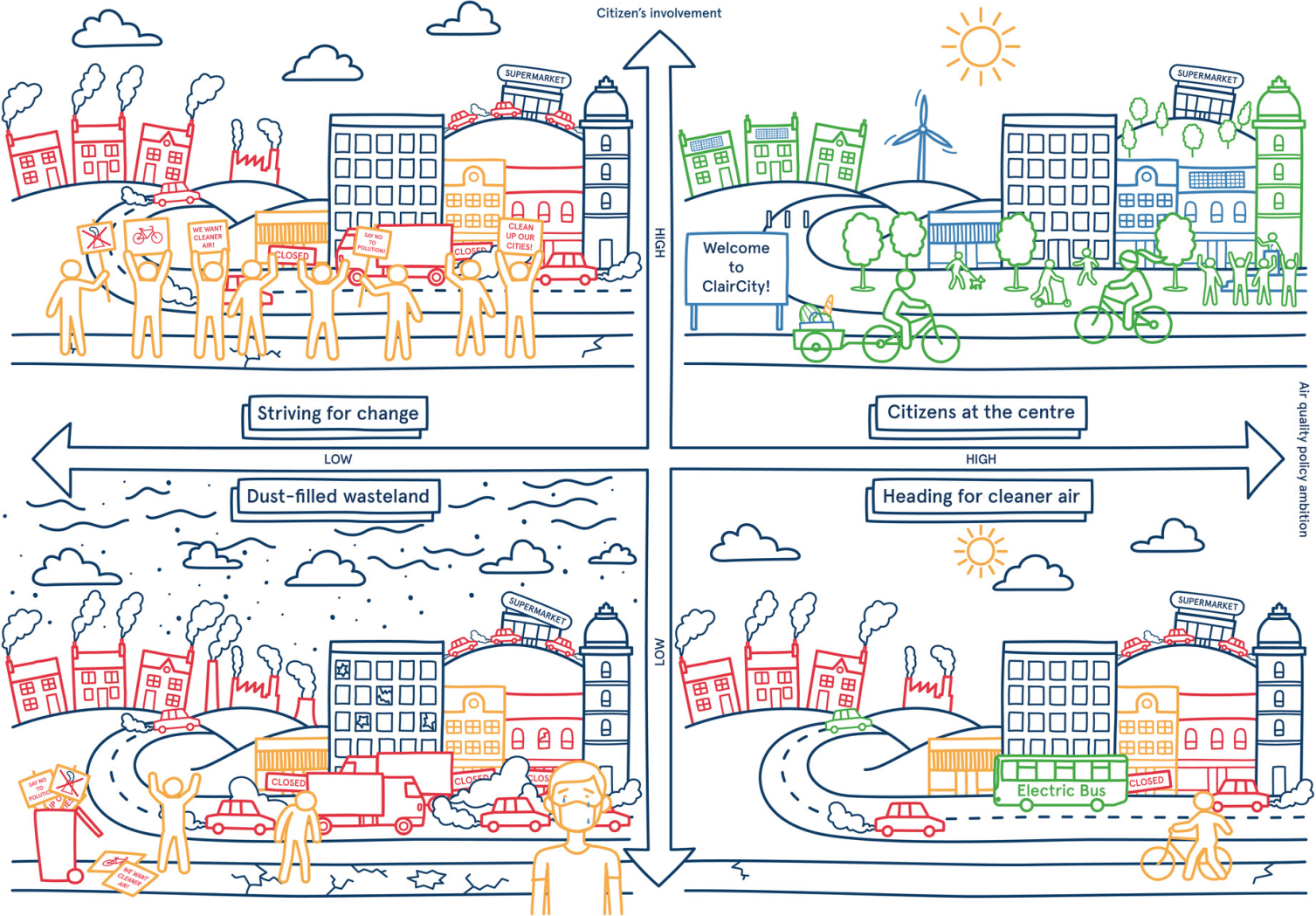




A visual evaluation of ClairCity: Our future with clean air

Engaging citizens in health and sustainability decision making

Which future do you want to help create?



Content

Page 1	What future do you want to help create?
Page 3	ClairCity: improving air quality, reducing carbon emissions
Page 5	The engagement process
	ClairCity in numbers
Page 7	- Social influence
Page 9	- Game stats
Page 10	- Delphi method
Page 11	- Policy package
Page 12	ClairCity Success stories
Page 13	- Accelerating health equity
Page 14	- Solving Bristol's air pollution problems together
Page 15	- Building national cooperation in Poland
Page 16	- Sustainability Leadership in Aveiro Region
Page 17	- Healthy competition in Liguria, Italy
Page 18	Using and adapting our engagement activities
Page 19	- Community engagement continuum
Page 20	- Film and schools competition
Page 21	- Workshops, Delphi method and city events
Page 22	- App and mobile game
Page 23	



ClairCity: improving air quality, reducing carbon emissions

How do you want to live, work, and travel in your city of the future?

That's the question we asked citizens across Europe in this four-year long research project. ClairCity was an EU research project which aimed to raise awareness about air pollution and carbon emissions in our cities, looking at how we all contribute to the problems and how they affect the air we breathe - and ultimately our health. Uniquely, the project put the power in the hands of residents to determine the best local solutions.

