ClairCity received funding for the European Union's Horizon 2020 research and innovation programme under grant No. 689289.

WeCount has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 872743.

Involving young people in clean air research and decision making

Experiences from three large-scale citizen engagement projects

Dr Laura Fogg-Rogers and Sophie Laggan UWE-Bristol

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.

www.claircity.eu

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...

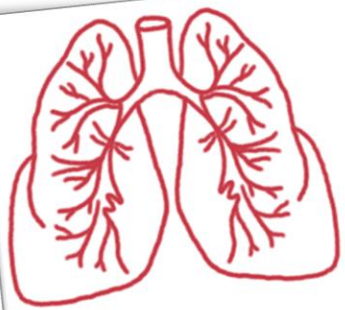
THE OLD

THE YOUNG

PEOPLE WITH HEALTH CONDITIONS

ClairCity

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 689289.

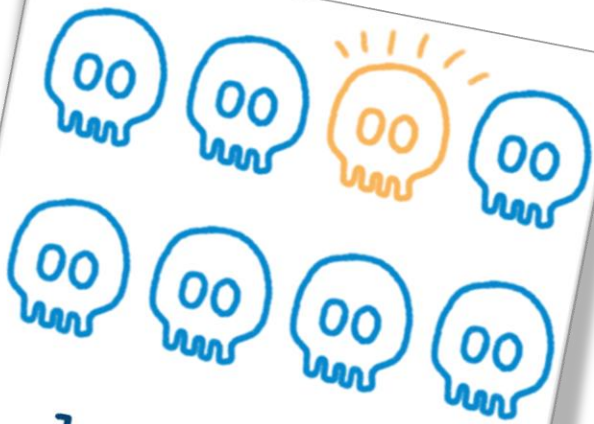


IT'S YOUR HEALTH

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.

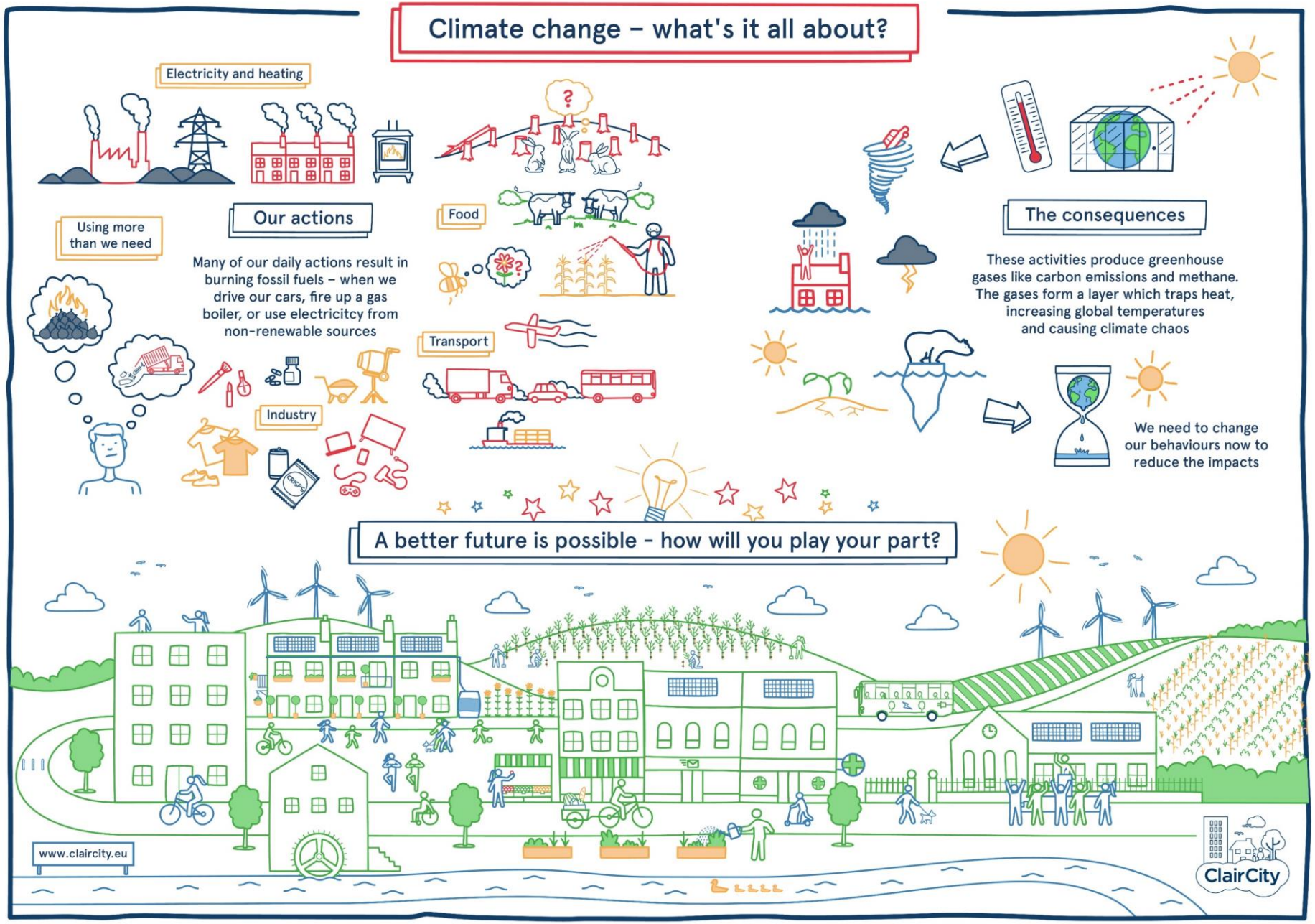


1 IN 8 DEATHS

AIR POLLUTION CAUSES ONE IN EVERY EIGHT PREMATURE DEATHS WORLDWIDE.

