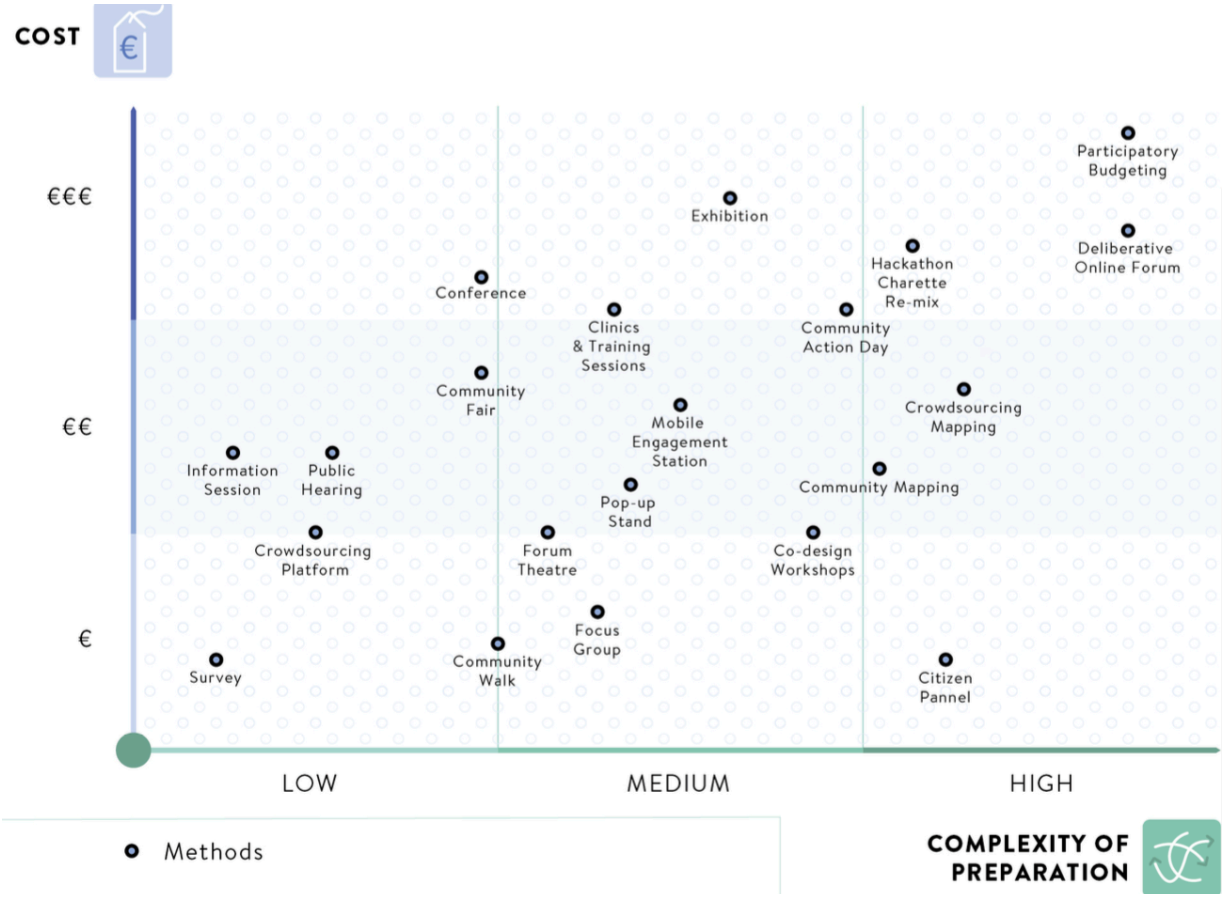


Figure 3: Sharing cities citizen engagement map

It is important to remember when planning activities that the living lab methodology calls for *active* user involvement (see Figure 4) and partners should try and plan each activity to not only inform people on the topics of air pollution and climate change but get them asking questions, collaborating and creating and testing solutions in active ways.

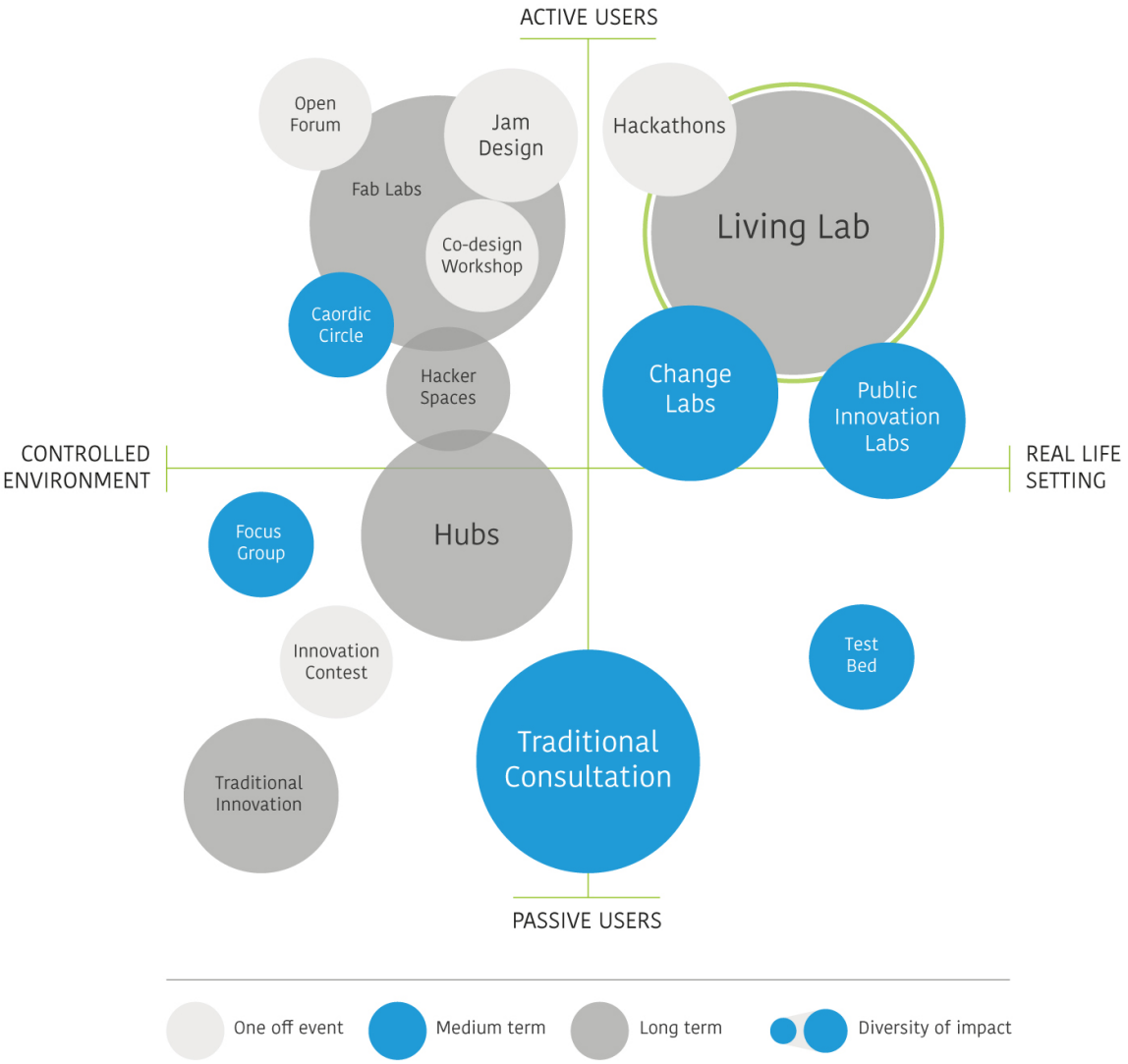


Figure 4: What is a living lab? (Dubé & al., 2014)

