UWE Bristol | University of the West of England

From science communication to action – engaging with society's change makers

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@laurafoggrogers

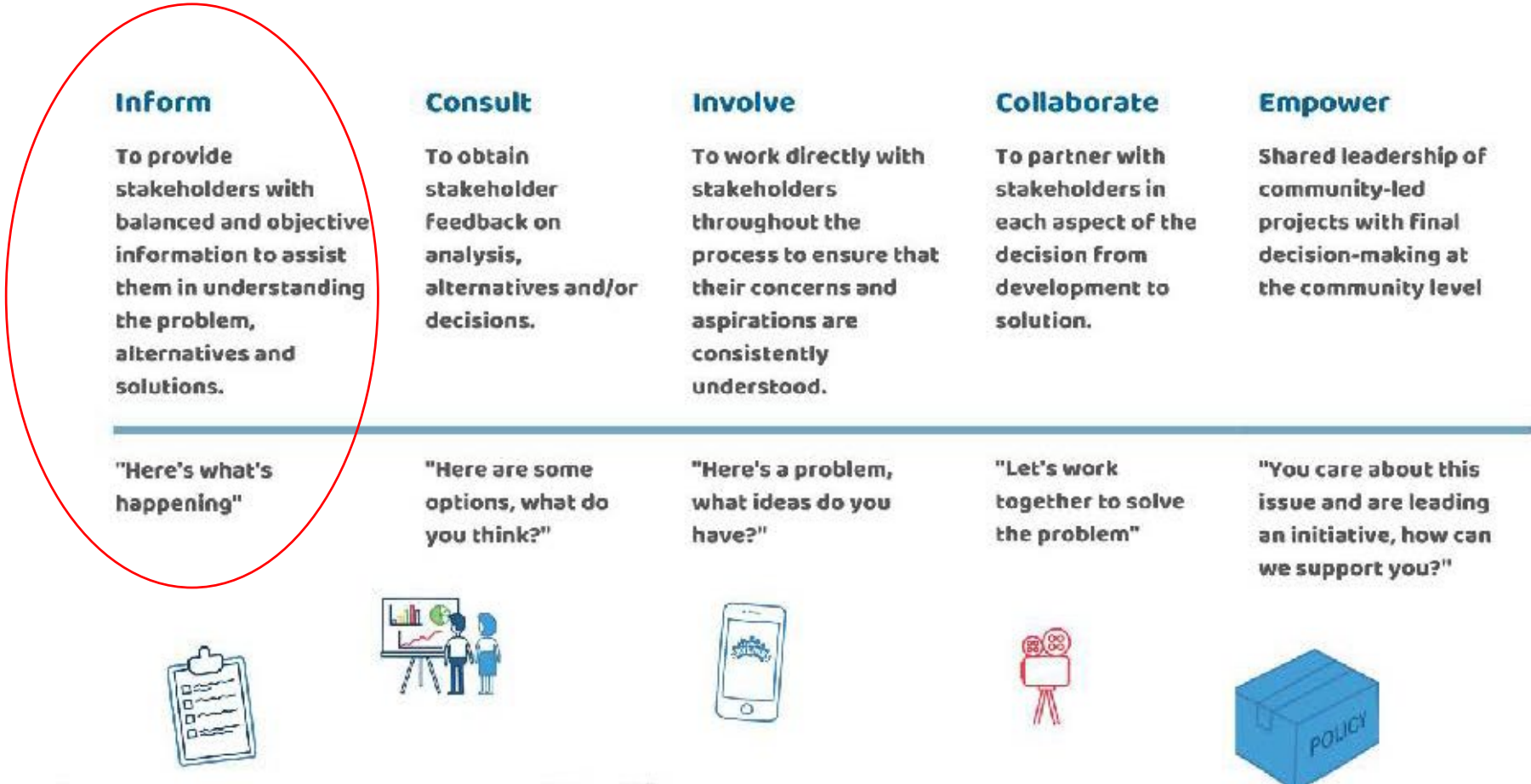**https://www.uwe.ac.uk/research/centres-and-groups/scu**

ClairCity

WECOUNT

DETI
DIGITAL ENGINEERING
TECHNOLOGY & INNOVATION

Climate and Ecological Emergency

https://www.ipcc.ch/sr15/

Net Zero 2030

Where is science communication?