UWE Bristol University of the West of England

www.claircity.eu



UWE Bristol University of the West of England

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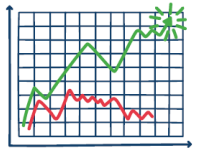
How the ClairCity process engages with a city & its citizens

UWE Bristol | University of the West of England

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

Public engagement and awareness

Community films

Schools Engagement: My City, School, & Home

ClairCity Skylines Game

Mutual Learning Workshop

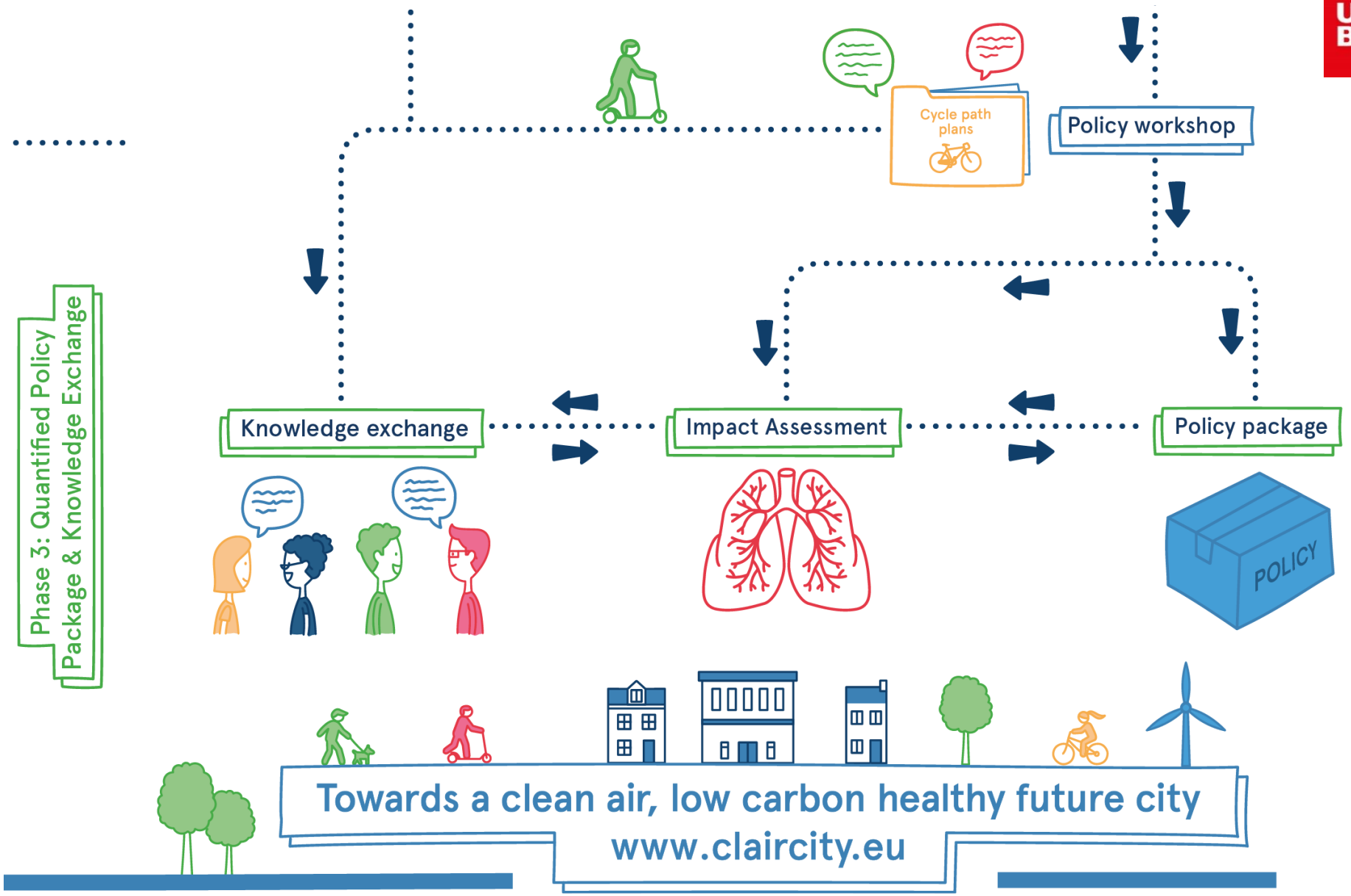
Citizen and Stakeholder Engagement & Co-creation of Scenarios