For the purpose of iSCAPE we have attempted to simplify the above mentioned frameworks, and have identified two levels of engagement we want to foster in each of the iSCAPE living labs. All living lab activities should sit on a continuum ranging from 'engage' to 'empower':

- **Engage**: This is about starting discussions not just informing people through lectures or communications. Think about how to build emotional connections with people, and get them thinking and providing feedback on the information you give them. Tools for this could include the following: a poster about the connection between air pollution and climate change inviting people to get in touch; a presentation explaining the topic

followed by a Q&A session with scientists; an exhibition showing how air pollution affects people around the world with a way for visitors of the exhibition to leave their own comments; or a survey via Twitter to find out more about how people deal with the air pollution in their city currently.

- **Empower**: This is the level of engagement we should always aim for in our living labs where possible. To do this, however, we will need to collaborate with different stakeholders, and be creative about how to get citizens involved in thinking about and building ideas to reduce air pollution. Tools for this could include: a brainstorming session or workshop on how to solve the air pollution issues in your city; or getting people physically involved in an intervention e.g. prototyping ideas, building or painting to make it more visible.

The remainder of this deliverable will provide partners with the tools to achieve the above levels of engagement, as well as instructions on how to use each tool.

4.3 The iSCAPE citizen engagement principles

One of the main conclusions from the 'Challenges and Opportunities in the iSCAPE Cities' report (Deliverable 1.1) conducted by FCC as part of WP1 in the iSCAPE project, was a manifesto for citizen engagement. This included five key principles of citizen engagement to guide the activities of the iSCAPE living labs going forward. As part of this report we have expanded on these principles and have created a simple diagram (see Figure5).

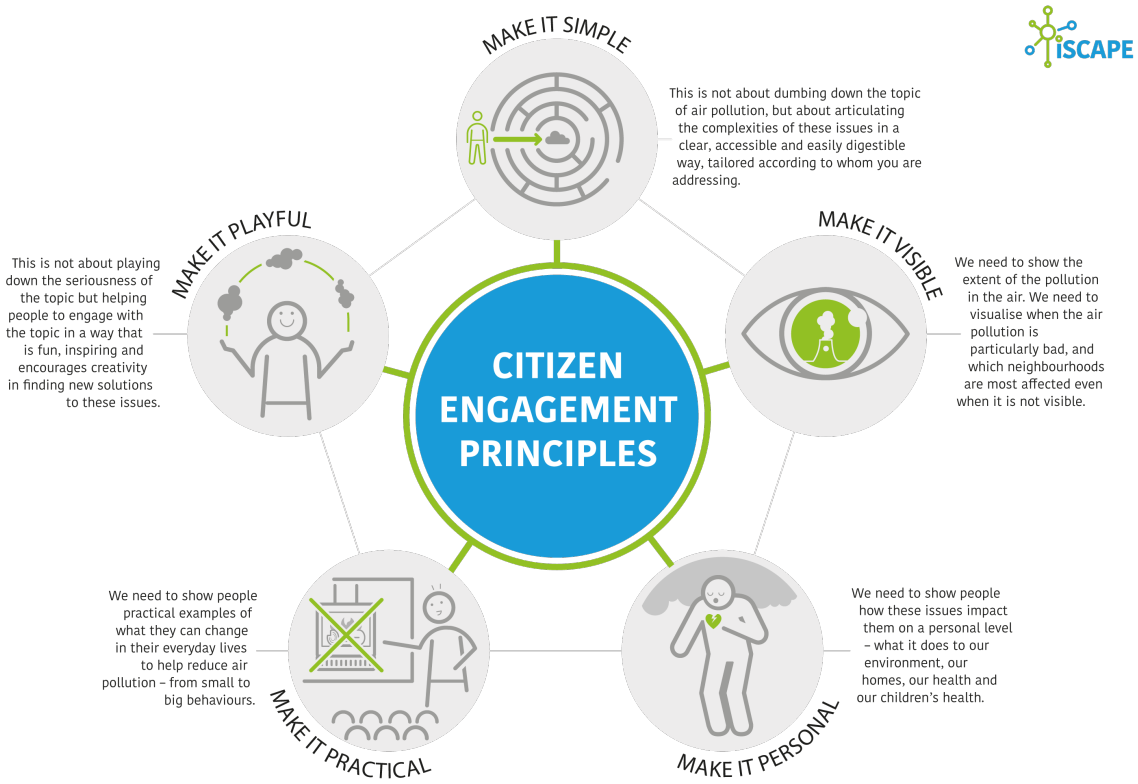


Figure 5: iSCAPE Citizen Engagement Principles

5 Getting people involved

One of the biggest challenges found for all of our living labs was 'how to get people involved' (see iSCAPE deliverable 2.1). This section of the report, therefore, provides a set of recommendations to help each living lab recruit participants for their research and citizen engagement activities. It offers advice for who each living lab should be involving as well as how to approach them.

