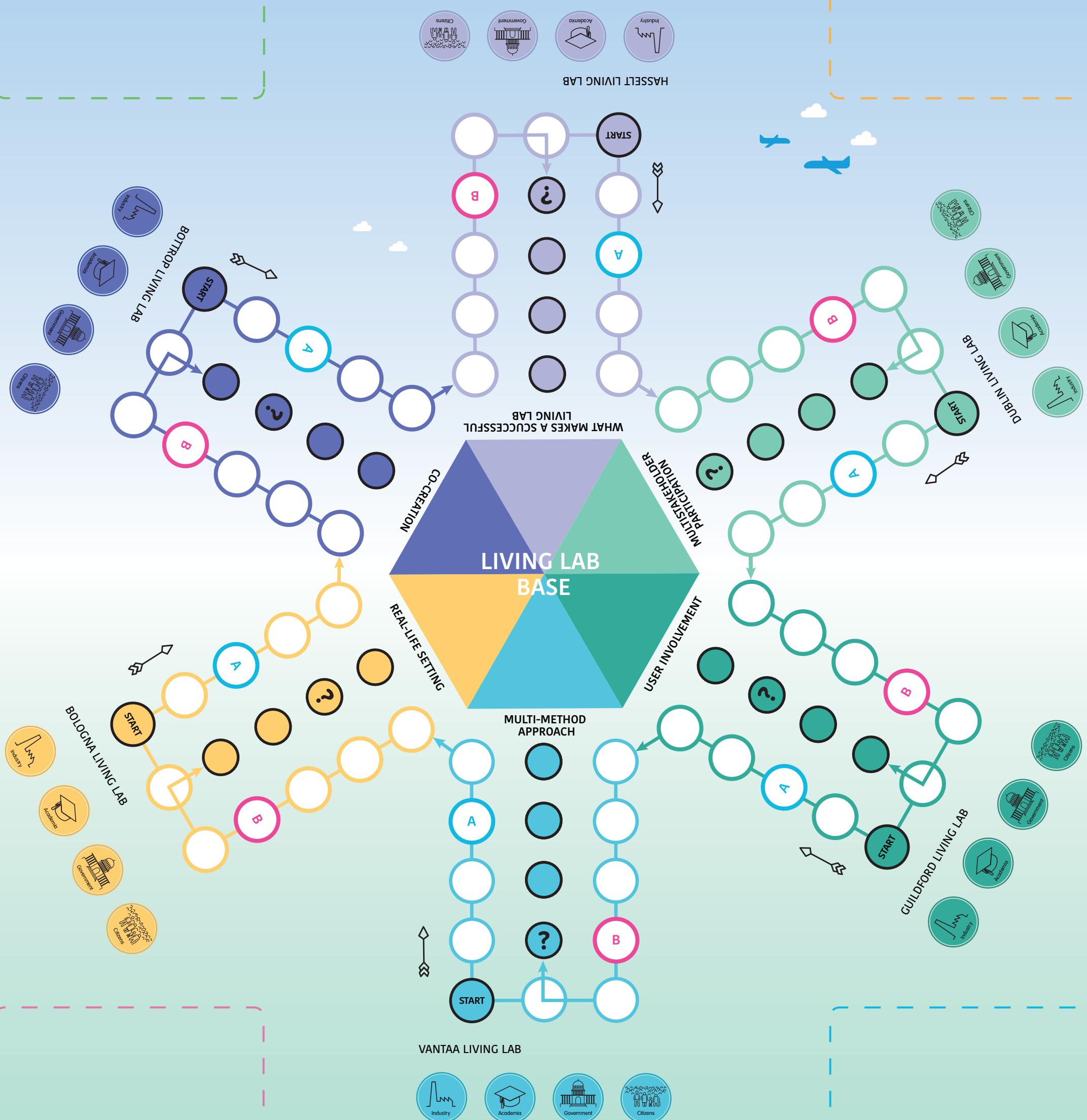




IMMERSE YOURSELF IN THE WORLD OF LIVING LABS
AND TACKLE AIR POLLUTION

???