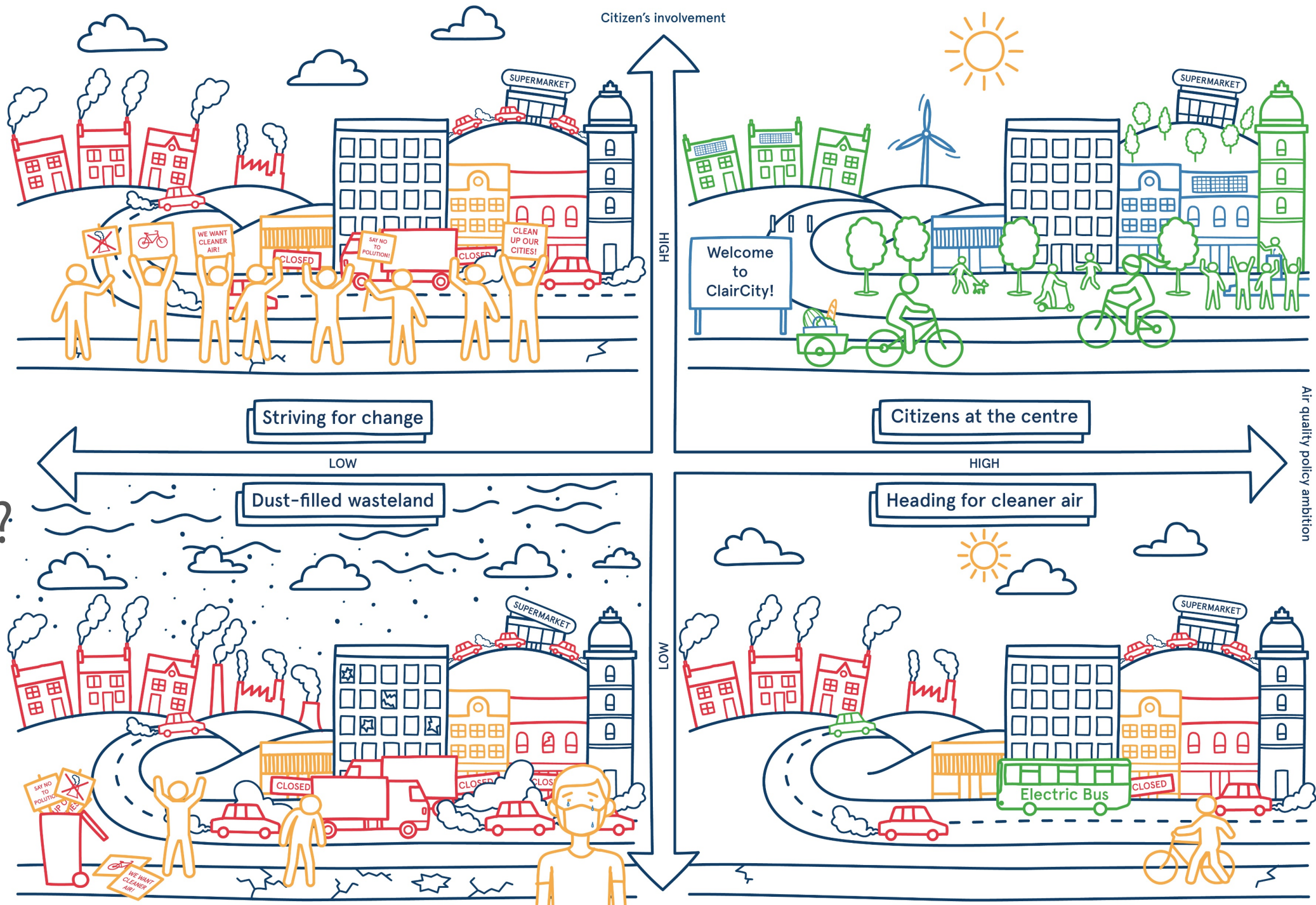| Inform	Consult	Involve	Collaborate	Empower
To provide stakeholders with balanced and objective information to assist them in understanding the problem, alternatives and solutions.	To obtain stakeholder feedback on analysis, alternatives and/or decisions.	To work directly with stakeholders throughout the process to ensure that their concerns and aspirations are consistently understood.	To partner with stakeholders in each aspect of the decision from development to solution.	Shared leadership of community-led projects with final decision-making at the community level
"Here's what's happening"	"Here are some options, what do you think?"	"Here's a problem, what ideas do you have?"	"Let's work together to solve the problem"	"You care about this issue and are leading an initiative, how can we support you?"

G. Stuart, "What is the Spectrum of Public Participation?," *Sustaining Community*, 2017.
https://www.theguardian.com/commentisfree/2021/may/04/information-campaigns-brexit-covid-climate-crisis-cop26

Which future do you want to help create?

Citizen's involvement

Air quality policy ambition

HIGH

LOW

HIGH

LOW

Striving for change

Citizens at the centre

Dust-filled wasteland

Heading for cleaner air

WE WANT CLEANER AIR!
CLOSED
SAY NO TO POLUTION!
CLOSED
CLEAN UP OUR CITIES!
SUPERMARKET

Welcome to ClairCity!
SUPERMARKET

CLOSED
SAY NO TO POLUTION
SUPERMARKET
WE WANT CLEANER AIR!

Electric Bus
SUPERMARKET
CLOSED

Citizen-led air pollution reduction in cities

Everyday, air pollution and carbon emissions are produced by our commutes to work, by heating our homes, or through our daily lifestyles.

The ClairCity aim was to create a major shift in public understanding towards the causes of poor air quality, inviting citizens to give their opinions on air pollution and carbon reduction to shape the cities of the future
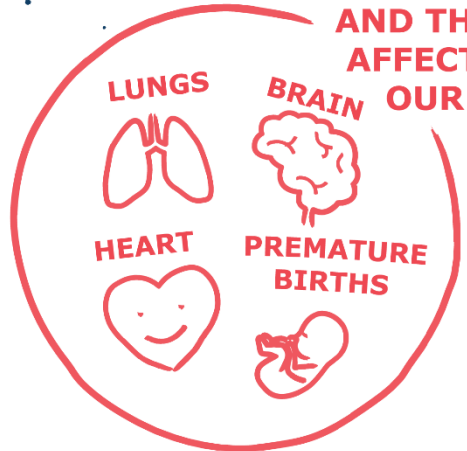(2016–2020).

WHAT IS AIR POLLUTION AND HOW DOES IT AFFECT US?

AIR POLLUTION

NOx

SOOT DUST

$PM_{2.5}$ PM_{10}

WE BREATHE IT IN

AND THIS AFFECTS OUR

LUNGS

BRAIN

HEART

PREMATURE BIRTHS

WHO'S AT RISK

ALL OF US!