- **Identifying a target group:** Think about who you want to attract to your research or event. You can plan better when you don't cater for everyone, but for specific groups of people, e.g. children, elderly etc. For example, people who are likely to be interested in coming to an event involving LEGO, are likely to have either played with it in their youth, or are parents with children. To best identify your target group, you can do a stakeholder mapping exercise. You can use the stakeholder management plan (Section 3.) to do this.
- **Identifying multipliers:** Think about involving community groups, professional organisations, student groups and your personal network. Asking these people to then invite others they know to get involved will amplify the potential audience. You must aim to include a wide variety of people, not just those who work around the topic of air pollution and climate change. These may be easier to recruit but they will bias your sample of participants and not reach those people who may benefit the most from getting engaged with these topics.
- **Targeting 'influencers':** Targeting some 'influencers' within your community is a good way to spread information about your event. Influencers could include local politicians, local businesses or prominent figures in the community. Give them information they can spread in an easy format that they can share e.g. an email template, a Twitter post or an image. This will make it easier for them to help you.
- **Incentivising people:** Incentives are always a good way to get people to take part in an activity and keep them motivated. You may need to think creatively about what sort of incentives you could give people if money isn't an option e.g. tickets to the local swimming pool. Your city stakeholders may be able to help source these. People are not always driven by extrinsic incentives like money, but also by intrinsic incentices like learning something etc., so think about how you can provide the latter.
- **Communicating with people:** Think about all types of media – for example this might include;
    - **Local newspaper:** You might already have contact with the local newspaper or your city stakeholder might be able to make contact for you. You can get them interested in your living lab and/or in the iSCAPE project and provide them with information, pictures and soundbites for their story.
    - **Classified ads:** Gumtree (UK) or Craigslist (USA) are online platforms that allow you to post free classified ads – your city will have a local equivalent. Use this to post about your event or recruit people for your research.
    - **City or university newsletter:** Your city might also have a newsletter that you can use to talk about your living lab and ask people to go to your local 'Virtual living lab'.
    - **Social media:** Think about all types of online media, e.g. Facebook, Twitter, LinkedIn, different online forums etc. Create a hashtag (#) not only for your living lab, but also specifically for events.

  - **Paid social media:** Think about using Facebook / Google Ads so you can directly address people in a specific location and a specific demographic.
  - **Notice boards:** Think about physical spaces where you might be able to put up a poster, leave some leaflets or even use iSCAPE stickers – these could be indoor or outdoor, think of community venues that you could approach. Think about the strategic placement of posters, leaflets etc. . People are more likely to take notice of something when they are in a situation that is related to the issue, e.g. an air pollution poster in a very polluted road.
- **Making use of other events:** Your university might organise a career fair, your local church might have a market or your city might have a city festival. Ask them if you can get involved by having a stand or distributing leaflets for your event.
- **Making it visual**: Make all communication as visual as possible to attract people. We have included a lot of material you can use in our toolkit, e.g. illustrations, thought starters etc.

Recruiting people for research

- **Academic research pool:** There is an online tool to find participants for your academic research (callforparticipants.com). This website will allow you to set up a page helping you to recruit the appropriate target group for your research.
- **Recruitment agencies:** If you have the budget, there are professional recruiters for people taking part in user or market research. You need to pay them for finding people for you and you need to pay incentives for people to take part in your research.
- **Ethics:** Respect people's privacy. Make sure they have understood what's required of them before they sign a consent form. Familiarise yourself with your university's regulations around research with participants.

6 Air pollution engagement tools

We have created the 'Air pollution engagement tools' to help the living lab leads to communicate and engage with citizens and other stakeholders on the topics of air pollution and climate change. Even though throughout the document we will mainly focus on citizen engagement, we believe that the tools can be used for and with other stakeholders like businesses, local authority representatives etc. as they are citizens as well.

All the material will be supplied to the living lab leads during the training with further instructions on how to use it. Each partner will then have the possibility to adapt it to its local context (e.g. by translating the information). The material can be edited, e.g. will be available in commonly used programs like PowerPoint or Word.

After the training, the living lab leads should be able to conduct all the activities suggested in the 'Air pollution engagement tools'. This material will also be included on the 'Virtual living lab' website to share with the wider community.

Each tool consists of the following:

- **What is this?** This is an explanation of what the tool is and what it contains.
- **How do I use this?** This section gives different options for activities to conduct with citizens and other stakeholders from those that engage them and those that empower them.
- **Materials:** This is a list of materials to accompany the tool, including documents, images and guides on how to conduct the activities suggested.

6.1 Air pollution and climate change illustrations

This set of illustrations was created as a result of our research suggesting that the link between air quality and climate change is poorly understood. It has been created in partnership with all iSCAPE air pollution experts to make the topic informative yet accessible for everyone. It contains an illustration about the relationship between air pollution and climate change, as well as illustrations about individual pollutants, their sources, and tips on how to avoid them.

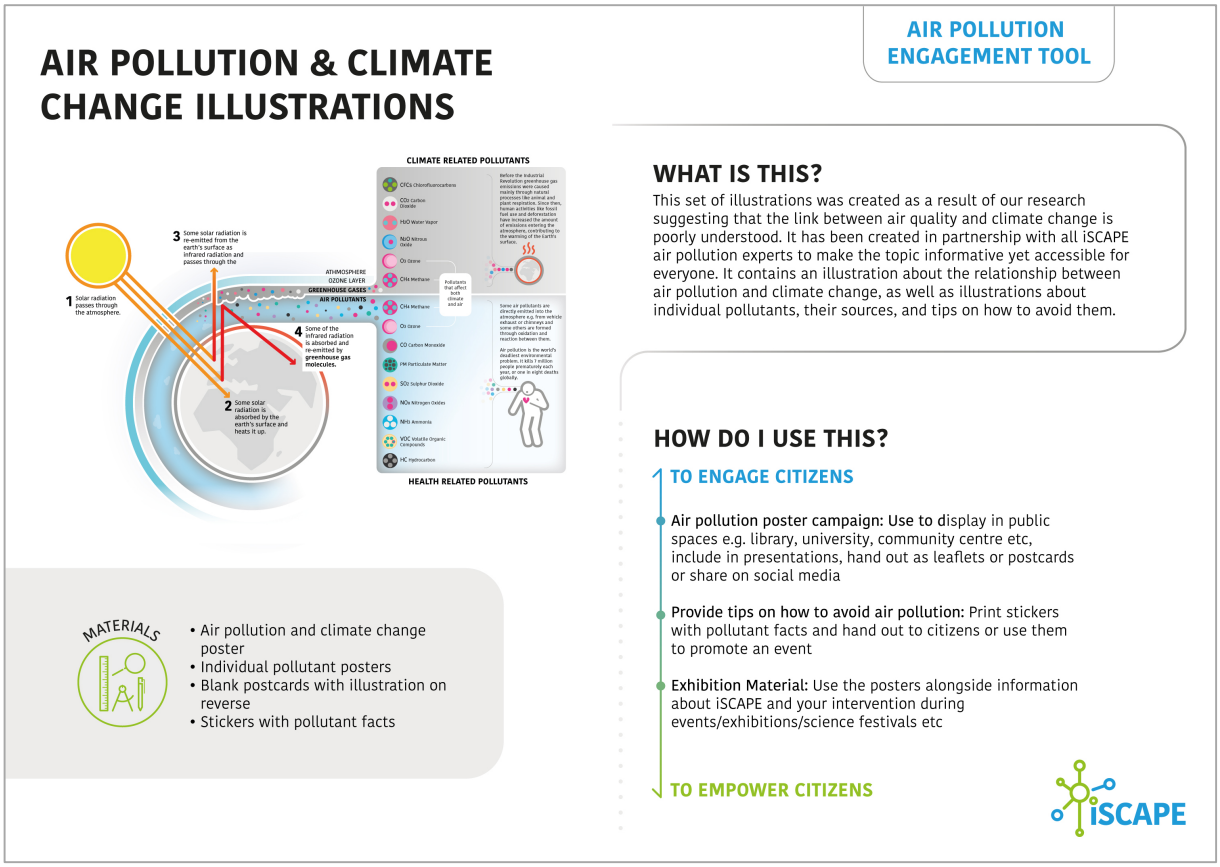


Figure 5: Air pollution and climate change illustrations

6.2 Citizen stories

A set of personal stories from regular citizens about how air pollution affects them. Respondents describe on camera or on a postcard the moment when they first noticed air pollution in their city. They then provide examples of how they have attempted to reduce their personal contribution to air pollution.