Delphi Method

Stakeholder dialogue

www.claircity.eu

How the ClairCity process engages with a city & its citizens



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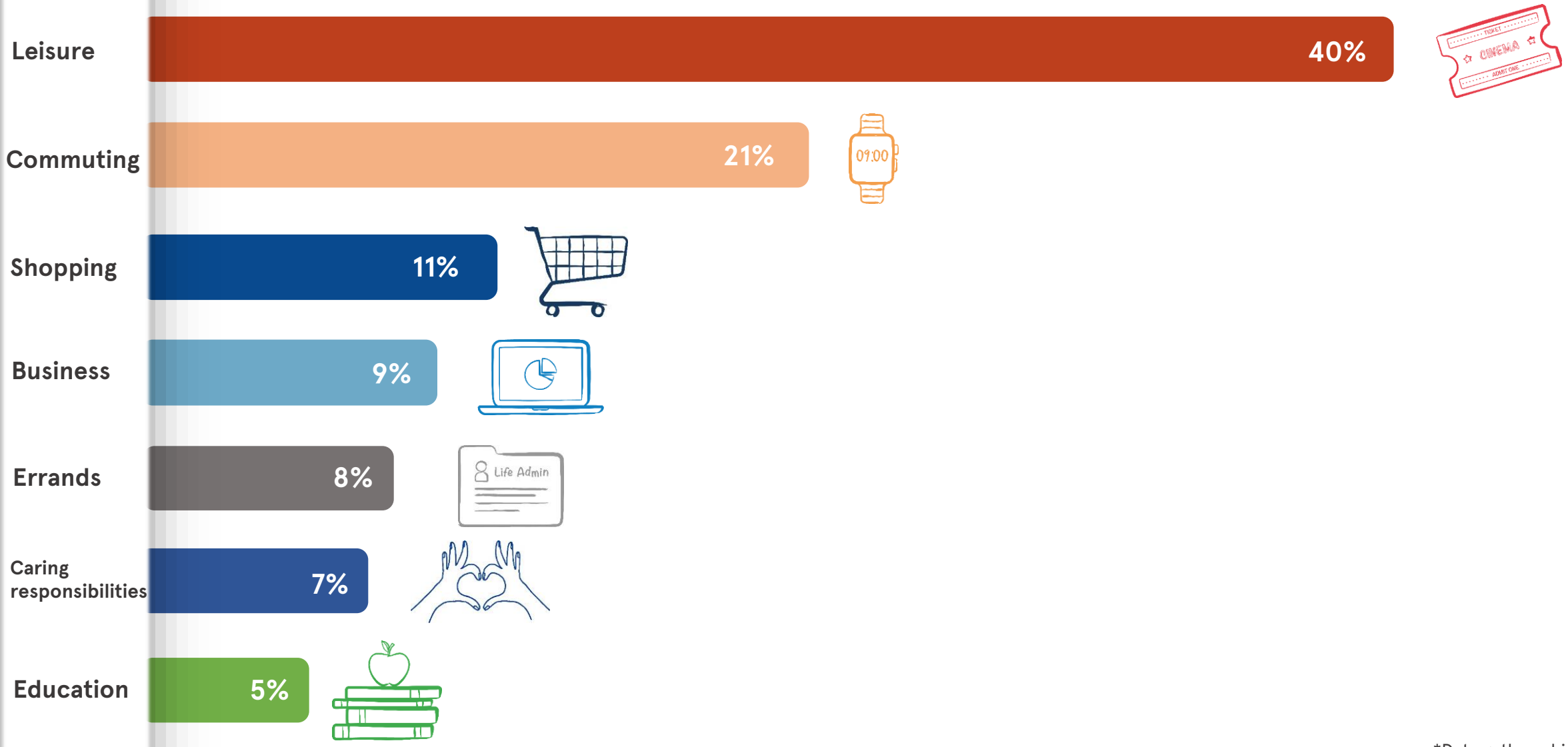
www.claircity.eu

Why we travel in Bristol...

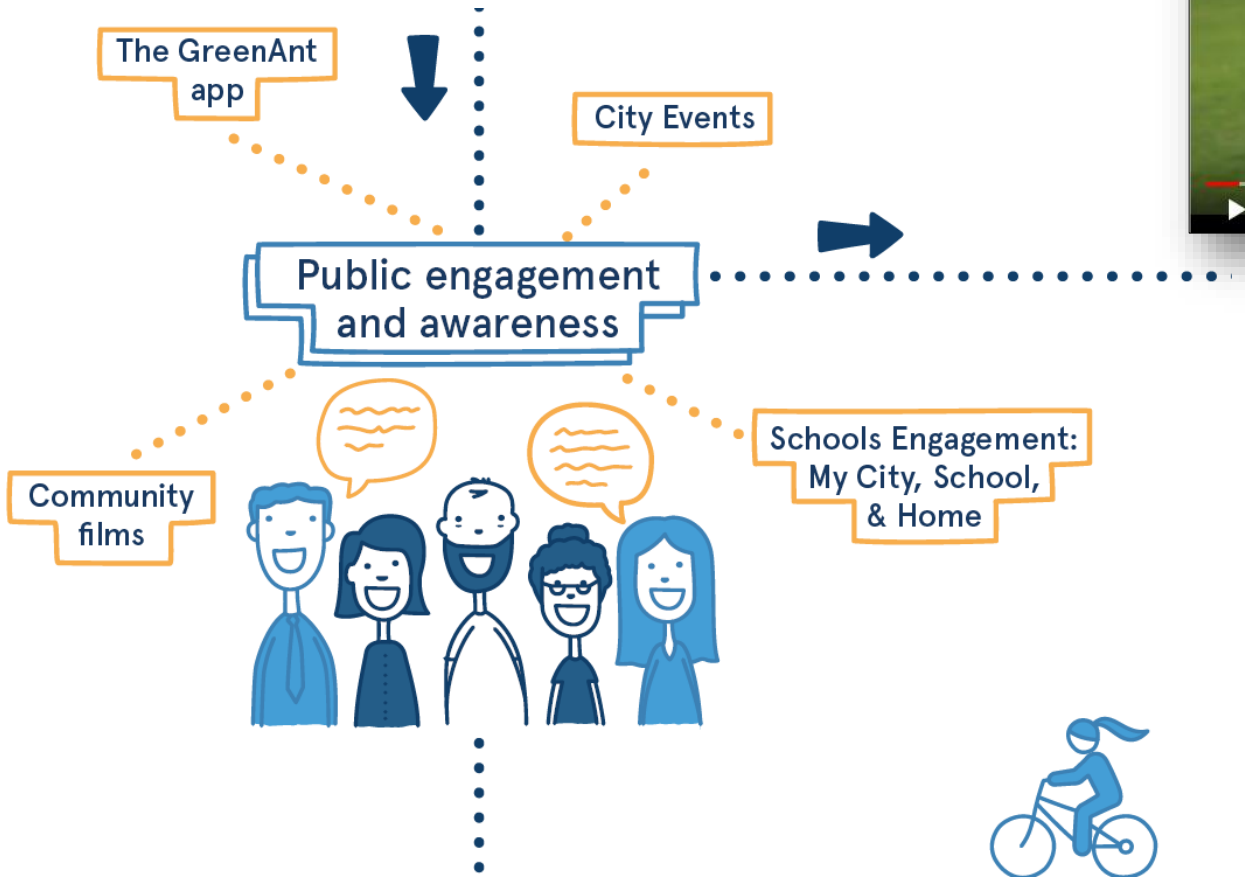
See the gif on Twitter @ClairCity

UWE Bristol University of the West of England



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

Engagement tools



Community films

Schools Engagement:

City Events

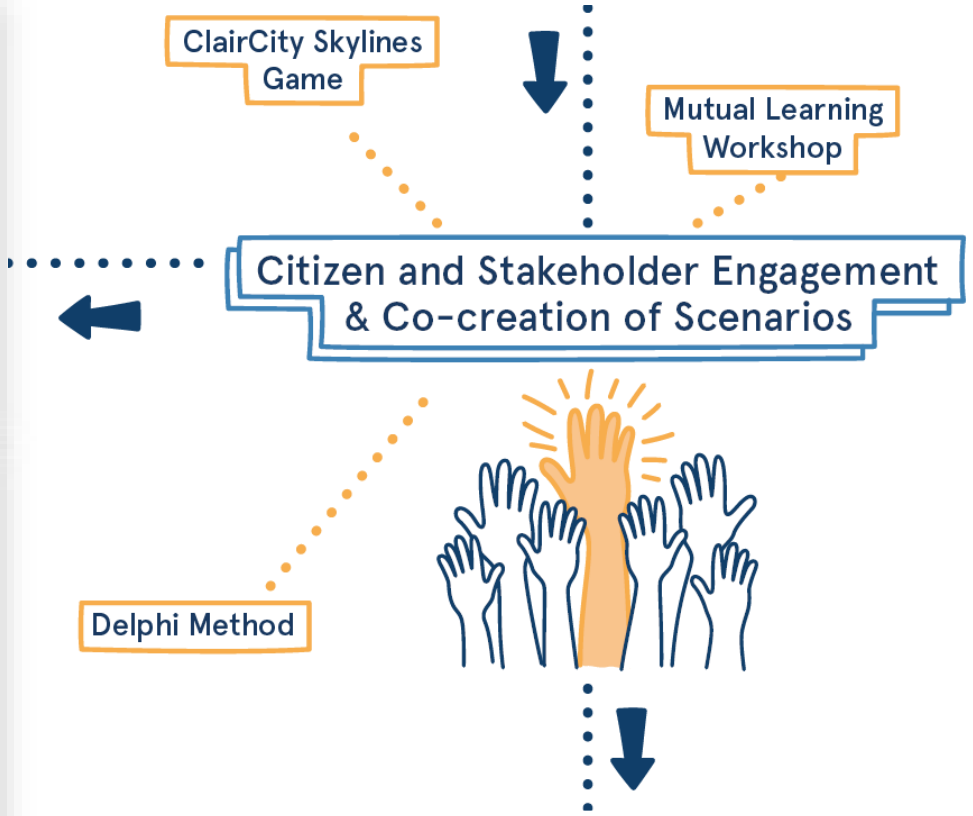
www.claircity.eu

Engagement tools

ClairCity Skylines

Delphi Method

Mutual Learning Workshop



www.claircity.eu

770,253
Twitter impressions

5,801
YouTube video views

1,418
Facebook followers

33,678
Website visitors

818,736
citizens involved across 6 cities and regions

82
Policy makers consulted