BUT ESPECIALLY...
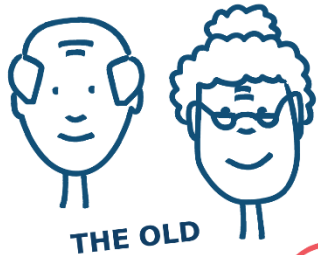
THE OLD

THE YOUNG

PEOPLE WITH HEALTH CONDITIONS

IT'S YOUR HEALTH

BREATHING POLLUTED AIR RAISES THE CHANCES OF HEART ATTACKS, STROKES, AND LUNG CANCER. IT MAKES RESPIRATORY CONDITIONS LIKE ASTHMA OR BRONCHITIS WORSE.
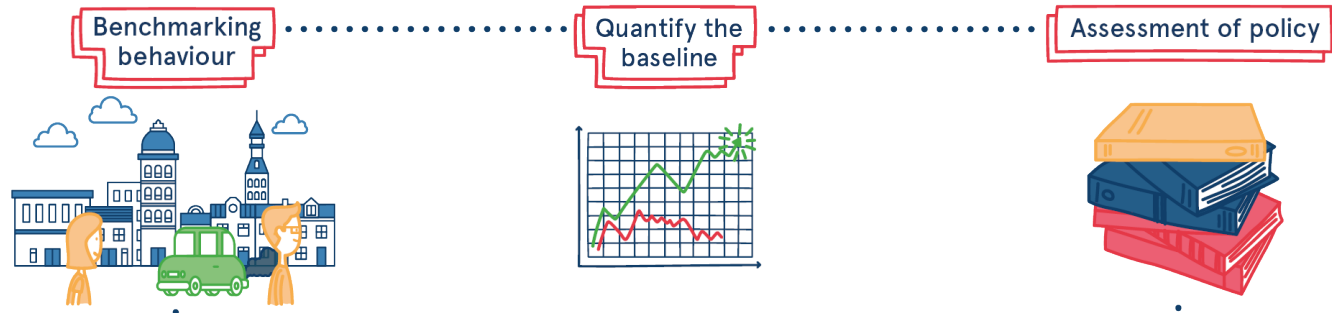
1 IN 8 DEATHS

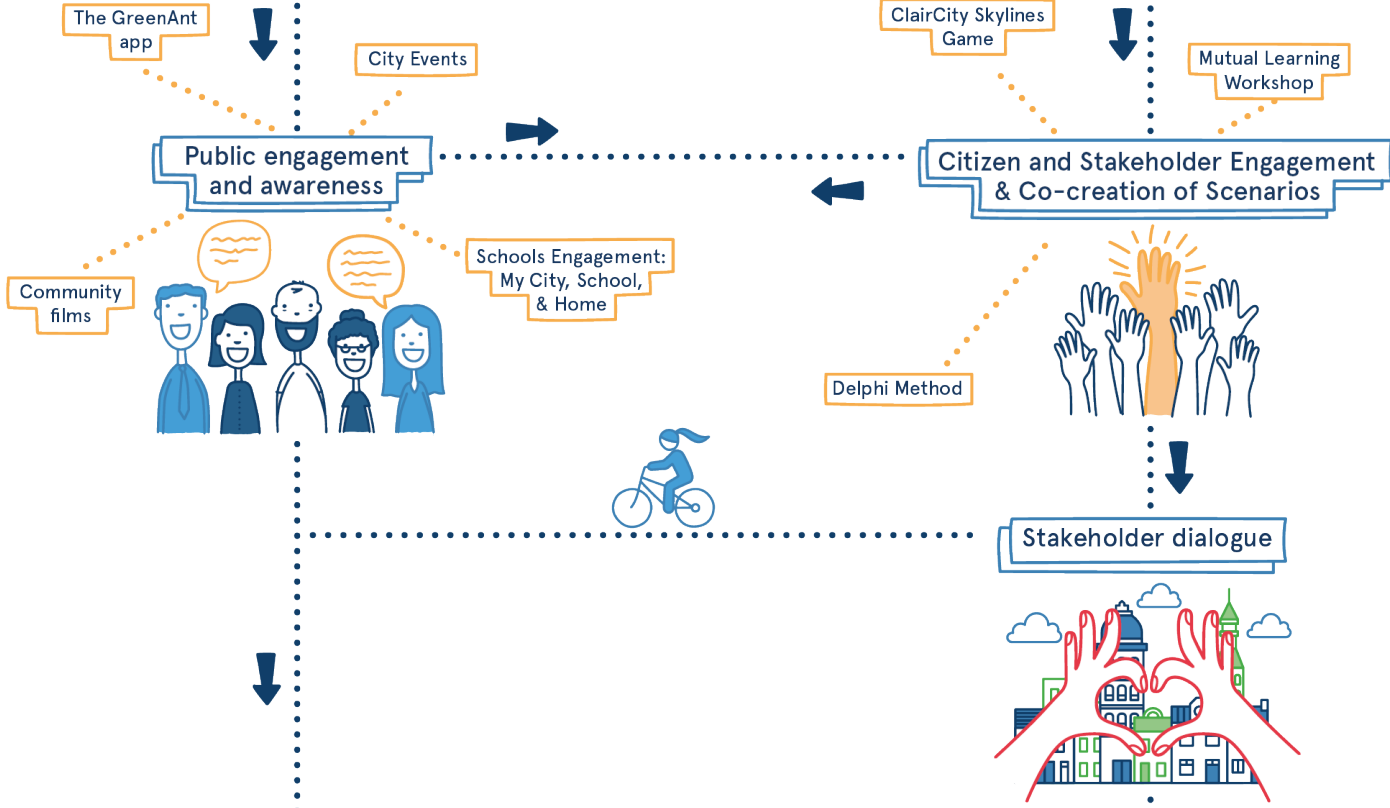AIR POLLUTION CAUSES ONE IN EVERY EIGHT PREMATURE DEATHS WORLDWIDE.