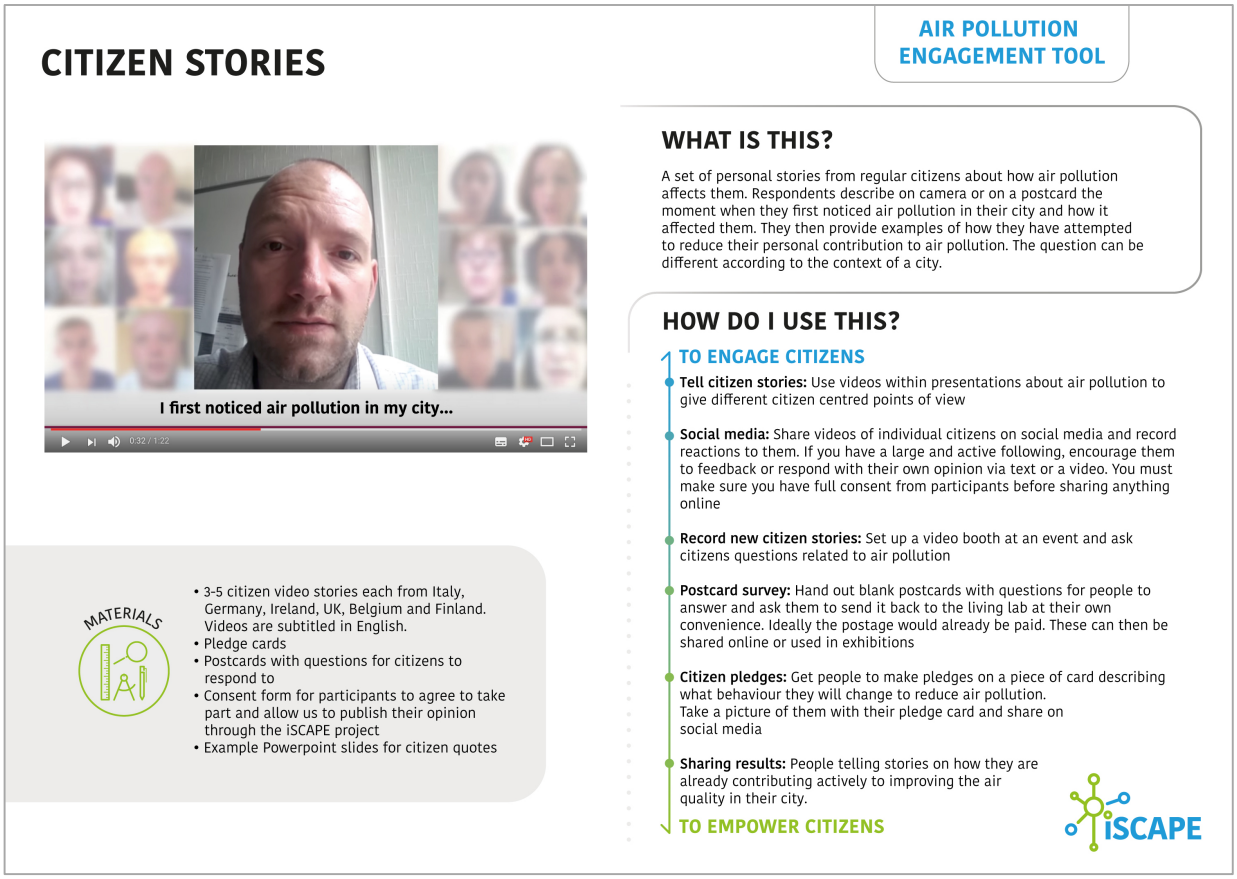


Figure 6: Citizen stories

6.3 City challenges

A set of challenges based on a survey done with city officials in each of the iSCAPE cities. The challenges are based on 3 key themes; urban environment, government policy & citizen perception. They can help start discussions, draw comparison between cities and help inspire solutions to these challenges.