Air pollution is the cause of one in eight premature deaths worldwide. Poor air quality disproportionately harms children and the elderly, causing respiratory diseases, cancer and exacerbating heart conditions.

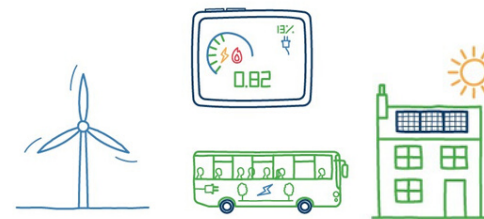


People living in cities are particularly affected, with 80% of urban residents exposed to harmful levels of air pollutants according to the World Health Organisation.

The link between carbon emissions and air pollution

While the effects of poor air quality are felt worldwide, the sources are usually local and regional. Every day, air pollution and carbon emissions are produced by our commutes to work, by heating our homes, or through our daily lifestyles. Understanding how we live - and the restrictions we face in those choices – is key to improving air quality. Solutions at a local level can make a big difference.

The activities polluting our air are also the same ones producing carbon emissions – the major cause of climate change. Reducing carbon emissions in cities is critical to achieve major cuts in carbon globally, so reducing climate risks. The EU now has a target of reaching net zero carbon emissions by 2050, with action urgently needed to improve the health of citizens and the environment.



The project

ClairCity was a Horizon 2020 funded project responding to the call 'Improving the Air Quality and Reducing the Carbon Footprint of European Cities' (SC5-4-2015). The project ran across six cities and regions in Europe - Amsterdam (Netherlands), Aveiro Region (Portugal), Bristol (UK), Liguria Region (Italy), Ljubljana (Slovenia), Sosnowiec (Poland) - engaging the public on issues of air pollution, carbon emissions, public health and wellbeing and the future of their cities and regions.

The project took a novel approach to understanding air pollution, carbon emissions, and their impact on citizen health and wellbeing. Using a sociologically informed perspective, the project aimed to shift the policy focus from technology and technological solutions to taking a closer look at the problems caused by people. ClairCity used innovative modelling and quantitative analysis to examine the role of people and society in creating pollution. By better understanding these behaviours and processes, successful policy interventions can be developed to meet local needs. Core to the project were a set of innovative tools that allowed city residents to participate in understanding the problem, visioning the future and backcasting to achieve results for their city.

Over **818,736** residents got involved across Europe through social media, a game for phones, schools competitions, city events, and local workshops.



An innovative approach

The project brought together detailed information about air quality in each city and how daily life there causes air pollution. Combined with citizen preferences and aspirations, we then generated possible future scenarios that modelled the options available to each city. All this information helped to define tailored solutions for each city and region. This unique approach raised awareness of air quality locally and ultimately allows us to work towards a future with clean air.

References:

bit.ly/1in8deaths

bit.ly/WHOurbanair

www.claircity.eu/reports

The engagement process

Public engagement during the research process and with the research results was critical for the success of the project. ClairCity aimed to take citizen engagement with future air quality policymaking one step further by carefully examining existing policy approaches, citizens' views on desired future policies, as well as city action perspectives and their limitations. By framing the source apportionment of air pollution, social practices, and city to national policies from the perspective of the citizen, the project aimed to make air pollution and carbon emissions and the associated health implications relatable to individual and societal actions, with a core communication goal of raising awareness of air quality.

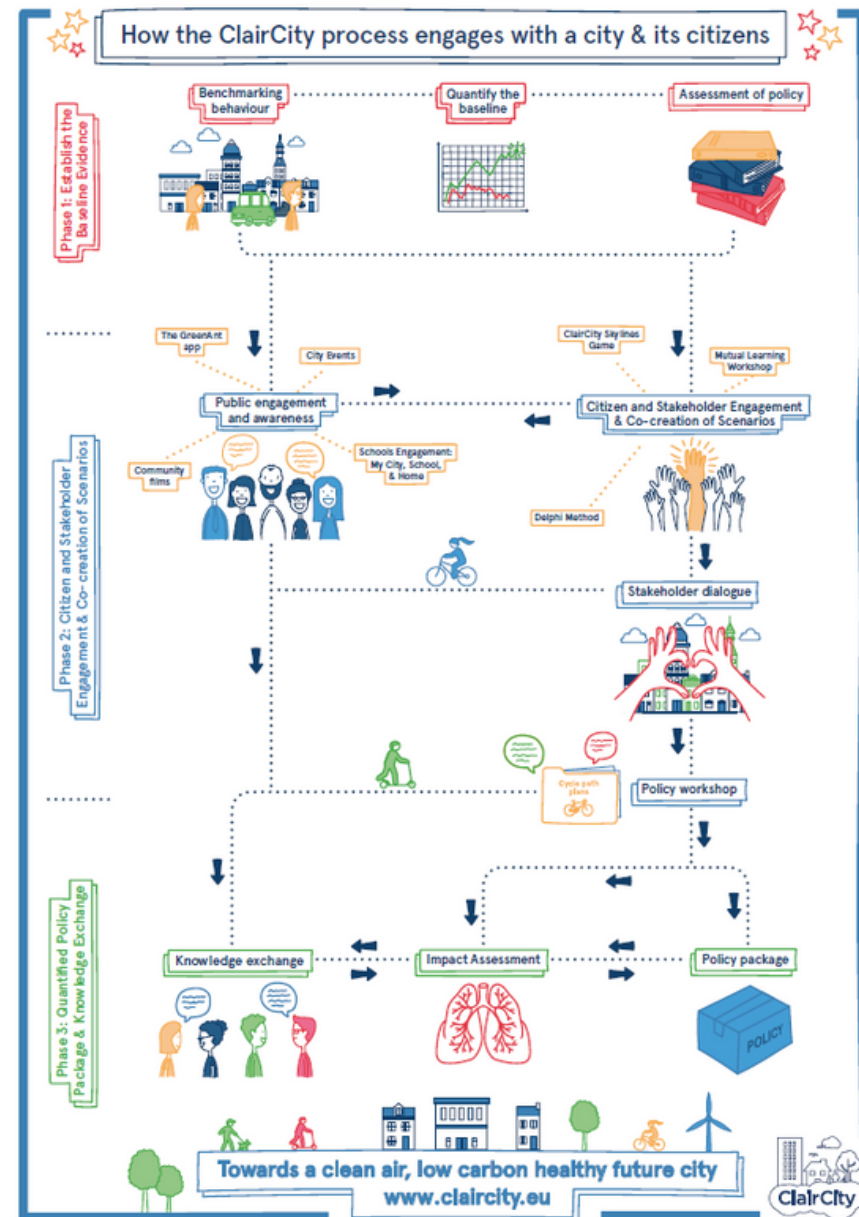
Why engage?