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How the ClairCity process engages with a city & its citizens

Phase 1: Establish the Baseline Evidence

Benchmarking behaviour

Quantify the baseline

Assessment of policy

Phase 2: Citizen and Stakeholder Engagement & Co-creation of Scenarios

The GreenAnt app

City Events

ClairCity Skylines Game

Mutual Learning Workshop

Public engagement and awareness

Citizen and Stakeholder Engagement & Co-creation of Scenarios

Community films

Schools Engagement: My City, School, & Home

Delphi Method

Stakeholder dialogue

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How the ClairCity process engages with a city & its citizens

Phase 3: Quantified Policy Package & Knowledge Exchange

Cycle path plans

Policy workshop

Knowledge exchange

Impact Assessment

Policy package

POLICY

Towards a clean air, low carbon healthy future city
www.claircity.eu

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Baseline reports e.g. why we travel… relative distance contribution of our travel activities in Bristol
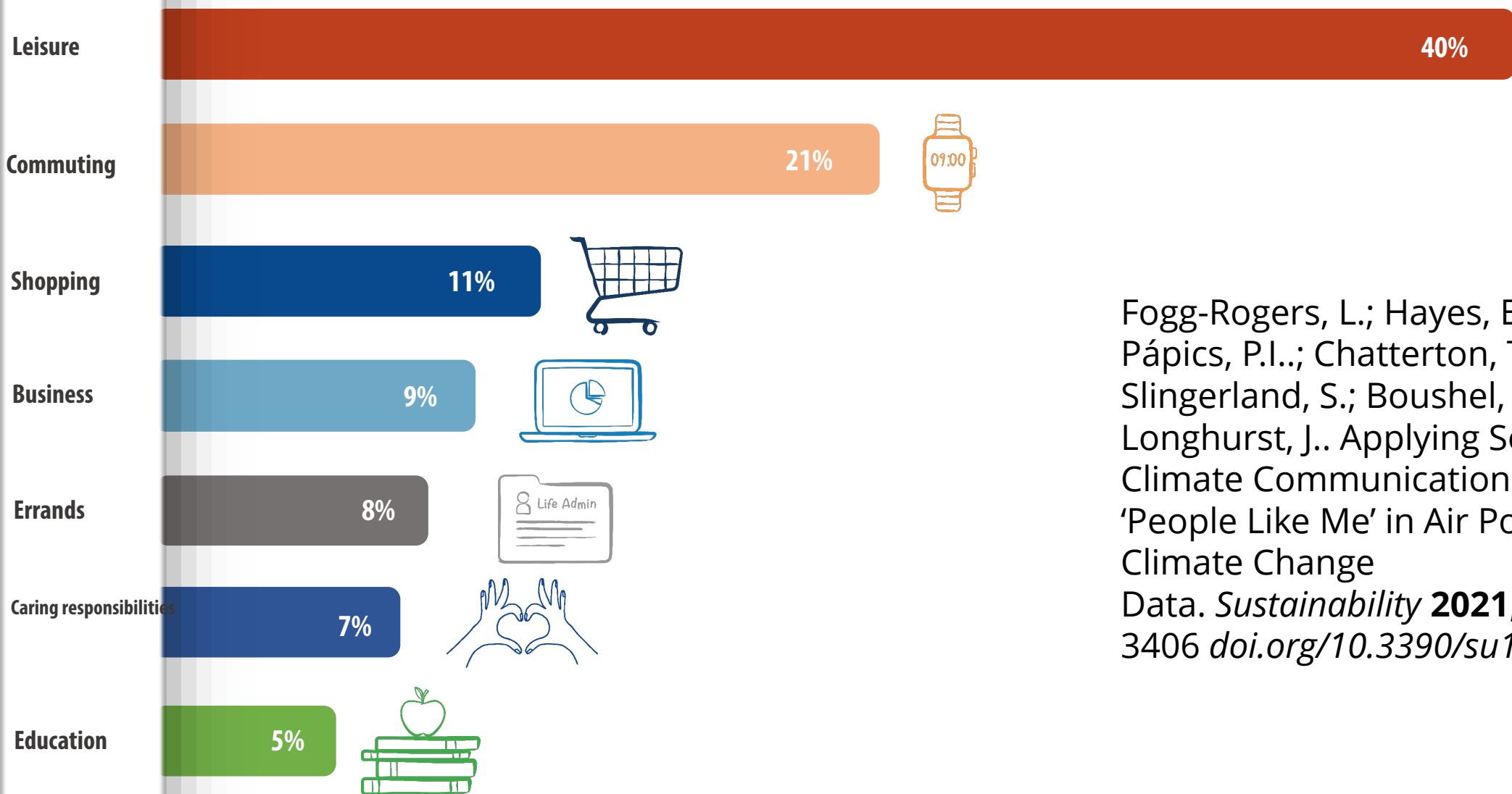
Leisure — 40%