132
stakeholders involved in Mutual Learning Workshop

4887
citizens involved in Delphi process

65
Older people filmed

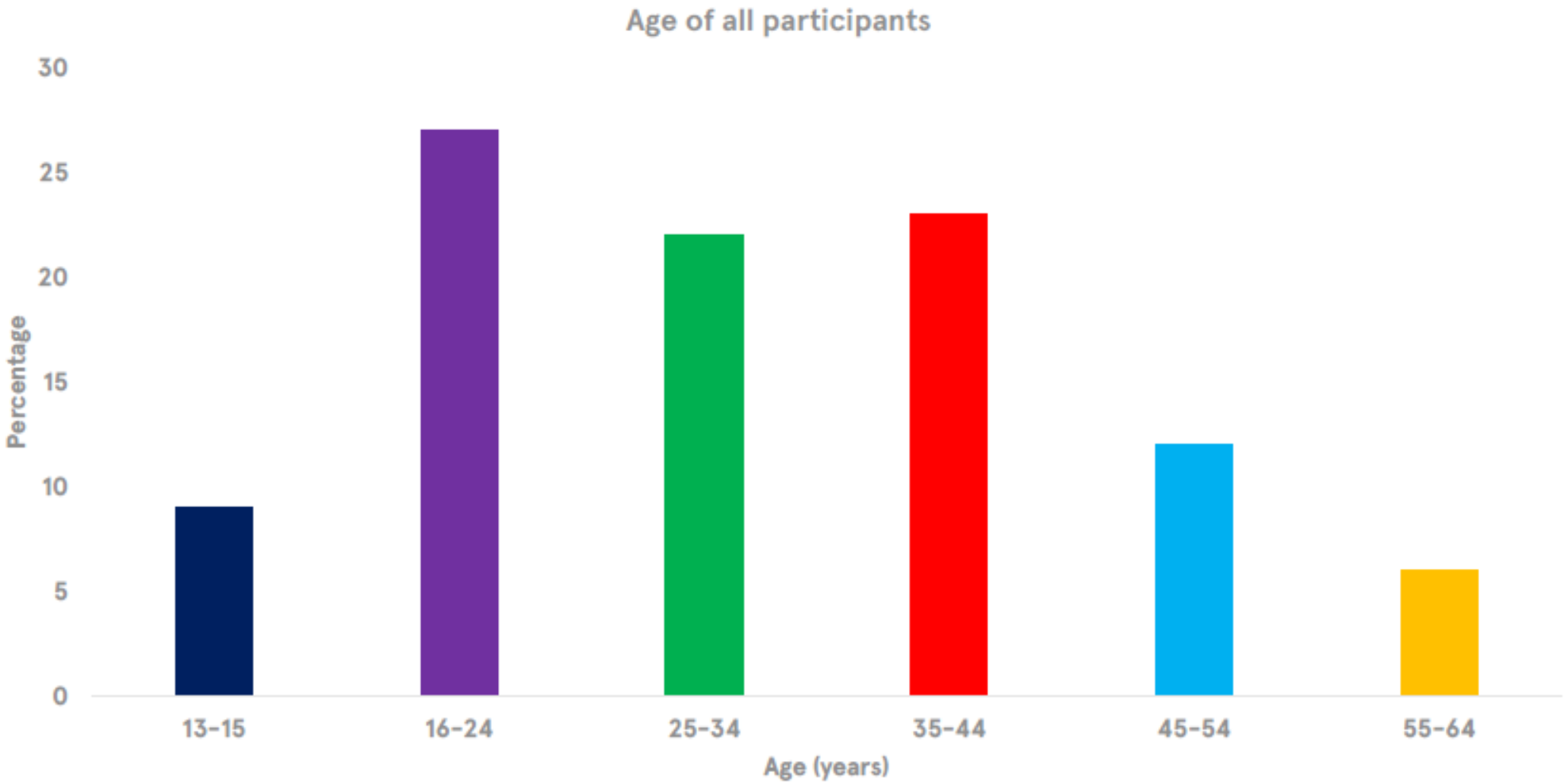
8302
direct engagements

>1000
children engaged in public events and lessons

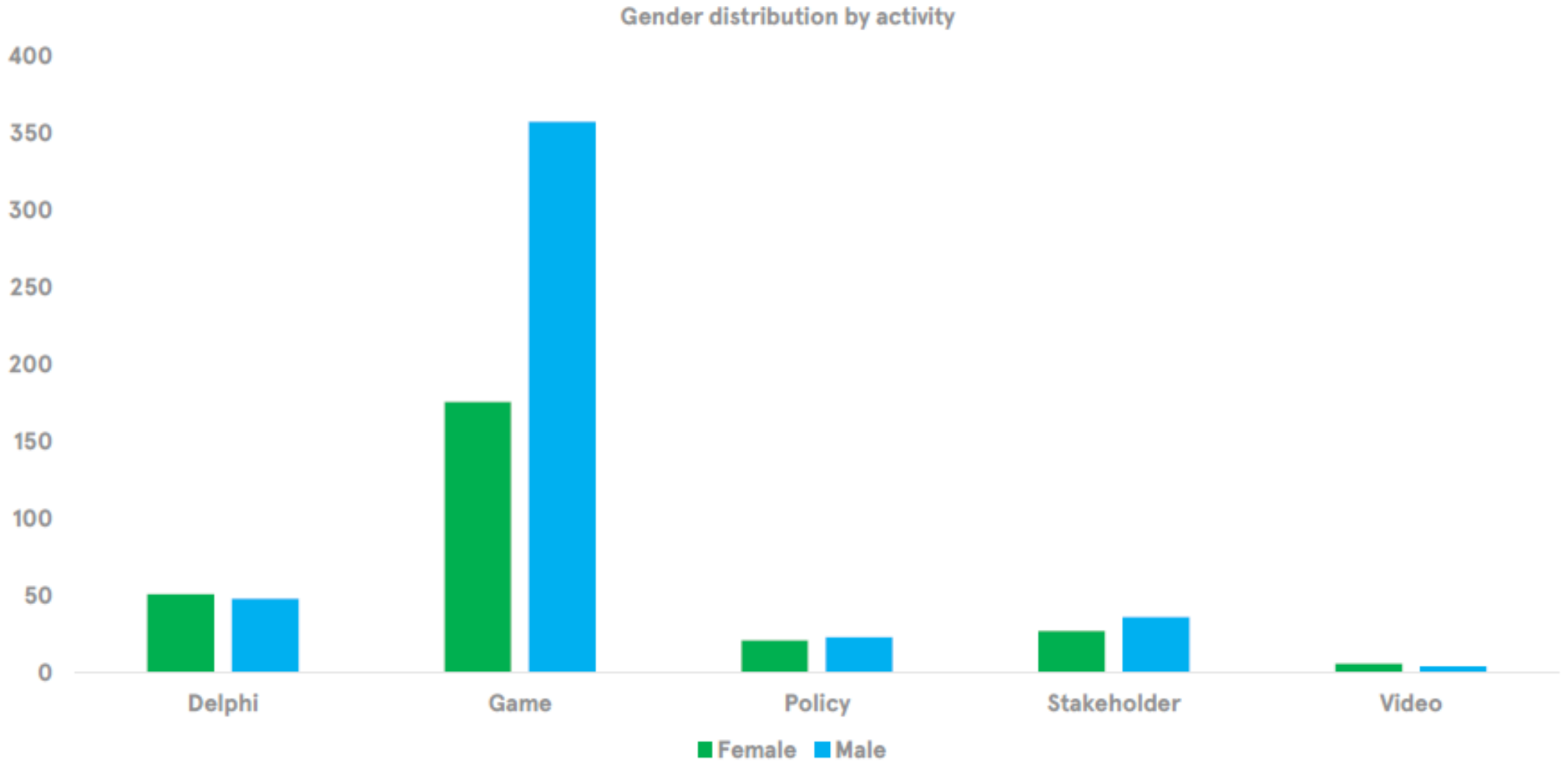
447
school children engaged in My School, My City, My Home competition