Engagement with citizens can lead to the following learning outcomes¹:

1. Skills
2. Knowledge and understanding
3. Behaviour and progression
4. Enjoyment, inspiration, and creativity
5. Attitudes and values

These outcomes (apart from skills) were measured in the ClairCity project to assess the project's effectiveness in raising awareness of air quality challenges and their solutions.

¹ bit.ly/AClearingoutcomes



How were people engaged?

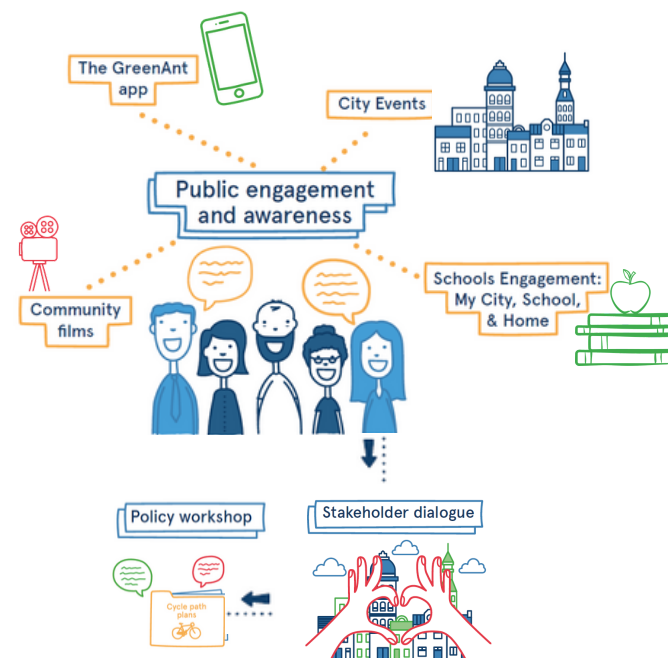
Different things appeal to different audiences. With this in mind, ClairCity tailored their approach when working with different groups of society. In addition to traditional methods (surveys, workshops) we held distributed dialogues in community spaces. We also worked with educators to produce schools resources, with developers to produce games and Apps for young adults and tech fans, and with older people to produce films documenting their lived experience of air pollution. These mixed methods ensured a full spectrum of engagement approaches were deployed (see page 19).

To evaluate the engagement we used interviews and questionnaires with participants and staff, media coverage, photos and dissemination activities (conferences, reports and journals).



Who did we engage?

ClairCity recruited more than 7,613 people during the course of the project. This was achieved through a combination of the diverse methods used along with traditional forms of marketing in each city or region. These included: emails, word-of-mouth, presence at events, networking, newsletters, press coverage, community partnerships and a social media presence.



ClairCity in numbers

818,736
citizens
involved across
6 cities and
regions


82
Policy makers
consulted

132
stakeholders
involved in Mutual
Learning Workshop



65
Older people
filmed


4887
citizens involved
in Delphi
process

>7,613
direct
engagements


>1000
children engaged
in public events
and lessons


447
school children
engaged in My
School, My City,
My Home
competition

Social influence

ClairCity was present across Europe, via various channels: Facebook, YouTube, Instagram, Twitter and our project website. Most cities and regions managed their own social media channels, available in their native language and tailored to their audience.


In some areas, social media use was a smaller part of the communications plan because local teams had alternative channels to engage with citizens and local agencies which gave a more valuable return on investment of time and project resources. In other regions or cities, social media played an important role in reaching a wider audience.