Commuting — 21%

Shopping — 11%

Business — 9%

Errands — 8%

Caring responsibilities — 7%

Education — 5%

Relative % contribution

Fogg-Rogers, L.; Hayes, E.; Vanherle, K.; Pápics, P.I..; Chatterton, T.; Barnes, J.; Slingerland, S.; Boushel, C.; Laggan, S.; Longhurst, J.. Applying Social Learning to Climate Communications—Visualising 'People Like Me' in Air Pollution and Climate Change Data. *Sustainability* **2021**, *13*(6) 3406 *doi.org/10.3390/su13063406*

*Data gathered in 2015 to show baseline behaviours (% rounded)

The seven segments in depth

Progressive Activists

Backbone Conservatives

Civic Pragmatists

Established Liberals

Disengaged Battlers

Disengaged Traditionalists

Loyal Nationals
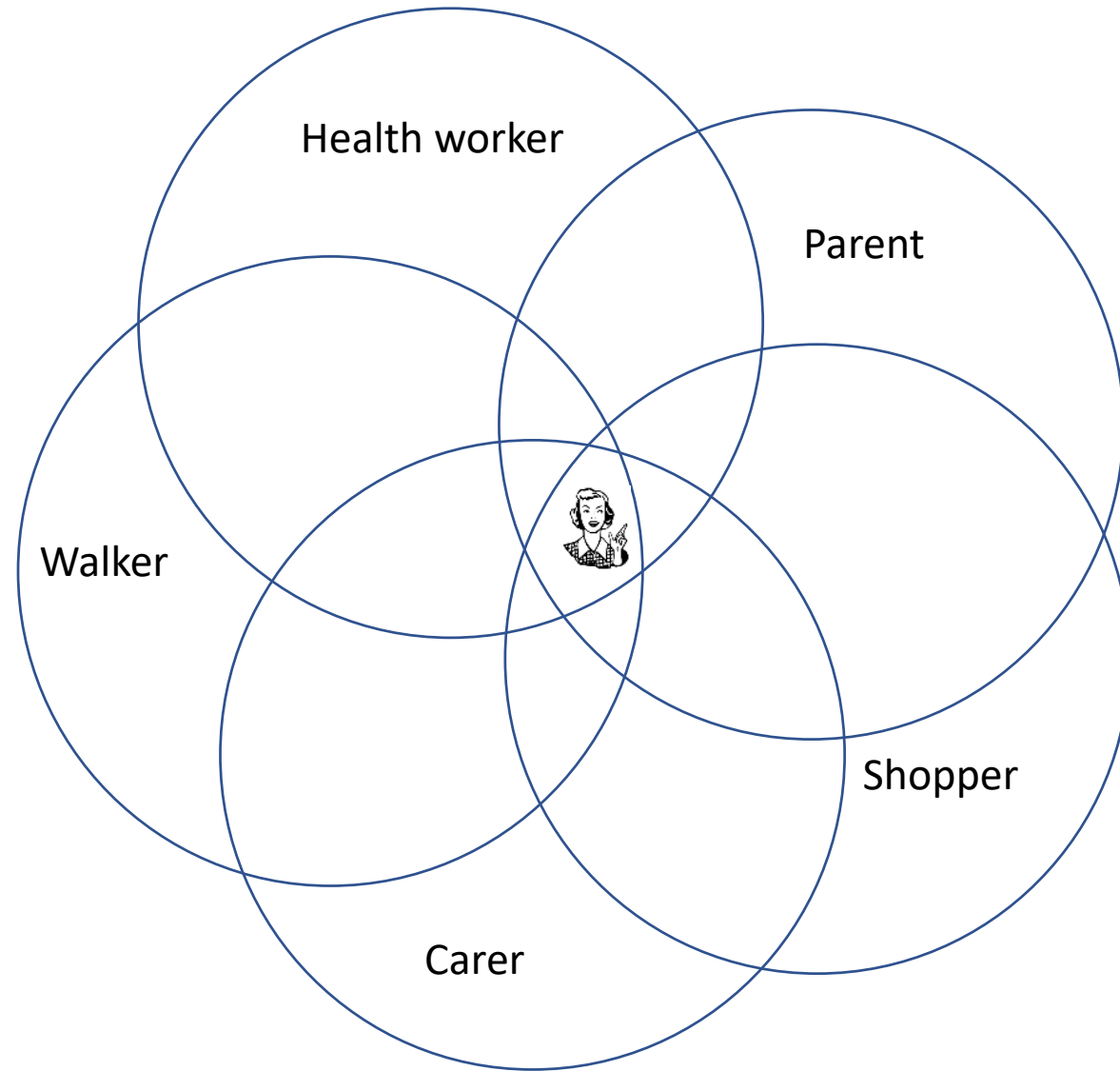
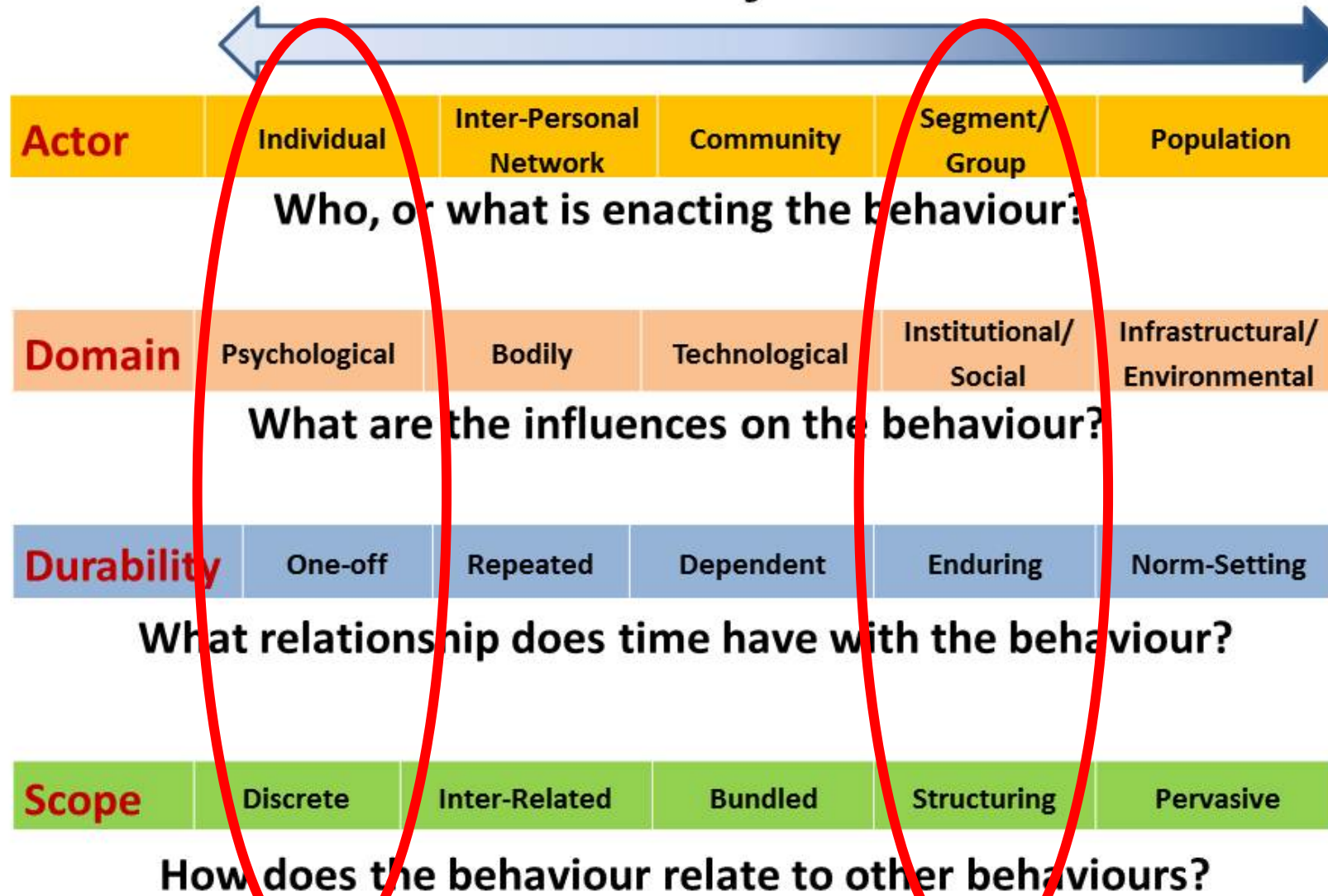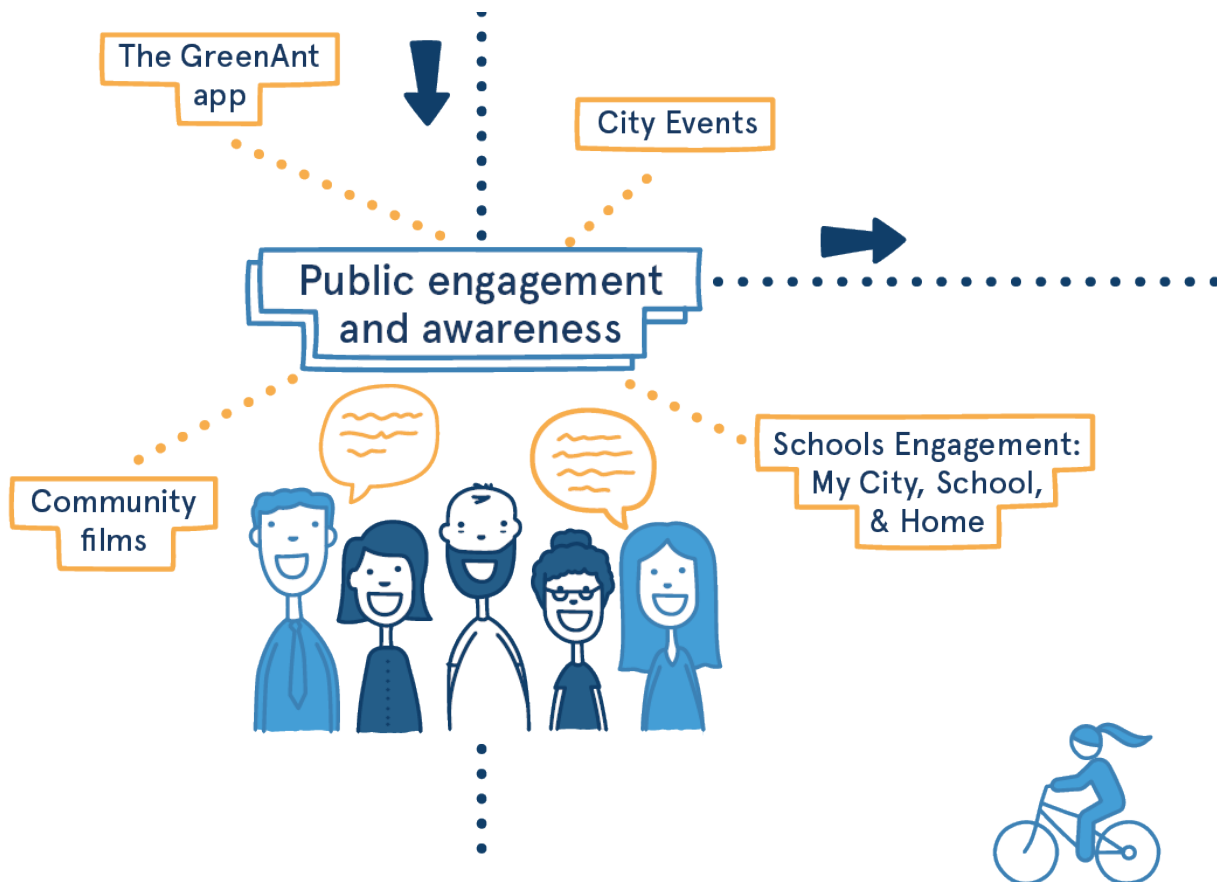https://climateoutreach.org/britain-talks-climate/seven-segments/