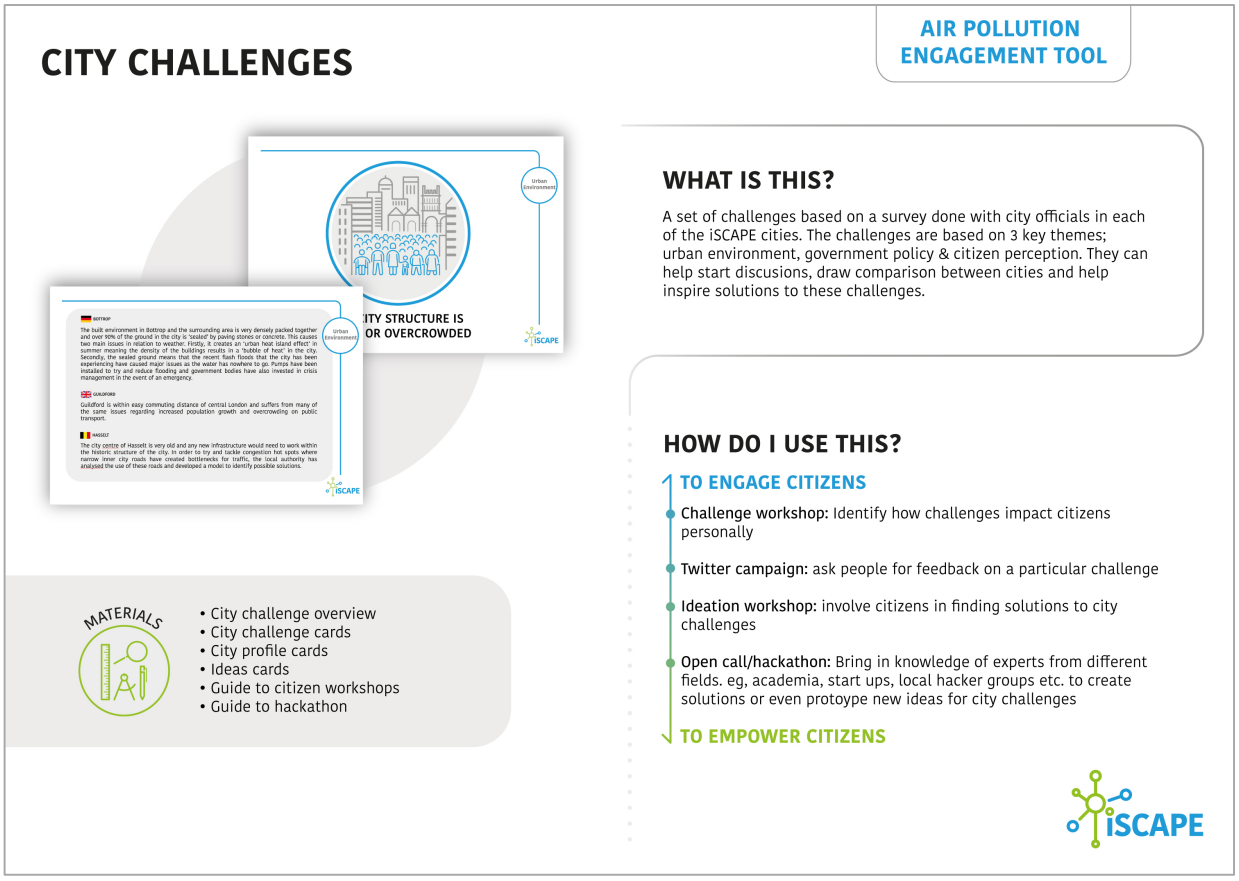


Figure 7: City challenges

6.4 Thought starters

The Thought Starter Cards provide a set of inspiring examples for how air pollution can be made simple, visible, practical, personal or playful - the iSCAPE principles for citizen engagement. The cards are intended to inspire discussions and generate new ideas for raising awareness and reducing air pollution.

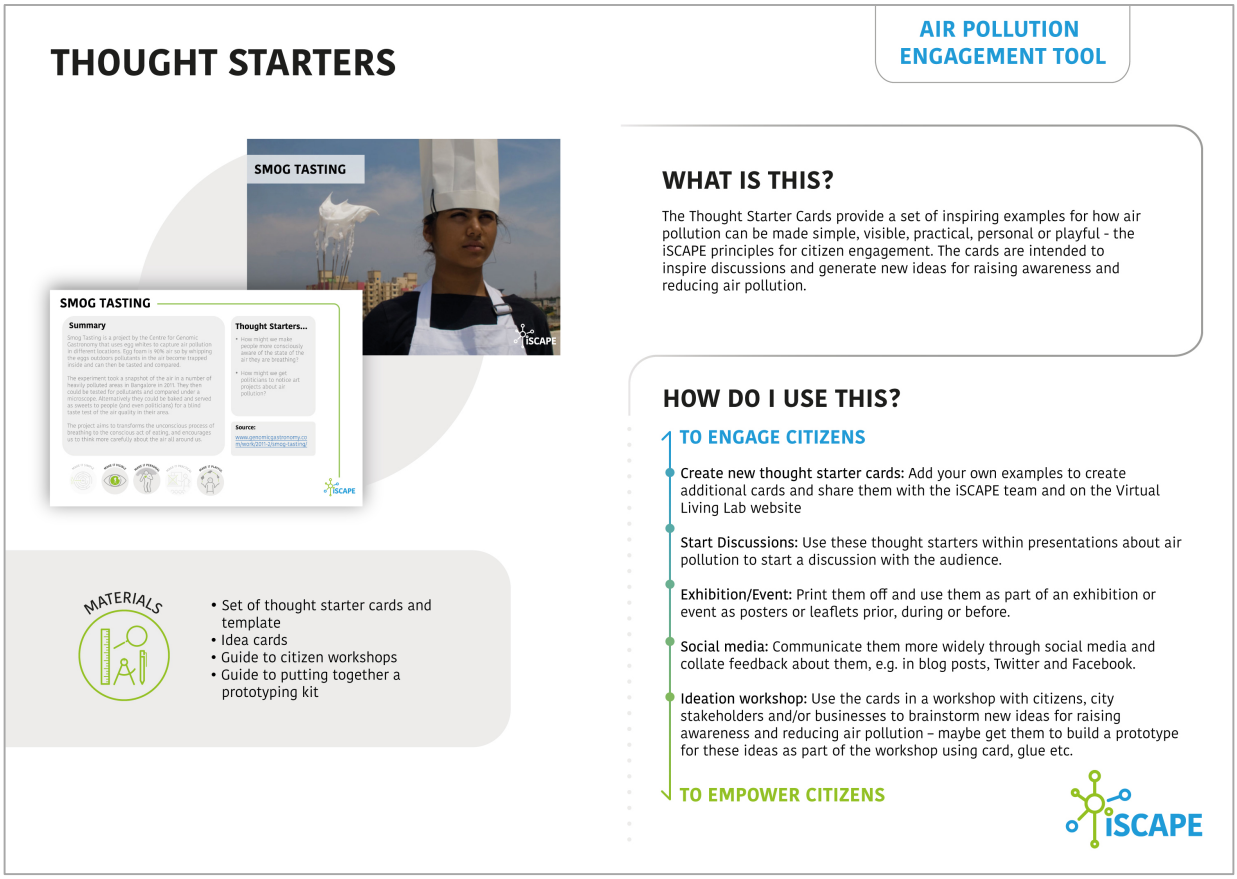


Figure 8: Thought starters

6.5 Twitter chatter

Twitter Chatter is research undertaken by the data science team at Future Cities Catapult. They wanted to measure how people experience a topic such as air pollution and looked at the context in which experiences of air pollution take place. To do this they didn't just look at the use of the word 'air pollution' on Twitter, but instead looked at terms such as 'traffic', 'chimney', 'airplane' etc. The data science team also looked at how pollution is expressed through smells, sounds and visual cues deciphered from short Twitter messages. The output of the research is a map per iSCAPE city displaying how much air pollution is talked about, as well as a word cloud displaying the most used words in connection with air pollution.