www.claircity.eu

Different activities needed to appeal to different ages



Different activities appeal to different genders



Game stats

69,476
policies selected

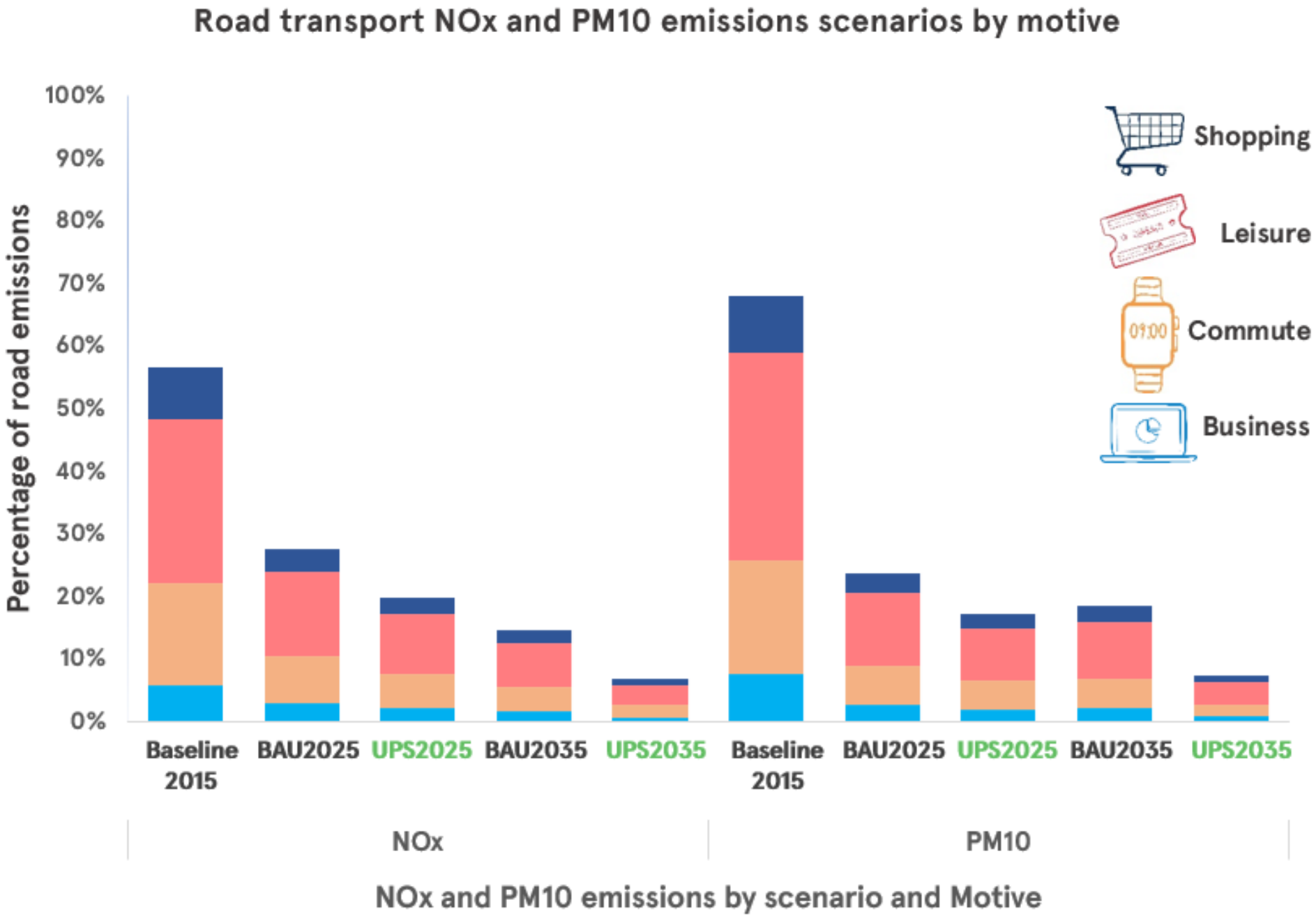
2,800
unique users

63:37
Male:Female ratio

83,339
'Years' played

Top 5 Policies (16-34 year olds)

- [ ] Keep separate ticketing systems for all transport types
- [ ] Make property developers consider air pollution & climate change
- [ ] Ban bonfires
- [ ] Don't build new nuclear power stations to replace coal
- [ ] Build cycle superhighway lanes in the city



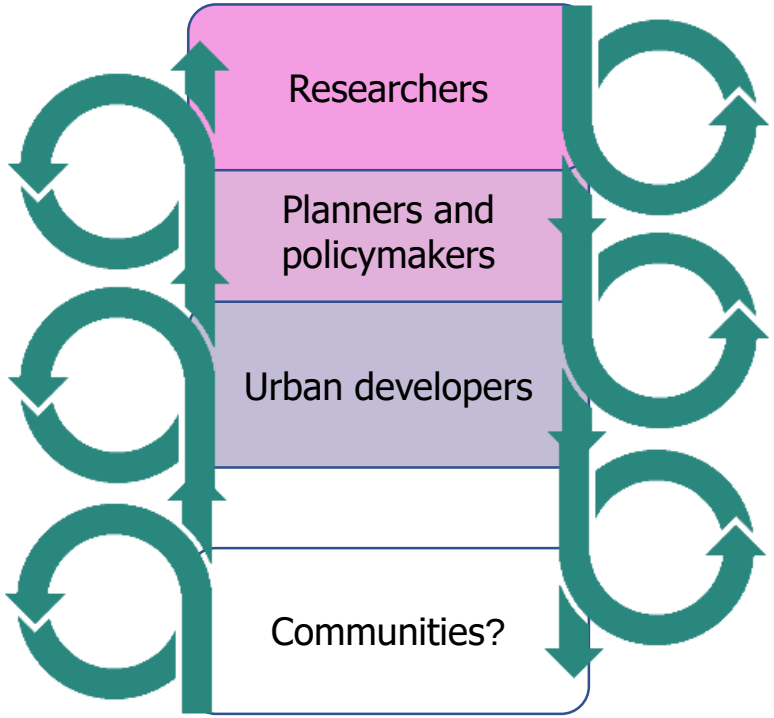
Citizens were more ambitious than Business as Usual