LIVING LABS



BARRIERS

ACCELERATORS



IMMERSE YOURSELF IN THE WORLD OF LIVING LABS
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Bologna Living Lab



University of Bologna



Environmental challenge

The city is designed around the car. Bologna is located in a wide valley which increases air pollution. There is a culture of car use which leads to high level of traffic congestion.

Living Lab goal – Raise awareness about air quality and impact of passive control systems to reduce air pollution.

Intervention – Green infrastructure (trees) and Photocatalytic coating (paint with air purifying qualities).

Special powers – Simulations, modelling and a strong media presence.

Bottrop Living Lab



University of Dortmund and Municipality of Bottrop



Environmental challenge

Once a mining area, Bottrop has a rich industrial heritage. The city structure is dense and overcrowded. Bottrop has a culture of car use and a high level of traffic congestion. The link between air quality and climate change is poorly understood.

Living Lab goal – Involve citizens and local stakeholders in city greening initiatives. The objective is to improve air quality, as well as enhance wellbeing of local citizens.

Intervention – Urban design and planning.

Special powers – Close relationship with the city of Bottrop, advanced experience with citizen engagement and co-creation methodologies.

Hasselt Living Lab



University of Hasselt



Environmental challenge

Innovating within a historic city with small roads and walkways can be difficult and often creates a bottleneck for traffic. Hasselt's citizens have many misconceptions about good and bad behaviour in relation to air pollution.

Living Lab goal – Encourage pro-environmental behaviour among city residents by designing informational strategy-based behavioural interventions. Their biggest challenge is traffic congestion and as a result of this there is a peak in pollution during rush hour.

Intervention – Changing travel behaviour for greener cities.

Special powers – Strong relationships with other universities and research organisations in the Flanders area.

Vantaa Living Lab



Finnish Meteorological Institute (FMI)



Environmental challenge

The city of Vantaa is designed around the use of cars. The city is also very closely located to Helsinki and the highways to the capital are the area that are most polluted. The link between air quality and climate change is poorly understood and pollution is often invisible.

Living Lab goal – Raise awareness of citizens and city stakeholders about air quality and impact of green infrastructure to reduce air pollution and provide socio-economic benefits.

Intervention – Assessing green infrastructure.

Special powers – Unique in-house skillsets and meteorological equipment, strong connections to local science organisations.

Dublin Living Lab



University College Dublin, Trinity College Dublin



Environmental challenge

The city is designed around the car. Innovating within a historic city with small roads and walkways can be difficult. In Dublin the link between air quality and climate change is poorly understood.

Living Lab goal – Enhance dialogue between different stakeholders. Ensure people's voices are heard to generate solutions that address problems as air quality and climate change.

Intervention – Low Boundary Wall.

Special powers – Close relationship with the Dublin council and smart city initiatives, advanced public engagement and co-creation experience.

Guildford Living Lab



University of Surrey



Environmental challenge

The city has three major air pollution sources that increase the pollution levels: Heathrow, Gatwick as well as major highways that lead to London. People have a very basic knowledge of the health impact of air pollution and often don't see air quality as something they can change.

Living Lab goal – Raise citizens' awareness about air quality and impact of green infrastructure to reduce air pollution and improve health and wellbeing.

Intervention – Low Boundary wall (using hedges and trees).

Special powers – Multi-disciplinary team, existing connections to the local council and community groups.



CONSIDER YOUR OBJECTIVES AND
THE GOALS OF YOUR LIVING LAB



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Q: Living Labs can be quite a lot of work. Why do you think its a good idea to have a project manager or coordinator in your team?

Thought starters...

- Take care of the budget
- Coordinates tasks and time

Did the other players approve your answer?
If yes, go into the Living Lab base (YAY). **If not**, you have to skip the next round.



Q: What are the key Living Lab principles?

Thought starters...

- Co-creation
- Real-life setting Funding
- Multi-stakeholder participation

Did the other players approve your answer?
If yes, go into the Living Lab base (YAY). **If not**, you have to skip the next round.



Q: How would you go about engaging with your local community after a long engagement break?

Thought starters...

- Newsletter
- Meet-up events

Did the other players approve your answer?
If yes, go into the Living Lab base (YAY). **If not**, you have to skip the next round.



Q: Why do you need to think about the impact your Living Lab wants to create from the very beginning?

Thought starters...