For more information:
www.claircity.eu
twitter.com/ClairCity
bit.ly/ClairCityYouTube



BROMMERS EN SCOOTERS
Amsterdam is de enige stad met een milieuzone voor brommers en scooter.



OS PORTUGUESES PREOCUPAM-SE
97% dos Portugueses pensa que é importante proteger o ambiente.



TWOJE ZDROWIE
Wdychanie zanieczyszczonego powietrza przyczynia się do występowania ataku serca, wylewu i raka płuc oraz pogarsza stan zdrowia chorych, pogłębiając choroby układu oddechowego, takie jak astma czy zapalenie oskrzeli.

770,253
Twitter
impressions



5,801
YouTube
video views



1,418
Facebook
followers



33,678
Website
visitors





Game stats

ClairCity Skylines was launched and promoted in each city. The smartphone game allows citizens to step inside the shoes of the Mayor and decide which policy measures they think will keep the city alive and thriving into the future.

69,476
policies selected



2,800
unique users

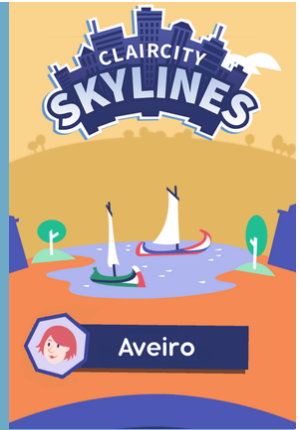
63:37
Male:Female
ratio

83,339
'Years'
played



Top 5 policies (16-34 year olds)*

- Train drivers how to drive fuel efficiently
- Make all taxis meet minimum clean engine standards
- Free bicycles and electric bikes available to residents
- Ban coal except low sulphur coal
- Restrict traffic in some areas at certain times



*From all cities and regions. Each city/region may have very different Top 5s

Delphi method

A Delphi method involves qualitative data collection, obtained iteratively to identify consensus on often complex issues such as air pollution and climate change.

A total of 4,887 citizens participated in ClairCity's Delphi process. Each city and region conducted surveys, on- and offline, followed by additional face-to-face workshops. The process asked participants for their current behavioural practices as well as their preferred future behaviours and policies for the city in 2050.

During the process, citizens were challenged to think about their behaviours - "If you want to change, what are the reasons why you can't currently?". Subsequently they explored difficult policy options and discussed how they could be made easier. For example, a common behaviour citizens wished to change in Liguria was driving - many are

willing to drive less. A possible policy measure is to introduce a ban on all private diesel and petrol vehicles from the city centre. According to citizens, to compensate for the elimination of the private vehicle from the roads it would be essential to have frequent public transport and longer hours of operation.

Striving for representivity, partner organisations in each case study region defined groups that were likely to be under-represented in their sample, and used their resources and networks to ensure more effort was put into recruiting these groups. For example, this involved street surveys in a neighbourhood with a higher non-Dutch population in Amsterdam, attending community festivals in poorer neighbourhoods in Bristol, and using connections through the network of local authorities across the Aveiro Region spread the survey to a non-urban public.

As a result, the project was able to pool together the collective knowledge and experience of a broad range of local people's travelling and home heating habits and the opportunities and problems faced in their cities or regions.



Desires of commuters in Liguria Region

	High polluting choice in future (car only)	Low polluting choice in future ('car and other' or non-car) e.g. car and walk; walk and bus
High polluting choice in present (car only)	41 Entrenched	134 Looking for positive change
Low polluting choice in present ('car and other' or non-car) e.g. car and walk; walk and bus	32 Getting worse	307 Staying positive

For more information:
www.claircity.eu/reports

Policy package

Following the engagement process, a policy report was produced for each city. These detailed the citizens' preferred policies, along with a health impact assessment and results from our modelling, showing how these policies would shape that future air quality and carbon emissions through to 2050.

We found that air quality and carbon emissions will improve over time under business as usual (BAU). This is due to existing policy measures coming into full effect, in combination with generic technological trends.

However this is not enough to meet the policy ambition of some cities or the advice of the scientific community, which states we need to cut carbon emissions by 45% by 2030 and reach net zero by 2050. As developed nations, Europe may in fact need to achieve greater reductions, at a quicker pace due to their bigger contribution to total emissions at present.

For more information:
www.claircity.eu/reports



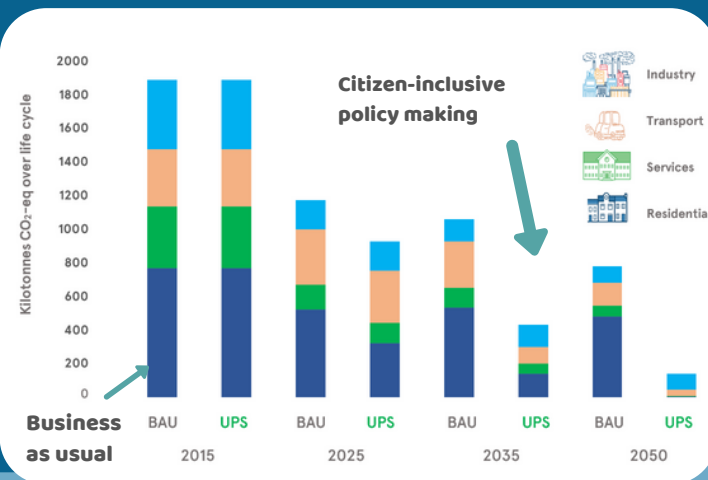
In Bristol, ClairCity found that if residents' preferences were implemented, compliance with legal levels of Nitrogen Dioxide would be reached in the timeframe required by Government and the city could achieve carbon neutrality sooner than current baseline policy ideas.

