Our future with clean air: ClairCity

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Why is air pollution a problem?

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.

Diesel vs Petrol
Diesel cars cause more air pollution than petrol cars, but have lower carbon emissions.

1 in 8 Deaths
Air pollution is linked to one in every premature deaths.

5 Deaths a Week in Bristol
More than 5 deaths a week in Bristol are linked to air pollution.
Why haven’t we fixed this already?

- Air pollution often dealt with as a *separate* problem
- Not adequately linked with other issues such as climate change, transport, health, energy consumption, home heating etc.
- A lot of policy has emphasised risks of climate change and tackled these using technological solutions *at the expense of air pollution*
- But air pollution is killing people *here* and *now* - where ‘behaviour change’ has been tried this mainly focusses on people as ‘individuals’
Differences between health and environment behaviour change
What does an ‘Individual’ look like?
Why do Bristolians use cars?

Cycling facilities at my workplace are not great, no shower. Roads feel unsafe at peak times, cycle routes are just on edge of road, often randomly stopping just before difficult areas eg junctions

Car user and occasional cyclist

Public transport takes twice as long as car or motorcycle travel

Bus route where I live are unreliable & infrequent. [Buses] are not an option for where I work as there isn't a route that would get me to work.

Car user and bike user
Who are people?

- Bus Driver
- Parent
- Sport Cyclist
- Shopper
- Carer
Why do Bristolians use cars?

I work [40 miles away]. Running to and from the train station at both ends, the train timetable and the duration of changes means I can't help out with childcare/school runs and use public transport [so I drive]. I will consider moving jobs closer to home when the time comes. I use the train as much as possible in the school holidays.

Car and train user, runner

Car user and walker

As a carer I have to use my car (door to door) to take parents to and from shops/doctors etc.
Why do Bristolians use cars?

I'd rather be able to do without taxis but I'm disabled and limited in how long I'm able to be outside my home. I can't cope with slow, unreliable and infrequent buses and am currently therefore often forced to use taxis.

“[Public transport] isn’t easy to use. [It’s a] mile walk to a bus stop, not regular [service]”

Bus and taxi user

Car and bike user
Rational, but constrained by social structures?
Individuals
People/Citizens

Citizen Led Air pollution Reduction in Cities

*Oxford English Dictionary*

**Individual** = A single human being, *as distinct from a particular group*, or from society in general.

**Citizen** = *An inhabitant of a city or town*; esp. one possessing civic rights and privileges and responsibilities
The ‘Four Dimensions of Behaviour’ framework: A tool for characterising behaviours to help design better interventions.

**Actor**
- Individual
- Inter-Personal Network
- Community
- Segment/Group
- Population

**Domain**
- Psychological
- Bodily
- Technological
- Institutional/Social
- Infrastructural/Environmental

**Durability**
- One-off
- Repeated
- Dependent
- Enduring
- Norm-Setting

**Scope**
- Discrete
- Inter-Related
- Bundled
- Structuring
- Pervasive
So what does this look like in ClairCity?
ClairCity process

DATA

ENGAGEMENT

SOLUTIONS
Change the behaviour of the behaviour changers

ClairCity meeting of regional Mayors, Aveiro

Working with decision-makers. Involving citizens, but not (directly) asking them to change.
ClairCity: breaking the traditional dichotomy

Policy

Individuals

Land-Use & Zoning

Material Infrastructure

Objects and Equipment

NGOs

Clubs, Societies

Other Businesses

Employers

Service Providers

Friends

Families

Households

Cultural Conventions

Expectations

Skills and ‘Know-How’
What would help people to cycle in my city?

**Individuals-People**
- Buy a bike
- Learn to ride or feel confident
- Find a route and cycle to work
- Encourage others to cycle

**Organisations**
- Provide showers & changing rooms
- Cycle storage in accessible places
- Casual dress codes
- Senior leaders promote cycling
- Improve virtual meeting tech to avoid journeys
- Pay double mileage for people who cycle to meetings
- Give directions for cyclists as well as drivers for visitors to the site
- Reduce car parking/increase charges

**Council**
- Build and maintain good cycle paths
- Provide training and advice for cycling
- Cycle signposts
- Limit cars to routes
- Subsidise purchase of bikes/cycle equipment (e.g. helmets, lights)
- Allow bikes to access areas e.g. to take on public transport
- Cycle lanes in pedestrianised areas
- City bike schemes

**Government**
- Fund cycle routes and networks
- Tax incentives to support people buying bikes; organisations to build infrastructure
- Invest in research looking at new technologies (e.g. electric bikes/cars)
- National targets for car use reduction
Behaviour changing practice?
Public engagement
City Council project partners

1. Trinomics B.V. (Project Coordinator - Netherlands)
2. University of the West of England, Bristol (Technical Lead - UK)
3. PBL Netherlands Environmental Assessment Agency (NL)
4. Statistics Netherlands CBS (Netherlands)
5. Technical University of Denmark (Denmark)
6. Norwegian Institute for Air Research (Norway)
7. REC Regional Environmental Centre (Hungary)
8. TECHNE Consulting (Italy)
9. Transport & Mobility Leuven (Belgium)
10. University of Aveiro (Portugal)
11. Municipality of Amsterdam (Netherlands)
12. Bristol City Council (UK)
13. Intermunicipal Community of Aveiro Region (Portugal)
14. Liguria Region (Italy)
15. Municipality of Ljubljana (Slovenia)
16. Sosnowiec City Council (Poland)
“Participants were happy to be involved and mutually learn about and discuss air pollution, health and carbon reduction. Feedback from participants was largely positive, highlighting in particular the opportunity to talk to people they wouldn’t normally talk to.”
Citizens – not individuals – can be central to policy and practice.
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