- Working towards a goal (roadmap)
- Collaborate and reach out to the right partners

Did the other players approve your answer?
If yes, go into the Living Lab base (YAY). **If not**, you have to skip the next round.



Q: Have you come across the iSCAPE engagement principles? Tell us which principles are most relevant for your project work?

Thought starters...

- Make it personal
- Make it simple

Did the other players approve your answer?
If yes, go into the Living Lab base (YAY). **If not**, you have to skip the next round.



Q: Lessons learned are great, but they only work if you put them into action. What are your key learnings you would share with other Living Labs?

Thought starters...

- Funding
- Citizen engagement
- Innovation processes

Did the other players approve your answer?
If yes, go into the Living Lab base (YAY). **If not**, you have to skip the next round.



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Q: Workshops require a lot of energy and input. How would you share your learnings and outputs with the public? Why?

Thought starters...

- Blogs
- Newsletters
- Follow-up event

Did the other players approve your answer? If yes, go into the Living Lab base (YAY). If not, you have to skip the next round.



Q: What is the advantage of low-fi prototyping?

Thought starters...

- Paper models, Lego
- Concept development
- Fail fast, fail often

Did the other players approve your answer? If yes, go into the Living Lab base (YAY). If not, you have to skip the next round.



Q: What are the first steps when planning a public intervention that also involves data collection?

Thought starters...

- Local council confirmation
- Consent form of citizens interacting with the intervention and sensors technologies

Did the other players approve your answer? If yes, go into the Living Lab base (YAY). If not, you have to skip the next round.



Q: Who would you get in touch with when lacking a specific skillset or expertise?

Thought starters...

- Local university
- Research institutes
- SMEs

Did the other players approve your answer? If yes, go into the Living Lab base (YAY). If not, you have to skip the next round.



Q: You are planning a town hall event to communicate your Living Lab activities to the public. How do you get people attending?

Thought starters...

- Make it exciting
- Invite speakers who have already a wider audience
- Host it in a special location with refreshments

Did the other players approve your answer? If yes, go into the Living Lab base (YAY). If not, you have to skip the next round.



Q: How would you identify environmental challenges in your city?

Thought starters...

- Citizen science approach
- Crowdsourcing
- Research studies

Did the other players approve your answer? If yes, go into the Living Lab base (YAY). If not, you have to skip the next round.



CONSIDER YOUR OBJECTIVES AND
THE GOALS OF YOUR LIVING LAB



BARRIERS



BARRIERS



BARRIERS



BARRIERS



BARRIERS



Q: Considering the environmental challenges of your city, what kind of other interventions should be implemented?

Thought starters...

- Innovative technologies
- Lobbying

Did the other players approve your answer?
If yes, go into the Living Lab base (YAY). **If not**, you have to skip the next round.



BARRIERS

Oh no it looks like... your city authority are not aware about how Living Labs work and why the concept is better to their current way of working.

Next time... think carefully of how you develop a trusting relationship with your city. The Living Lab concept is only possible if the municipality is onboard. Explain the importance of involving the city and its citizens in a Living Lab, and keep authorities informed on a regular basis.

Go back... to the start (sorry!)



BARRIERS

Oh no it looks like... your Living Lab is running out of funding.

Next time... pro-actively reach out to potential sponsors. Think about brands or organisations with broad synergies with the Living Lab, or with your intervention in particular. Funding is essential to keep Living Lab activities moving forward.

Go back... 5 moves



BARRIERS

Oh no it looks like... you have identified a Living Lab intervention without an understanding of the environmental issues in your city.

Next time... work with local experts and organisations to assess existing and future challenges and opportunities in your city and use the findings to inform your Living Lab activities.

Miss your next turn



BARRIERS

Oh no it looks like... your Living Lab team underestimated the time and resources needed to manage your pilot and maintain relationships with stakeholders. This has led to unnecessary delays and coordination issues.

Next time... try planning your resources. Factor in time to form relationships, bearing in mind that relationships are built up through several encounters and introductions over time.

Go back... 3 moves



BARRIERS

Oh no it looks like... your Living Lab coordinator did not consider the permissions and approvals needed to deploy your intervention.

Next time... identify what permissions are needed when working with the public or prototyping in a real-life setting and obtain any further ethical, data collection and privacy approvals.