The policies identified as being popular with citizens were similar to those being developed by the Council. In fact, the research showed that citizens supported measures that went further than those currently being developed.

Meanwhile, Amsterdam is so ambitious - aiming for zero transport emissions by 2030, free from natural gas by 2040, and near carbon neutral by 2050 - that enhanced communication is required so the public can align with this ambition.

Each city is different, with different environmental, social and economic issues that will influence the policies most appropriate for their context. What is clear, however, is that to accelerate the transition to a zero carbon, clean air future, citizen involvement is crucial.

Modelling carbon emission reductions



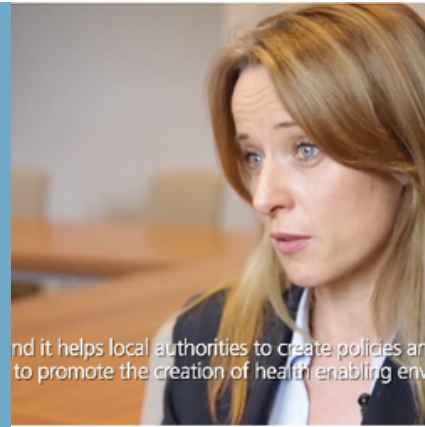
Success stories

Accelerating Health Equity

In 2019, ClairCity was recognised by the WHO – the World Health Organisation – for its role in addressing health equity. The Organisation valued ClairCity’s inclusive participatory process and proactive approach to addressing air pollution, with citizens at the centre. They produced a video about ClairCity’s work in Sosnowiec for its High Level Conference on Health Equity. The video highlights the Skylines game that the project created to raise awareness of local air quality and influence behaviour change, as well as the city’s engagement with schools.

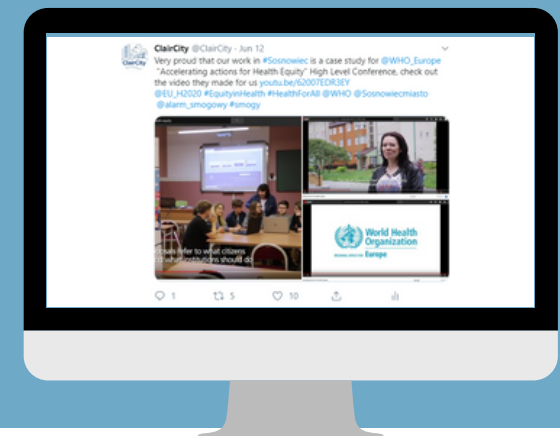
To make the approach inclusive and participatory, each city involved on the ClairCity project has been working with local communities from different socio-economic backgrounds and using different tools for engagement that most appeals to them.

For more information:
bit.ly/ClairCityWHO
bit.ly/WHOVideo



To reach these communities they have partnered with community organisations and local authorities, exchanging knowledge between them and the local university so together they can work towards equitable outcomes concerning air quality.

The Sosnowiec local government increased the local budget to co-finance the activities of residents aimed at reducing pollution, such as subsidies for stove replacement, photovoltaic panels, solar collectors and heat pump installations, the purchasing of electric buses and the replacement of street lighting, making this the perfect opportunity to harness the project's work and continue engagements post-ClairCity. When ClairCity began there were no bike paths in the city; now there is a growing network.



Solving Bristol's air pollution problems together

Thanks to additional funding from UWE Bristol, the ClairCity Bristol team were able to engage more than 800 children during the course of the project, trialling and testing the schools resources in ClairCity's Educators Pack. They further engaged many more families and young people at festivals and during community consultations across the city.

Communications Officer Corra Boushel said: "An exciting part of the activities, alongside getting to do air quality tests, watch for chemical reactions and start planning how to solve air pollution in their neighbourhoods, was a chance for the children to get involved in city democracy. When there was time available, we invited the pupils to write letters to their politicians to explain what they had discovered and share their solutions for Bristol's air pollution".

So far, over 150 letters from young people have been sent to their local councillors, both Mayors and the relevant MPs.

For more information and to read the responses www.claircity.eu/blog/600-children-solving-bristols-air-pollution-problems



We have been impressed by the dedication and thoughts of the children, and also delighted that many local politicians have found time to respond to the letters directly," added Corra.

All responses were sent on to teachers to make sure that the children know their letters were received, read and recognised. As one teacher put it: "From our point of view, writing and sending the Mayor letters made the learning purposeful and very real for the children... Thank you for such a great day!"

Thank you for taking the time to write to me. It's great to hear from young people who are interested in important issues. You came up with some great ideas about how we can change transport to reduce air pollution... Our [Clean Air] plan is a plan for everyone in the city, and so it is great to see your thoughts on how you think we can reduce air pollution. By working together, we can make Bristol cleaner for everyone.