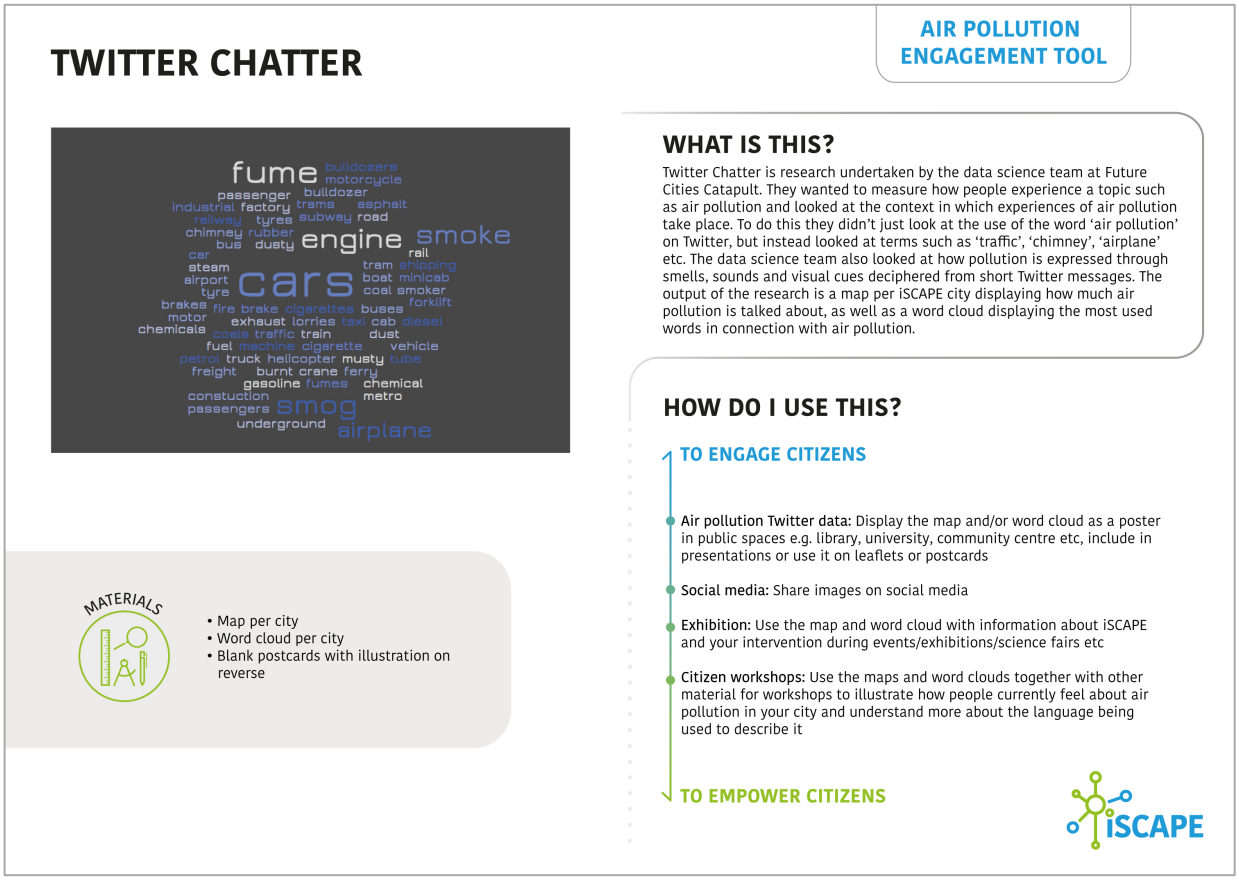


Figure 9: Twitter Chatter

7 Local citizen engagement strategy

This section of the report builds on two previous iSCAPE Deliverables:

- **Stakeholder analysis and risk assessment - non-technical challenges to implementation of interventions** (D2.1): This document includes the challenges and recommendations recorded after a series of city visits and stakeholder workshops in each of the iSCAPE cities.
- **Implementation plans for the iSCAPE living labs** (D2.2): This document described in more detail the implementation plans and next steps for the interventions and the citizen engagement.

This section of the report aims to make recommendations for citizen engagement activities in each city using the 'Air Pollution Engagement Tools' from the previous chapter.

These recommendations range from very specific suggestions to the more generic depending on how far along each living lab is in terms of implementation of the living lab. They have been designed to be iterative documents that will be reworked as the living labs develop.

8 Bologna local citizen engagement strategy 1

1. **Raise awareness of your intervention** (from July 2017)

   - **Display a poster**: Use the 'Air pollution and climate change' illustration (Section 6.1) and/or any of the 'individual pollutant' illustrations in a poster to raise awareness of the topic. You will need to do any necessary translation. Hang it up in your university, the Urban Centre and other public spaces that you get access to through your city partners.
   - **Make your social media stand out**: Use the illustrations on social media to link to your cities 'Virtual living lab'.
   - **Build a pop up stand near your intervention**: Have a pop up stand in the street canyons with the posters. Give away free posters, postcards and stickers with the illustrations – all of them with a link to your 'Virtual living lab' webpage.

2. **Visualise the air pollution at street level** (February – March 2018)

   - **Use the thought starters**: Look at the 'Thought starter' cards (Section 6.4) to see how others have visualised air pollution issues on the street, e.g. #LondonsChoking, Million Trees NYC.

3. **Ideate with citizens** (beyond March 2018)

   - **Citizen workshops**: Plan a weekend event in the Urban Centre and invite a mix of citizen as well as local businesses. Use the 'Getting People Involved' guide (Section 5.) to approach this.
   - **Make it a competition**: Ask citizens to come up with ideas on how to solve air pollution issues in Bologna. To incentivise people to take part in this, you can make it into a competition, e.g. award for best idea with the opportunity to prototype that idea.
   - **Use thought starters to brainstorm ideas**: Use the 'City Challenges' cards (Section 6.3) to ideate with the citizens around challenges in your city. You can also use the 'Thought starters' (Section 6.4) for inspiration. See 'City Challenges' and 'Thought Starter' instruction sheets for an explanation on the materials needed and tips for facilitation. A step by step guide for conducting the brainstorming session will also be provided during training.
   - **Use visual material to communicate the project**: Make sure you collect lots of visual material during workshops and events, e.g. photos, sketches, notes, anything the workshop participants have produced. This will not only help with disseminating the project but can also be used when advertising future events, to show people what to expect if they attend. Think about how to share news with citizens in real time on social media, as well as in blogs, newspaper articles, or even TV.

9 Bologna local citizen engagement strategy 2

1. **Ideate with citizens (**July 2017 ongoing**)**

    - **Student workshop**: Plan an event with the Terracini in Transizione living lab and students/employees at the Lazaretto campus. Invite a mix of the faculties on campus.
    - **Brainstorming session for making the photocatalytic paint visible**: As part of the workshop, run a brainstorming session to come up with ideas for how to visualise the photocatalytic paint. Use the 'thought starter' cards (Section 6.4) as inspiration. Adding an element of competition will encourage more people to take part e.g. the best idea wins a prize and will be implemented. Involve students/citizens in physically implementing this idea.
    - **Use the expertise of those around you:** Ask Pureti to judge the competition. Run the session in conjunction with Terracini in Transizione to help facilitate the session. Look at the instructions provided for 'thought starters' to help understand what kind of materials you will need to run the session and tips for facilitation. A step by step guide for running the brainstorming session will also be provided during training.
    - **Use visual material to communicate the project**: Make sure you collect lots of visual material during workshops and events. This will not only help with disseminating the project but can also be used when advertising future events, to show people what to expect if they attend. Think about how to share news with citizens in real time on social media, as well as in blogs, newspaper articles, or even TV.

2. **Exhibition of the developed ideas** (Summer 2018)

    - **Citizen exhibition/event at the Urban Centre**: Plan a follow up exhibition or event in the Urban Centre and invite a mix of citizens and local businesses to attend. Here you can showcase the ideas from the student workshop, and use the material created in the student workshop to inspire and brainstorm new ideas with the general public. You can also exhibit information about the intervention itself to inform citizen in more detail. Perhaps allow citizens to vote on a wall in their city that they feel should be painted with a photocatalytic coating. Use the 'Getting People Involved' guide (Section 5.) to approach this.