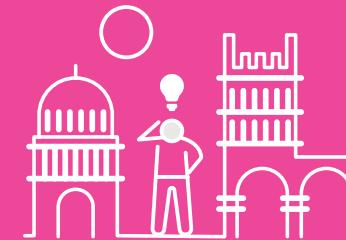
Freeze one of your figures for one round



BARRIERS



BARRIERS



BARRIERS



BARRIERS



BARRIERS



BARRIERS



BARRIERS

Oh no it looks like... your Living Lab has failed to recruit a multi-disciplinary team, essential for work across different sectors and engagement levels.

Next time... clarify which skills are already present and which are still required to achieve your Living Lab goals. Living Labs need the relevant expertise and skills to tackle challenges from different angles.

Go back... 2 moves.



BARRIERS

Oh no it looks like... you have decided to run a community workshop but have failed to recruit diverse participants and factor in ways to incentivise citizens to take part.

Next time... specify a target group and develop a multi-channel communication strategy accordingly. Don't take people's time for granted. Make sure citizens are given a reason or personal incentive for joining Living Lab activities or workshops.

Freeze one of your figures for one round



BARRIERS

Oh no it looks like... your Living Lab partners lack of experience in the area of citizen engagement and they require additional support in generating ideas for engaging citizens in creative ways.

Next time... look out for opportunities to collaborate with local initiatives, organisations and communities.

Go back... 1 move



BARRIERS

Oh no it looks like... the location of your intervention is making it difficult for a diverse group of users to access it.

Next time... spend time considering a suitable location for the Living Lab intervention within your city. In addition, think about creative ways to communicate the intervention and its effects eg, physical signs, colours, messages. Engagement can happen beyond the physical location using social media and online tools.

Go back... to start (sorry)



BARRIERS

Oh no it looks like... you have not considered using low-cost sensing devices to improve the citizens' understanding of their personal exposure.

Next time... use our iSCAPE Smart Citizen Kit, a low-cost sensor developed for citizen scientists.

Go back... 1 move



BARRIERS

Oh no it looks like... you did not expect the conflicting interests and priorities of your different Living Lab partners – industry, academia, government and citizens.

Next time... don't forget that each of your stakeholder groups have different objectives, needs and processes. The core team the Living Lab needs to develop and manage these relationships, and these differing priorities and objectives need to be accommodated by the Living Lab projects.

Go back... 3 move



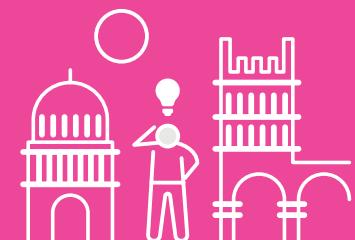
BARRIERS



BARRIERS



BARRIERS



BARRIERS



BARRIERS



ACCELERATOR



BARRIERS

Oh no it looks like... the Living Lab intervention has failed to raise awareness about air quality, climate change or any other sustainability challenges your city faces.

Next time... bear in mind the most important outcome of the activities in the Living Lab might not be the innovative solution, but rather the increased awareness of the stakeholders concerning the targeted environmental challenge.

Go back... 3 moves



BARRIERS

Oh no it looks like... you and your partners have not reflected on what the long-term impacts and lasting effects of your Living Lab will be on your city and its citizens.

Next time... have a clear idea of how and where you want to create that impact, especially in terms of behavioural change, awareness and replicability of your intervention

Go back... 2 moves



BARRIERS

Oh no it looks like... you and your partners have not thought about how the Living Lab intervention could best best to inform urban policy design in your city.

Next time... engage with policymakers to understand their issues and processes. In so doing you will be able to demonstrate how the Living Lab can support them to become more proactive.

Go back... 3 moves



BARRIERS

Oh no it looks like... your Living Lab has not considered how to engage citizens in its activities.

Next time... consider how to encourage greater involvement from citizens and community groups in the design of the intervention from earlier stages.

Go back... 3 moves



BARRIERS

Oh no it looks like... you waited for a response from your city for too long. Now your Living Lab missed out on other opportunities!

Next time... don't keep waiting. Reach out to different departments or contacts that could collaborate with you. There is always an alternative.

Miss your next turn



CONGRATULATIONS!