Marvin Rees, Mayor of Bristol

Building national cooperation in Poland

Thanks in part to the ClairCity project, Sosnowiec has been able to position itself as an expert at a national level in decision-making processes regarding air quality with residents. The ClairCity engagement process, using innovative tools such as interactive workshops and mobile decision-making games has been key to this success.

Poland's Communist history has meant certain groups of citizens are not willing to engage in public affairs, believing their voice does not matter. However, ClairCity's modern methods have been able to overcome many citizen's aversion to engaging in city affairs.

The involvement of Sosnowiec in the project was thanks to the city's consultative platform of stakeholders, which the team utilised to reach different age groups over the four year period. As a result, the team have shared their

knowledge and experiences with residents of Polish cities, stakeholders and policy makers, representatives of schools and scientific and research units, and business representatives.

The Sosnowiec team also took advantage of opportunities to share their learnings at events and conferences throughout the project period. Some of the events they attended include: Environment and Energy in H2020 Programme information Day (October 2016) and Day with Horizon 2020 (October 2019). They also organised their own events, including annual meetings (Round Table for Clean Air) with residents, stakeholders and policy makers and played host to the Annual ClairCity conference in 2018.

Natalia Dziurawicz, from the Sosnowiec team said: "We want to use ClairCity tools and methodology to support consultations regarding city plans and municipal strategies. Active involvement of citizens in such activities showed that their engagement at the very beginning of decision-making process and joint search for solutions guarantees their support in implementing decisions".

For more information:

bit.ly/ClairCityConference2018

www.youtube.com/watch?v=QRxV_FKoFfo

bit.ly/RoundTableforCleanAir



© Kacper Jurkiewicz / Marzena Bugała-Azarko

ClairCity Conference
Citizen-led Air Pollution Reduction in Cities

Protecting citizen health:
Mitigating air pollution from domestic heating and transport

You are invited to join us for the ClairCity annual conference 2018, at the Sosnowiec Science and Technology Park, Poland on 25 April. This year the conference focus is on:

- Understanding the challenges of urban air quality
- Sharing best practice and cutting edge solutions for air polluted cities

For more information and registration visit bit.ly/ClairCityPoland2018

25 April 2018
Sosnowiec, Poland



www.claircity.eu



Our future with clean air
www.claircity.eu

Projekt realizowany jest w 16 miastach w Polsce

Wśród 16 partnerów projektu europejskich - 4 miasta z Funduszy Europejskich

W Sosnowcu za realizację projektu Funduszy Europejskich

Budżet projektu w tym dla Sosnowieca

Natalia Dziurawicz
UM SOSNOWIEC, PROJEKT CLAIRCITY



Sustainability Leadership Aveiro Region

In 2018, at ClairCity's first working group meeting, the Aveiro Region decided to set up a Sustainability Working Group for it's region. The goals were to reinforce inter-municipal cooperation in the area of sustainability and to define projects and strategies that can be common to the 11 Municipalities of the region, in order to benefit all, sharing knowledge, problems and solutions.

As a result of the working group several important developments have taken place. They now have clearly defined common priorities for the municipalities in the areas of climate change, risks and vulnerabilities, smart cities and water efficiency. Future Horizon 2020 and Horizon Europe opportunities have been debated and pursued.

For more information:
bit.ly/RdANewsletter

Finally, a common strategy of action is in the process of being defined and presented to the municipality's policy makers in the hope of aiding ongoing dialogue and action post-ClairCity.

ClairCity is another example of institutional cooperation between the Intermunicipal Community of the Aveiro Region (CIRA), the Municipalities and the University of Aveiro, providing the resources to bring people together and design, develop and implement new and innovative projects and initiatives.

Through this ongoing dialogue, the group were able to freely exchange knowledge, problem solve, avoid repeating mistakes and develop a broader vision and strategy for the territory, without concern of juridical borders.



Healthy competition in Liguria Region, Italy

Over the course of one day in October 2019, the Liguria project team engaged hundreds of citizens in Genoa during its annual Science Festival. Over 80 people involved in the ClairCity process participated, including children and teachers who took part in the schools competition and the producers of films made for the video competition (which collectively have been viewed over 1,000 times on YouTube). Together, they were able to share their personal experiences on the project and highlight the important role young people play in tackling air pollution and climate change.

During the Festival, the team spoke with citizens about air pollution and carbon emissions in the region to raise awareness of these important issues. The results from the schools competition was presented and the short videos were displayed. One video, "Anemmu in bici a Zena" in fact won an award at the Festival.

For more information:
<http://bit.ly/YouTubeLiguria>
www.claircity.eu/liguria
www.facebook.com/ClairCityLigure

Great applause was received by the producer come songwriter Mr. Fontana as he gave a rendition of the song during the award ceremony.

Four schools participated in the schools competition in Genova - totalling 23 teams between the ages of 13 and 16. Following an introductory lesson on air pollution and climate change, teams worked together to understand more about these issues in their local context and explore how different policy measures would influence the health, climate and air quality in the future. The winning team - 'Green Hearth' of Primo Levi Institute was chosen as the team that put forward the best policy measures and justification for their selection.