Social identity and social cognition = people like us

Fogg-Rogers, L.; Hayes, E.; Vanherle, K.; Pápics, P.I..; Chatterton, T.; Barnes, J.; Slingerland, S.; Boushel, C.; Laggan, S.; Longhurst, J.. Applying Social Learning to Climate Communications—Visualising 'People Like Me' in Air Pollution and Climate Change Data. *Sustainability* **2021**, *13*(6) 3406 *doi.org/10.3390/su13063406*

4 Dimensions of Behaviour

Actor	Individual	Inter-Personal Network	Community	Segment/ Group	Population

Who, or what is enacting the behaviour?

Domain	Psychological	Bodily	Technological	Institutional/ Social	Infrastructural/ Environmental

What are the influences on the behaviour?

Durability	One-off	Repeated	Dependent	Enduring	Norm-Setting

What relationship does time have with the behaviour?

Scope	Discrete	Inter-Related	Bundled	Structuring	Pervasive

How does the behaviour relate to other behaviours?

Chatterton, T. and Wilson, C. (2014) The 'Four Dimensions of Behaviour' framework: A tool for characterising behaviours to help design better interventions . Transportation Planning and Technology, 37 (1). pp. 38-61. ISSN 0308-1060

Consult and Involve

The GreenAnt app

City Events

Public engagement and awareness

Community films

Schools Engagement: My City, School, & Home

Sue on why walking helps her diabetes

I'm Sue and I'm Bristolian. I've lived in the city most of m...

0:05 / 1:54

Community films

Schools Engagement:

City Events

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Consult and Involve

ClairCity Skylines

Delphi Method

Mutual Learning Workshop

Mutual Learning Workshop

Delphi Method

ClairCity Skylines Game

Citizen and Stakeholder Engagement & Co-creation of Scenarios

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Different activities needed to appeal to different ages, genders, and communities

Age of all participants

M. Sardo, S. Laggan, C. Boushel, and L. Fogg Rogers, "Citizen-led air pollution reduction in cities (ClairCity) Final evaluation report," 2020. https://uwe-repository.worktribe.com/output/6017473/citizen-led-air-pollution-reduction-in-cities-claircity-final-evaluation-report

www.claircity.eu

Different activities needed to appeal to different ages, genders, and communities

Gender distribution by activity

M. Sardo, S. Laggan, C. Boushel, and L. Fogg Rogers, "Citizen-led air pollution reduction in cities (ClairCity) Final evaluation report," 2020. https://uwe-repository.worktribe.com/output/6017473/citizen-led-air-pollution-reduction-in-cities-claircity-final-evaluation-report

Different activities needed to appeal to different ages, genders, and communities

Demographics

- **62.5%** Men
- **25%** 16-24
- **81%** workshop participants older men

Activities

- **74%** intend to change their behaviour
- **98%** found policy workshop useful
- **21%** knowledgeable before playing
- **61%** found schools activities useful

Engagement Findings

- the more participants understanding had improved, the more likely they were to change their behaviour

- the more participants enjoyed the activity, the more their understanding of air quality improved

- the younger the participants, the more likely they were to say that they enjoyed the activity

M. Sardo, S. Laggan, C. Boushel, and L. Fogg Rogers, "Citizen-led air pollution reduction in cities (ClairCity) Final evaluation report," 2020. https://uwe-repository.worktribe.com/output/6017473/citizen-led-air-pollution-reduction-in-cities-claircity-final-evaluation-report

Collaborate – citizens want ambitious policies designed with their needs in mind

Bristol's top five
Citizen-led clean air policies

1. Ban/phase out polluting vehicles

2. Make buses greener and cleaner

3. Make public transport more affordable

4. Create alternatives to car use through better walking and cycling infrastructure

5. Reduce vehicle road space and increase public transport space

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Road transport NOx and PM10 emissions scenarios by motive