ClairCity Outputs

www.claircity.eu

Cities impact people…

…and people's behaviour and decisions impact cities

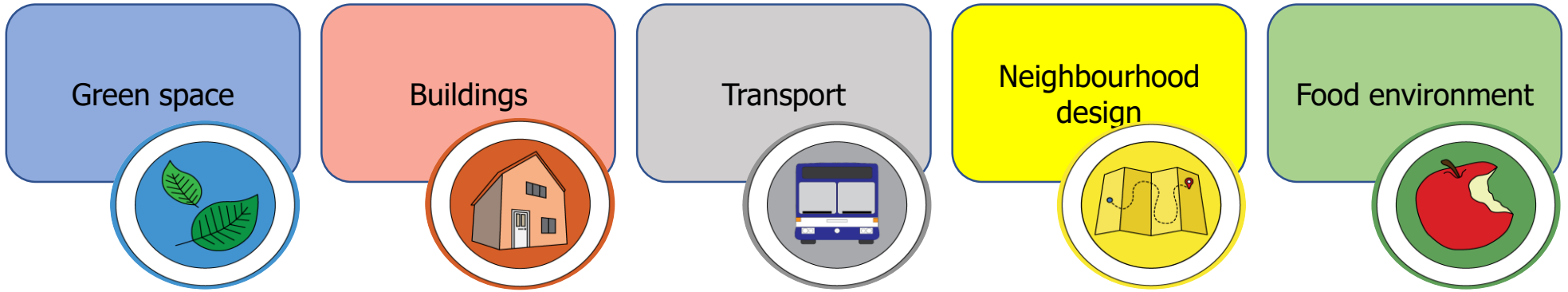


Communicating

systemic issues

using only

>short engagements<



https://urban-health-upstream.info/impact/our-city-our-health/

- Beta testing: 23
- Festival of Nature: 600

  (15 000 visitors)
- UPFEST: 224 observed no of direct interactions

  (50 000 visitors)
- Clean Air Day: 248
- History walks: 51
- Community consultations: 247
- Schools: 89
- Community actions: 44

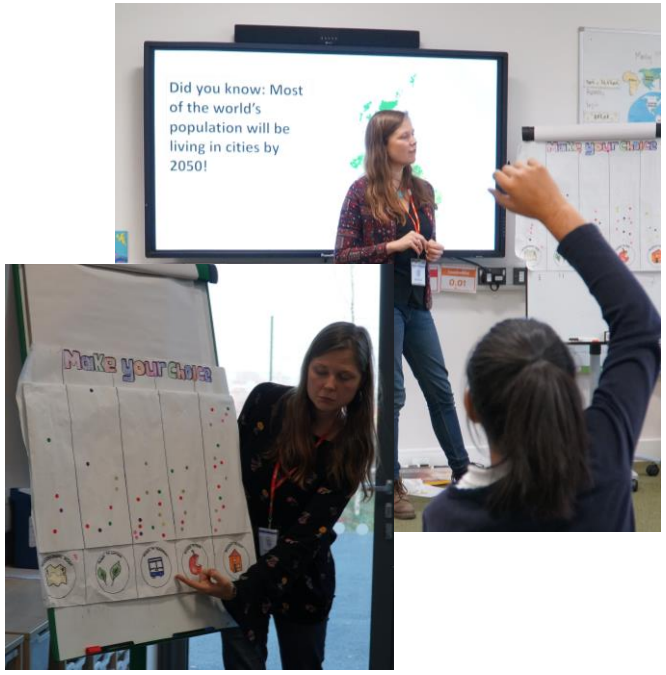
1537

face-to-face engagements

https://urban-health-upstream.info/impact/our-city-our-health/

Public

Neighbourhood



Community

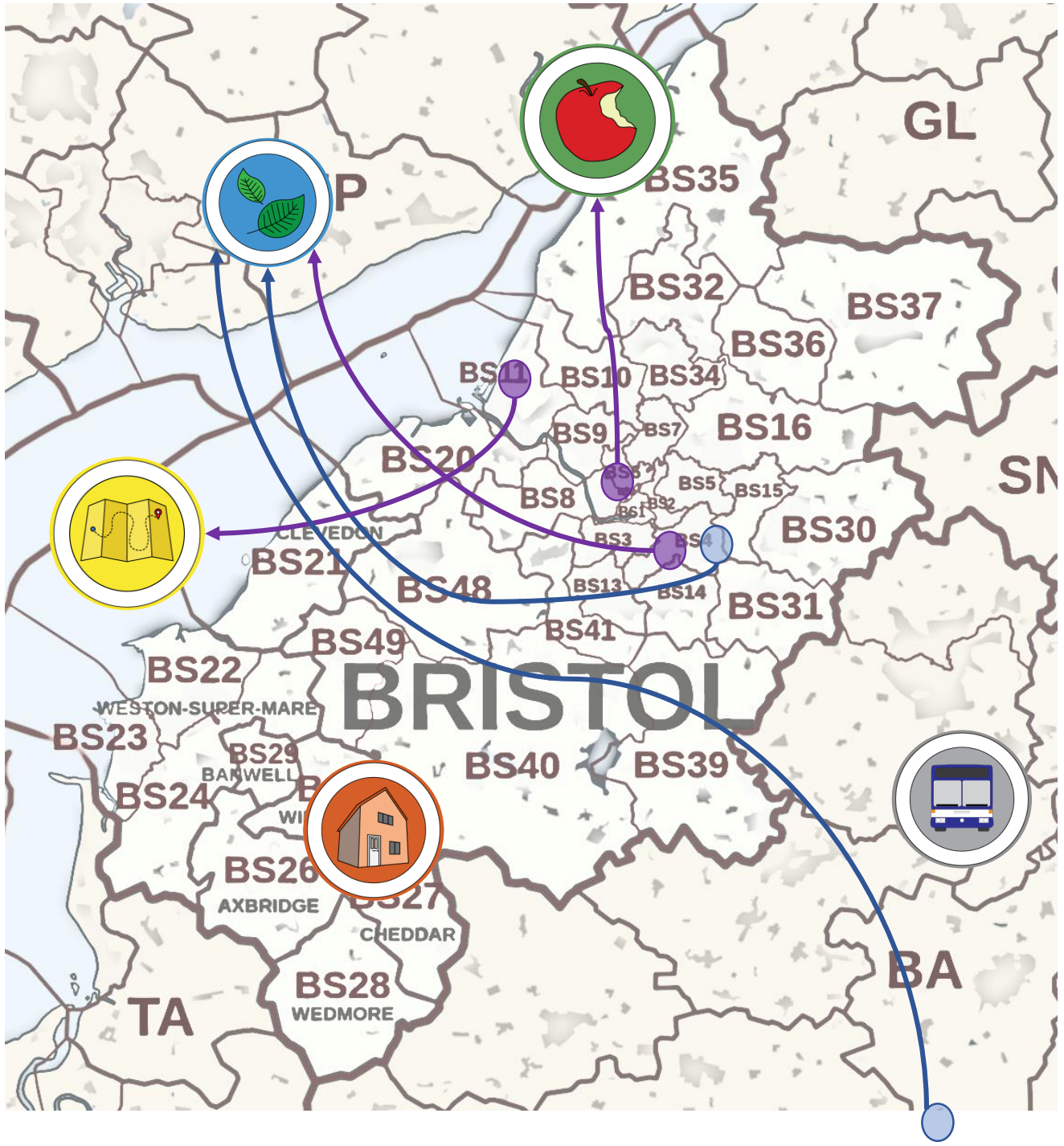
How does the place you live make you feel?