10 Bottrop local citizen engagement strategy

1. **Plan your events / parades (**September 2017 – February 2018**)**

   - **Recruit a broad set of participants**: Use the 'Getting people involved' guide (Section 5.) to reach out to a diverse set of people. Where possible, get community groups involved.
   - **Send postcards to residents**: Use the 'Air pollution and climate change' illustration (Section 6.1) on the postcard template and send these to local residents asking them to suggest areas/streets to place the wandering trees. You can also ask them to get in touch with their suggestions via Facebook and Twitter. You could even consider making it into a competition or allow people to vote.

2. **Workshop with the Urban Gardeners** (before May 2018**)**

   - **Use the Thought Starters to brainstorm with participants**: Use the 'thought starters' (Section 6.4) and or 'city challenges' (Section 6.3) to ideate with the Urban Gardeners about how to keep people involved. We are sure that you and your city stakeholders already have the skills to facilitate the session, but you can also use our instructions for what kind of material you will need, tips for facilitation and how to conduct the brainstorming session.

3. **Survey the 'Wanderbaum experts'** (before May 2018**)**

   - **Survey Munich citizens**: Create a survey for citizens in Munich who took part in the Wanderbaum event to find out why they got involved and to understand their sentiment and the impact of the parades on their lives. You could also consider using the same tool we have used to create our 'Citizen stories' (VoxPopMe) (Section 6.2), available after the training in September.

4. **Communicate the event / parades** (May - September 2018**)**

   - **Keep it simple**: Embrace the low-tech nature of the intervention – use the 'Tree Tags', stickers, brochures etc. to point people towards the 'Virtual living lab'.
   - **Wanderbaum goes to Carnival**: Could one or more of the Wanderbaum trees take part in the carnival events in Bottrop to raise awareness about the event? (February 2018)

5. **Record the parades** (May - September 2018)

   - **Tell stories**: Use photography and videography to record the parades so you can tell stories about then. Share the material on social media, traditional media and on the iSCAPE website.

11 Dublin local citizen engagement strategy

1. **Plan your events (**June 2017 ongoing**)**

   - **Get a broad set of participants**: Use the 'Getting People Involved' guide (Section 5.) to reach out to a diverse set of people. Where possible, get community groups involved.
   - **Use visual materials to alert residents to the event**: Use the 'Air pollution and climate change' illustration (Section 6.1) on a postcard or flyer to invite local residents to take part in events.
   - **Create a buzz around the event**: Use stickers, posters, leaflets or other visual material to talk to citizens about air pollution and encourage them to come to the event. Think about promotion on social media before, during and after events.
   - **Reach out to local schools and community organisations:** Get in touch with different groups of people across the areas where the LBW are and to select the best design, you could host a design competition e.g. best design for preventing exposure to air pollution, most innovative design etc. Use the 'Thought Starters' (Section 6.4) to brainstorm ideas to decorate the walls or communicate its purpose.

2. **Hold outdoor events to build the walls (**June 2017 ongoing**)**

   - **Record and document the events**: When you are hosting an event make sure to capture feedback and feelings about it from participants using photos, videos, feedback forms. Ideally try to capture participants contact details to follow up.
   - **Use video to capture 'Citizen Stories'**: Think about using video to understand people's feelings around air pollution and the LBW intervention. This can be as simple as attaching a microphone to a smart phone to do the recordings on the go, or building a 'video booth' at an event with a camera and microphone on a tripod inside. You will need to hand out consent forms to capture people's details and get permission for the material to be used on the iSCAPE website.
   - **Disseminate info after the event:** After the event use the material you have recorded during the event to local press and through all your social media channels. Any visual material will be useful to attract the most attention.
   - **Vote for the best wall**: Once the events have taken place in several neighbourhoods you can create an exhibition with photos, videos and any other material you have created. You can the showcase the event in a central exhibition space and expose more citizens to it.
   - **Follow up**: If you had the chance to collect contact details from participants who are interested in more information about your living lab, get in touch with them after the event and follow up if possible. Create an email for them with some information and don't forget to include a thank you to them for attending.

12 Guildford local citizen engagement strategy

1. **Create a survey (**July-August 2017**)**

    - **People and air pollution**: Set up an online survey to think about what information people would like to know about air pollution to feed into the interactive tool design. Share this with all your non-expert contacts. The reach of the survey needs to as broad as possible – think about contacts in your network that could help e.g. BBC.

2. **Visualise the interventions and communicate the project (**August 2017 ongoing**)**

    - **Install 'Tree Tags' and hedge signs**: Create signs for the intervention sites to make them more visible to passers-by and make it clear to them that measurements are taking place. These can be designed for both trees and hedges.

3. **Plan an event to launch the interactive display (**January 2018**)**

    - **Get a broad set of participants**: Use the 'Getting People Involved' guide (Section 5.) to reach out to a diverse set of people. Where possible, get community groups involved.
    - **Location**: Think about the best location for the launch event and try to get help for this from your city stakeholders. Also think about community groups you can involve and invite.
    - **Send postcards to residents**: Use the 'Air pollution and climate change' illustration (Section 6.1) on a postcard template and send these to local residents inviting them to take part in the launch event.
    - **Spread the word**: Take advantage of any events happening during the Christmas period in Guildford to communicate about the citizen engagement activities and recruit people. Maybe think about having a stand to explain the intervention to citizens. Use the air pollution posters and postcards, and have a form to collect addresses of citizens interested in knowing more.
    - **Create a buzz around the event**: Use stickers, posters and leaflets to communicate the event. Think about promotion on social media before, during and after the event.

4. **Plan what to do with the interactive display after the launch (**January 2018 – September 2019**)**

    - **Compile a list of events**: Ask for the help of your city stakeholders to compile a list of events happening in your area that you can use to showcase the interactive display further on in the project (after the launch - September 2019)
    - **Contact exhibition spaces**: Think about organisations and public spaces you can reach out to house the interactive display more permanently e.g. libraries, museums, etc.

13 Hasselt local citizen engagement strategy

1. **Think about how the study will end** (July 2017 ongoing)

   - **Feedback about the study:** After the study has finished, collate feedback from your participants about how the study went, so that you are able to amend any flaws before the iSCAPE partners replicate the study in their city.
   - **Think about what's in it for your participants:** You have put a lot of thought into how to run and analyse the study but have you also considered how the study will end for the participants? How will you keep them interested and make them into ongoing advocates for the project? Together with your city stakeholders you could consider creating an exhibition about the project to disseminate your results and invite them to the opening to share their thoughts. You could then use the exhibition material to run a citizen workshop and come up with ideas on how to solve air pollution issues in Hasselt.