The regional team and the teachers involved in the competition have seen the value of the tool in engaging young people on these pertinent issues and see its long term value in future decision making for cities that extends beyond just clean air and climate change.



Using and adapting ClairCity's engagement activities

Community engagement continuum

Inform

To provide stakeholders with balanced and objective information to assist them in understanding the problem, alternatives and solutions.

"Here's what's happening"

Consult

To obtain stakeholder feedback on analysis, alternatives and/or decisions.

"Here are some options, what do you think?"

Involve

To work directly with stakeholders throughout the process to ensure that their concerns and aspirations are consistently understood.

"Here's a problem, what ideas do you have?"

Collaborate

To partner with stakeholders in each aspect of the decision from development to solution.

"Let's work together to solve the problem"

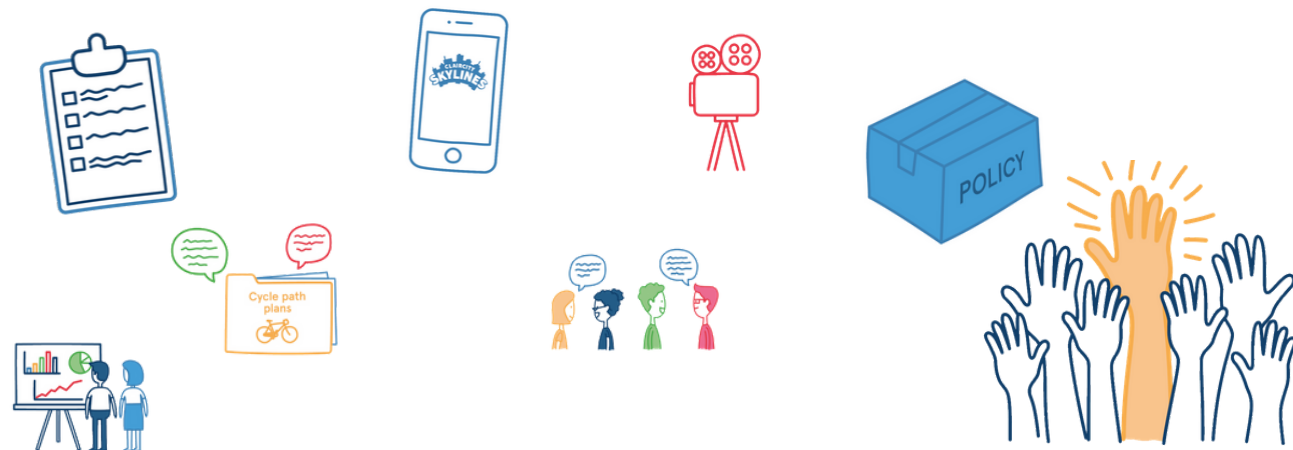
Empower

Shared leadership of community-led projects with final decision-making at the community level

"You care about this issue and are leading an initiative, how can we support you?"

Top Tip

Aim to cover the full spectrum of approaches in your work in order to appeal to different audiences.



Community films

Videos appeal to a wide audience and are shareable (YouTube)

What worked

Dedicated and targeted promotion and partnerships to spread the message

Allowed (some) older people to share their experiences with younger people

Working with a camera team capable of producing high quality content

Improve by...

Working with local organisations to increase reach and amplify call to action

Asking participants how they would like to share their story, as some people are camera shy

Exploring free editing software or working with film students



For more information see our accompanying Educator Pack

Schools Engagement: My City, School, & Home

Working with schools allows you to engage pupils on multiple occasions to deepen their understanding

What worked

Developing lessons that could satisfy curriculum requirements and testing in different schools

Developing both online and analogue materials so that different learning styles could be satisfied

Teachers thought activities would increase pupils understanding and motivation to act

Improve by...

Approaching educators, to ask what works best for them. Work together to create a tailored plan for the context

Experimenting with analogue versions, or making the digital element more flexible

Document the actions pupils take as a result of their involvement

Mutual Learning Workshop



Allows for in-depth discussion and the co-creation of policy solutions

What worked

Agreeing on time, location and access to the location with input from the target audience

Improve by...

Asking your audience how you can tailor the content to better suit their needs

A great way to bring together different expertise

Inviting participants from business, and allowing more time for discussing visions and actions

Dividing up tasks between staff and having one or several dedicated facilitators

Piloting in advance so facilitator can think how best to manage the space and keep activities focused, and evaluating can assess the most appropriate forms of data collection

Delphi Method



A tried and tested approach, surveys allow for robust quantitative and qualitative analysis

What worked

Gathering responses from 1,000s of people, from countries all over Europe

Improve by...

Targeting community organisations to increase your chances of capturing a representative sample

Increasing knowledge about health, air quality and climate change

Keeping theory to a minimum and being clear on how citizens involvement will go on to influence city decision making

Inspiring participants to change their behaviour as a result of participating

Allowing time for participants to network and discuss ways to follow through with their behaviour change.

City Events



Taking engagements to the streets allows for interaction with new audiences

What worked

Participating in existing, well-established events or working with affiliated organisations

Improve by

Consider combining with pre-existing events (e.g. local festivals) in a variety of locations

Having fact sheets to take away and being honest when you don't know the answers.