Your Living Lab has secured buy-in from the key decision makers in the city.

This is great because... you can now proceed with securing approvals and permissions for your Living Lab.

Go forward... 4 moves



ACCELERATOR



ACCELERATOR



ACCELERATOR



ACCELERATOR



ACCELERATOR



ACCELERATOR



CONGRATULATIONS!

You conducted a brainstorm workshop with citizens and city stakeholders on how they would solve the issue of air pollution in their city.

This is great because... your Living Lab intervention will be more meaningful to people's everyday lives and make its impact visible.

Go directly to the Living Lab base!



CONGRATULATIONS!

Your Living Lab has designed an intervention in such a way that it could be easily replicable in other cities, both in Europe and worldwide.

This is great because... replicability maximises impact and improves sustainability. Compiling a list of lessons learned is a great way for other cities to know what has already been tested and worked.

Throw again!



CONGRATULATIONS!

Your Living Lab has made the data it is gathering open source. This means data could be freely used, re-used and redistributed by anyone in your city.

This is great because... you have increased transparency and encouraged your city and citizens to further explore the data's potential.

Go directly to the Living Lab base!



CONGRATULATIONS!

Your Living Lab activities have provided some tangible examples of how air pollution can affect people as well as what people can do about it on a local level.

This is great because... your Living Lab has raised awareness and improved citizens' understanding of air pollution and climate change.

Go forward... 3 fields



CONGRATULATIONS!

You have used co-creation as a way to bring different stakeholders together and stimulate conversation between citizens, scientists, education professionals, and businesses.

This is great because... through working with diverse audiences, a Living Lab gains a better understanding of participants' needs and perceptions, in order to refine and develop its intervention.

Go forward... 4 fields



CONGRATULATIONS!

Your Living Lab has decided to incorporate citizen science in its activities. This means it will combine citizen engagement and sensor technologies to empower active communities to collect and analyse data.

This is great because... you are now able to engage your local community, and collect and analyse air pollution data. The findings could be used to develop action plans and to inform policy design and behaviour change.

Go forward... 3 fields



ACCELERATOR



ACCELERATOR



ACCELERATOR



ACCELERATOR



ACCELERATOR



ACCELERATOR



CONGRATULATIONS!

You have developed a policy simulation to demonstrate the future impacts of climate change and air pollution on your city.

This is great because... you can now present the simulation results back to your municipality stakeholders. By doing this, the Living Lab will improve their understanding of the concept and test the efficacy of simulations as a policy-making method.

Go forward... 2 fields



CONGRATULATIONS!

You have undertaken a desk-based research and academic literature review of existing urban air quality and climate change solutions and technologies.

This is great because... now your Living Lab has an excellent understanding of existing and emerging solutions that could be part of your pilot. You have also developed a library of best practice examples to inform the pilot's design and deployment.

Go forward... 3 fields



CONGRATULATIONS!

You have developed a promising stakeholder engagement plan.

This is great because... your Living Lab coordinator can now manage the stakeholders within the Living Lab and track communication and engagement activities.

Go forward... 1 fields



CONGRATULATIONS!

Your Living Lab deployed low-cost sensors (eg, Smart Citizen Kit) and monitoring stations.

This is great because... this enables your Living Lab to assess the effectiveness and socio-economic impact of its intervention.

Go forward... 2 fields



CONGRATULATIONS!

Your Living Lab has secured buy-in from the key decision makers in the city.

This is great because... you can now proceed with securing approvals and permissions for your Living Lab.

Go directly to the Living Lab base!



CONGRATULATIONS!

Your Living Lab has enabled citizens to monitor and visualise their personal air pollution exposure in a creative way.

This is great because... you have found a way to emphasise the scale of the problem and empower behaviour change.

Throw again!



ACCELERATOR



ACCELERATOR



CONGRATULATIONS!

You have used the Living Lab to develop new ways to disseminate academic knowledge to both citizens and government stakeholders.

This is great because... you have narrowed the gap between scientific research and policy making.

Throw again!



CONGRATULATIONS!

Your Living Lab findings have informed and influenced your city's air quality action plan.

This is great because... you have successfully demonstrated the value and impacts of a Living Lab to city stakeholders.

Go forward... 5 fields