NOx and PM10 emissions by scenario and Motive
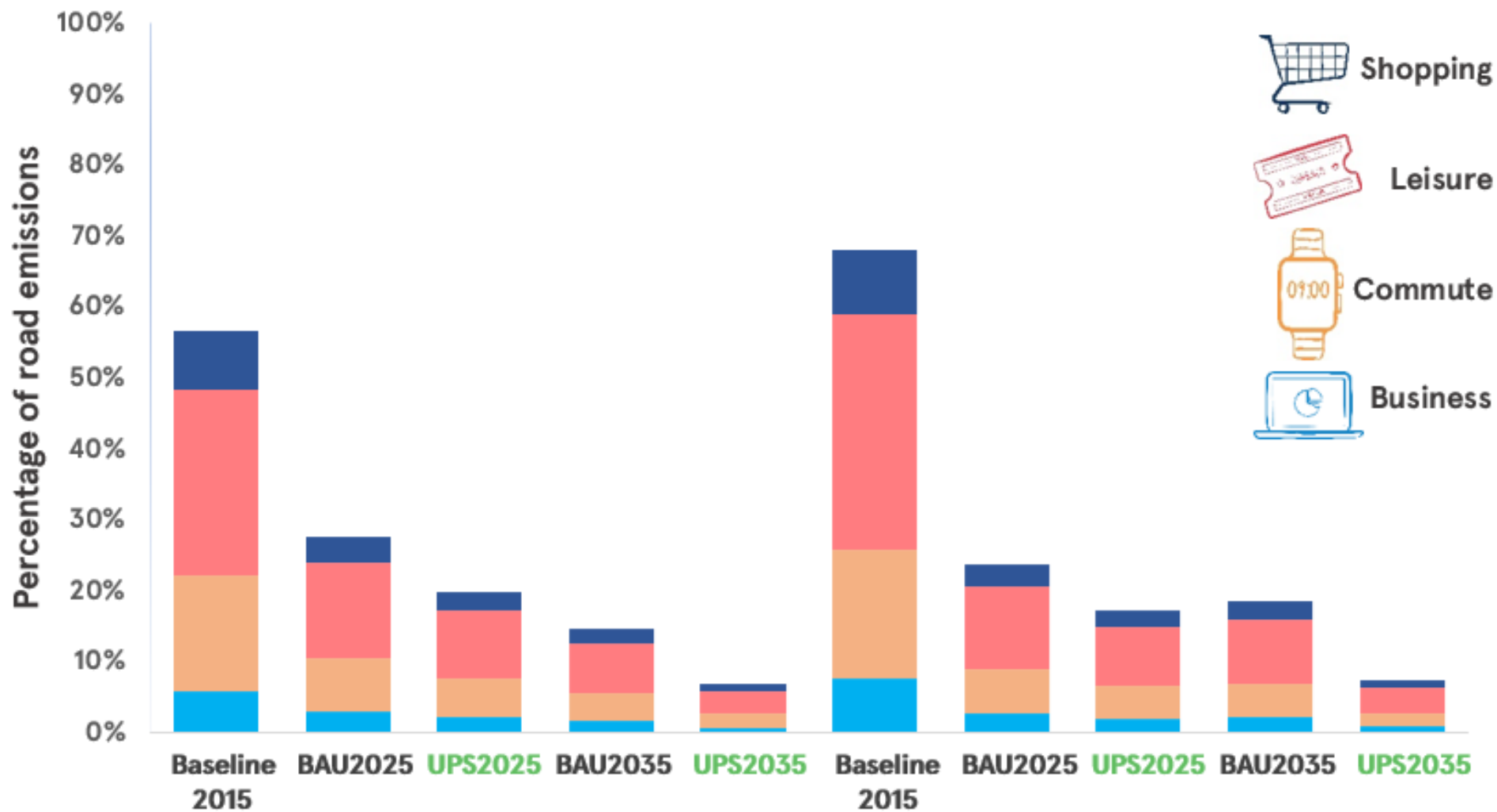
Citizens were more ambitious than Business as Usual

www.claircity.eu

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Empower

M. Sardo, L. Fogg-Rogers, S. Laggan, I. Vleugels, A. Bracke, and E. Franchois, "Are we on the same page? Making project engagement and evaluation work across European cities and cultures," in *Citizen Science SDG Conference*, 2020.

What is WeCount?

- Road traffic and urban mobility is a hot topic with plenty opinionated and even militant citizens already engaged. Although the younger voice is often not heard.

- The aim is **work with citizens to quantify local road transport, produce new knowledge on local mobility, and co-create informed solutions to tackle various urban mobility challenges** such as speeding, rat-running, peak episodes, air pollution, active travel etc.

- The WeCount project will carry out five different pilot studies in six EU cities / regions:

  – Leuven, Belgium;

  – Madrid / Barcelona, Spain;

  – Ljubljana, Slovenia;

  – Dublin, Ireland; and

  – Cardiff, UK.

Community resources

Community activator pack

To support groups working for a clean air and zero carbon future

ClairCity
www.claircity.eu

Citizens at the centre!
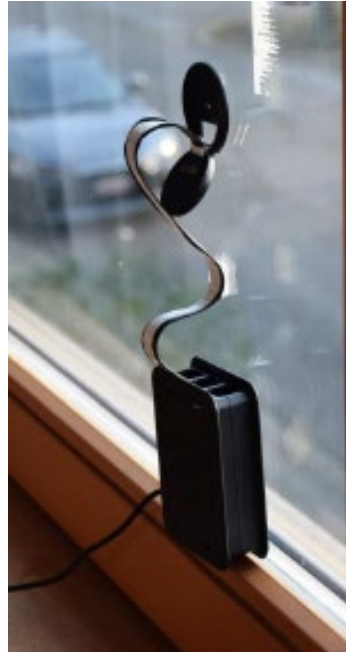
www.claircity.eu/take-action/community-activator

@Claircity
@WecountH

Educator pack

For engagement practitioners, teachers, and young people working for a clean air and net zero carbon future

ClairCity
www.claircity.eu

www.claircity.eu/take-action/educator

Engaging citizens in clean air decision making

Findings from the evaluation of ClairCity

ClairCity
www.claircity.eu

http://www.claircity.eu/take-action/science-communicator/

www.claircity.eu

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Community engagement

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