2. **Share learnings from your study with all iSCAPE partners** (September 2017- via Deliverable 4.1)

   - **Recruitment**: You have successfully recruited 50 people for their pilot study and the study is currently underway. Make sure you record your lessons learned and share tips for recruitment with all other iSCAPE partners.
   - **Belgian Living Lab Day:** Record your learnings from the Belgian Living Lab Day in Brussels (May 9th 2017) and share them with the other partners.

3. **Prepare your study for the iSCAPE partners**: September 2017

   - **Get in touch early**: Contact the iSCAPE partners early so that they have enough time to translate all the material and recruit the participants in their city.
   - **Create templates**: Prepare all the material you used in Hasselt for your partners. This should include the briefing document, consent form and any instructions for using the app. They can then translate these and use them for their own experiment.
   - **Offer help**: You are now the experts for conducting the behavioural study and the partners may need your advice. Try to make everything as easy as possible for them and offer them regular support and Skype calls for questions.

4. **Communicate the project constantly** (June 2017 ongoing)

   - **Use social media**: Talk about project milestones on social media, even if they seem small e.g. briefing of the participants, half time of the experiment has past etc. Let all partners know to follow you and re-tweet.
   - **Local newspaper:** Contact the local press. Tell them about your study and provide them with information, pictures and soundbites for their story.
   - **City or university newsletter:** Your city or university might also have a newsletter that you can use to talk about study.

- **iSCAPE website:** Think about where to communicate about the project using the iSCAPE website. Write an article or let T6 know about your progress.

14 Vantaa local citizen engagement strategy

1. Think about the target group for citizen engagement (July 2017)

- **Decide on a target group:** Decide who to target and build stakeholder relationships in this area e.g. if focussing on children, build your relationship with local schools and Heureka, the Finnish Science Centre.
- **Use the 'Getting People Involved' Guide:** See this guide Use the 'Air pollution and climate change' illustration (Section 5.) for advice on identifying and recruiting your chosen target audience.
- **Seek expertise from others:** Ask your Heureka contacts who their main audiences are, and what events they have planned already that you could potentially get involved in. Ask them if they have anywhere you could leave some air pollution leaflets or stickers. Does anyone at FMI have expertise in talking to children about complex issues?

2. Conduct video survey with citizens (August 2017 – September 2018)

- **Collect your own 'Citizen Stories'**: Set up a survey using the 'Citizen Stories' tool (Section 6.2) to collect videos of participants experiences with air pollution in Vantaa. You can do the survey online (using Voxpopme, which will be available after the training in September) or in person at events or at Heureka by setting up a 'video booth' with a camera on a tripod. Ask city stakeholders and your contacts at Heureka to help with recruitment.

3. Run a workshop (August 2017 – September 2018)

- **Contact Heureka and Community Groups:** Ask if you can use Heureka as a venue and whether they can help with recruitment. Get in touch with community groups or local schools to get involved in the day.
- **Use the citizen sensing kits:** During the workshop get people using the citizen sensing kits to explain your interventions and the iSCAPE project more broadly.
- **Use 'City Challenges' and 'Though Starters' to brainstorm with participants:** You could also use the 'City Challenges' (Section 6.3) and 'Thought Starters' (Section 6.4) to brainstorm new ideas to some of the air pollution challenges Vantaa is facing. Use our instructions for what kind of material you will need, tips for facilitation and how to conduct the brainstorming session. If you decide that your main target group is children, these tools may need to be adapted to be more child friendly.

4. Plan an exhibition (Summer 2019)

- **Use the Heureka centre:** Ask the centre if they would be happy to host an exhibition for iSCAPE.
- **Include all iSCAPE partners:** This could include not only work from Vantaa but all of the other iSCAPE cities. Think about what you could include to showcase the results of the

project e.g. posters about the interventions in each city, photographs and prototypes from citizen workshops, videos of citizen stories.

15 Conclusions and next steps

This document includes a set of tools to manage all stakeholders involved in the living lab in each city and for engaging citizens in the topics of air pollution and climate change. It should be considered as a practical guide for citizen engagement in the iSCAPE living labs and is intended for use by the living lab leads in each of the cities.

The development of the living labs is already underway and, therefore, this document is a snapshot of the progress of the living labs in each city as of June 2017. As the project progresses we will continue to work closely with the living lab leads to plan and manage citizen engagement activities which will be specific to each city. The following next steps are planned:

Training:

- A number of partners will attend the ENoLL Open Living Lab days in August 2017.
- Training for all living lab leads will be run by FCC and will take place in London in September 2017. During the training the partners will learn how to use the 'Air pollution engagement tools' presented in Chapter 6 of this report. All materials mentioned in this chapter will be provided during training. They will also be available for download on the 'Virtual living lab'.

Regular communication:

- Regular calls with each living lab lead will be scheduled from July 2017. The first of these will continue discussions around the 'Local citizen engagement strategy' for each city.
- FCC will oversee the living labs remotely using the 'Stakeholder management plan'. This will involve ensuring all living lab leads regularly record any communication with stakeholders and engagement activities taking place. The plan will also be used for partners to communicate any concerns or issues they are having on a monthly basis so they can seek support from FCC or other partners in the project.
- 'Community feedback reports' will be sent to all partners involved in the iSCAPE project (not just the living labs) on a monthly basis to ensure all partners are aware of the ongoing activities, and so appropriate dissemination can happen. This will include information provided to FCC via the 'stakeholder management plan' as well as any other updates.

Active involvement:

- Some of the partners will need more support from FCC than others. Time will be allocated to them on a case by case basis and will vary over time. Support may include extra training, design support, additional city visits etc.

16 Author biographies

Anja Maerz has been a UX Researcher and UX Designer working on full UCD projects for a wide variety of clients and has a breadth of experience conducting fieldwork in diverse and unique environments – from exploring the behaviors of commuters in Belo Horizonte / Brazil to expat and local communities in Dubai and the Sorbic people of eastern Germany. She has an MA from Georg August University in Cultural Anthropology and is a Lead Insights Expert at Future Cities Catapult. In this role Anja has conducted research about public transport, the ambulance service and other city relevant topics. She conducts interviews and diary studies, carries out participant observations and workshops across the UK and internationally. Anja is most passionate about inspiring and enabling research participants to be actively creative in the process, an effort which has proven to inspire more nuanced insights. In the context of iSCAPE, Anja is leading Work Package 2, which is about setting up and managing the 7 iSCAPE living labs.

Lucy Barrett has a degree in Psychology and an MA in Social Research and has worked in research in both the public and the private realm for the past six years. She specialized in qualitative research methods and is interested in devising innovative and compelling ways to explore and communicate complex topics such as 'the future of energy' and 'how to encourage healthy behaviour in cities'. In her role at Future Cities Catapult, she focuses on the big challenges that cities face and how we can use user centred design to tackle these issues. In the context of iSCAPE, Lucy will work across WP1 and WP2, carrying our in-depth research on air quality and climate change challenges in the participating cities, and on the definition and set up of the iSCAPE living lab.

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