Providing a brief for ambassadors beforehand with frequent questions and answers

Providing hands on activities to capture people's attention quickly

Capturing participants intended behaviour change (e.g. through pledges) or ask them to take action on the day (e.g. write to PM)

The GreenAnt app

We only tested our app internally, however below we state some common challenges of existing Apps that collect health data.

What worked

People were able to access air quality data and how this related to health

Improve by...

Having ethical discussions with expected users to clear up any concerns they may have

Participants intended to change their behaviours after interacting with the app

Thinking of ways to document/monitor behaviour change intentions

Engaging people who are already technologically savvy

Partner with community organisations, reaching out and testing with different groups

Innovative digital technology



ClairCity Skylines Game

Engaging participants with no prior knowledge of air pollution and encouraging behaviour change

What worked

Crowdsourcing public opinion from across Europe

Improve by...

Asking your audience what kind of games they like and co-create the game with them so they continue to use it

Actively reaching out to different groups, such as commuters, minority groups, etc. at public events

Host dedicated games workshops with younger (13-15) audiences to increase their involvement

Younger participants particularly enjoyed the game

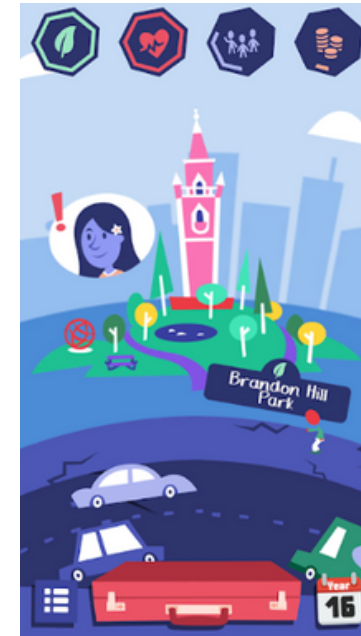
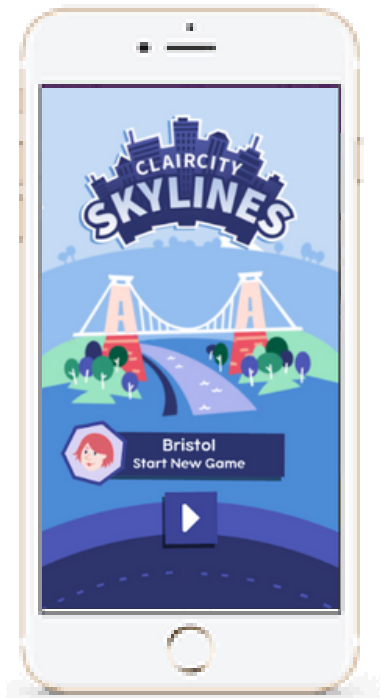
Invest more time advertising in places where they will see your adverts (schools, young adult magazines, Snapchat and Instagram)





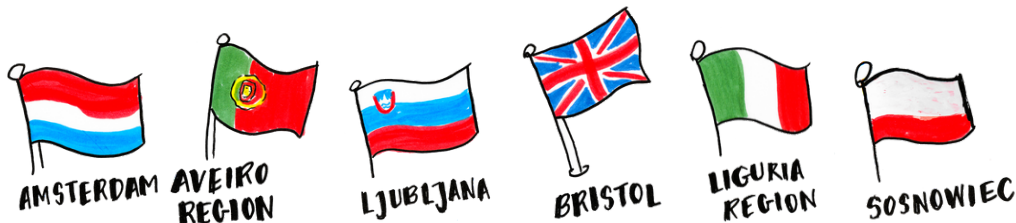
ClairCity Skylines

Can you save your city?



ClairCity Skylines allows citizens to step inside the shoes of the Mayor and decide which policy measures you think will keep the city alive and thriving into the future. It is currently available for the six partner cities and regions involved in ClairCity but the concept can easily be adapted for other places. Explore the game if available in your language, or consider using our analogue version available in our [Educator Pack](#) to get citizens to understand the tradeoffs that have to be made when taking decisions about the future. Choices will inform the ClairCity project about citizens policy preferences for a future with clean air. Get in touch if your city is interested in their own ClairCity Skyline. Available on iOS and Android.





Thanks to our partners!

1. **TECHNE Consulting (Italy)**
2. **Transport & Mobility Leuven (Belgium)**
3. **University of Aveiro (Portugal)**
4. **Municipality of Amsterdam (Netherlands)**
5. **Bristol City Council (UK)**
6. **Intermunicipal Community of Aveiro Region (Portugal)**
7. **Liguria Region (Italy)**
8. **Municipality of Ljubljana (Slovenia)**
9. **Sosnowiec City Council (Poland)**
10. **Trinomics B.V. (The Netherlands)**
11. **University of the West of England, Bristol (UK)**
12. **PBL Netherlands Environmental Assessment Agency**
13. **Statistics Netherlands (CBS)**
14. **Technical University of Denmark (Denmark)**
15. **Norwegian Institute for Air Research (NILU) (Norway)**
16. **Regional Environmental Center for Central and Eastern Europe (REC) (Hungary)**

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