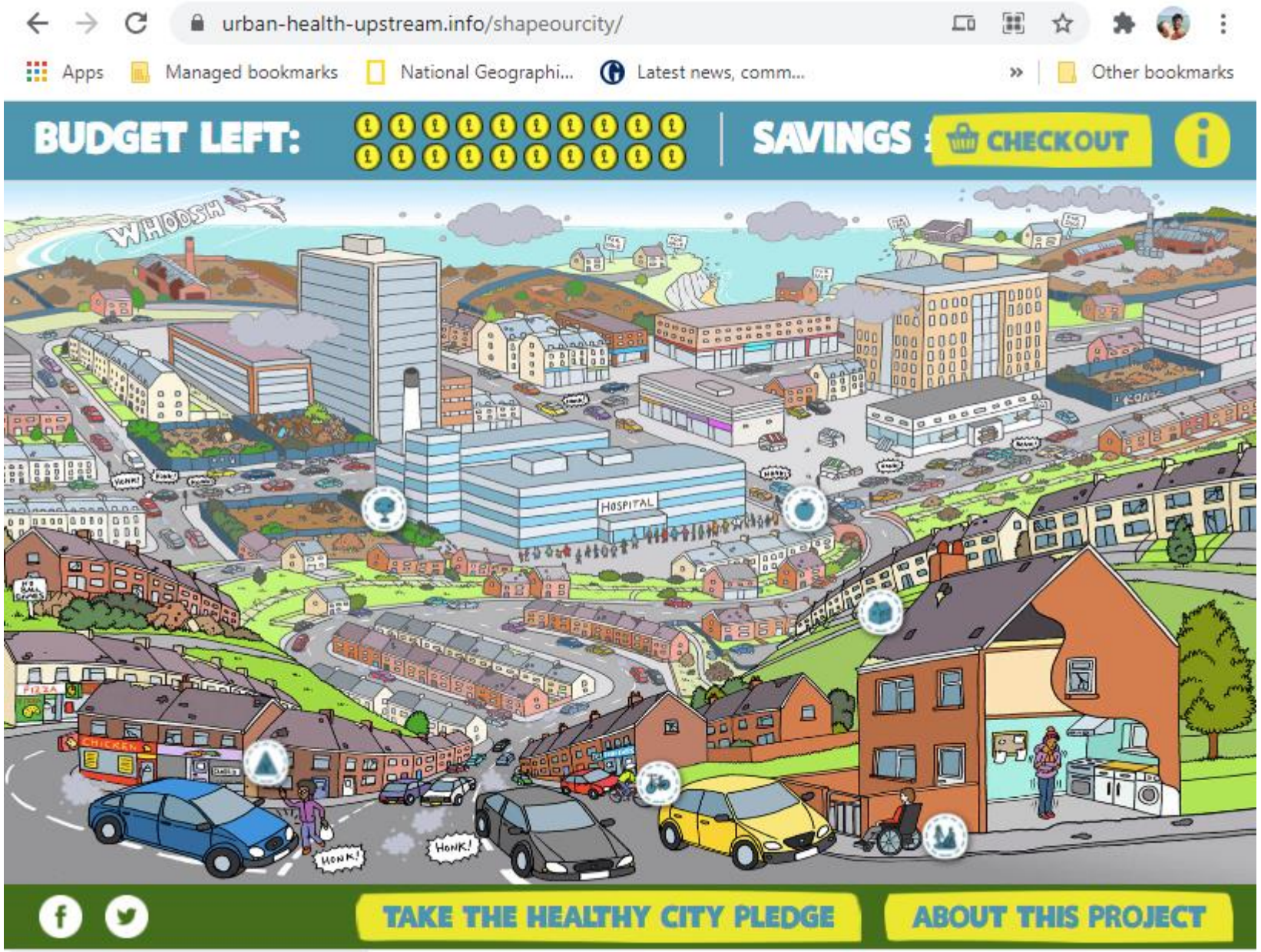
What would you improve?

What young people prioritised

Citywide, transport and air quality the 2nd most important priority

“We wish for cleaner, greener public transport”





SHAPE OUR CITY

Bit.ly/shapeourcity

What we learnt…

- **Multi-channel** communication and **Intergenerational** activities
- Centering engagements around **food** helps discussion of systemic issues
- Build **lasting relationships** with community organisers; invest in time and people
- People mostly already know what they'd like to improve about a local area – but **views diverge more the further they are away from their 'place'** (home, street, neighbourhood, city…)
- People often feel 'done to' but this project has shown that **residents can lead the change**. Having their voice heard, and co-design were essential ingredients.

https://urban-health-upstream.info/impact/our-city-our-health/

Citizens observing urban transport

Citizens observing urban transport

A European project that enables citizens to initiate a policy-making process using traffic sensors.

- 5 cities across Europe
- 100s of sensors installed in private homes… and soon schools
- Driven by participants agenda (Rat running, roadworks, cycling infrastructure…)
- Citizen and stakeholders collect, analyse and take action based on the data
- Schools resources in development

www.we-count.net

How it works (in theory)

A Telraam sensor is placed in an upstairs window with a clear view of the road.

The sensor, via an algorithm in a Raspberry Pi, counts cars, large vehicles, cyclists, pedestrians and can also assess car speeds.

The data is open access and can be viewed on the sensor data dashboard.

How it works (in practice)

Each window is different…

Stops counting in the dark

Technical glitches. Raspberry PI – you love it or you hate it

Double counting

WeCount in schools

WeCount-DETI collaboration

- An educational tool for STEM engagement
- Interesting datasets for data analysis
- Critical debates on the use and potential of technology for sustainable development

Cardiff pilot

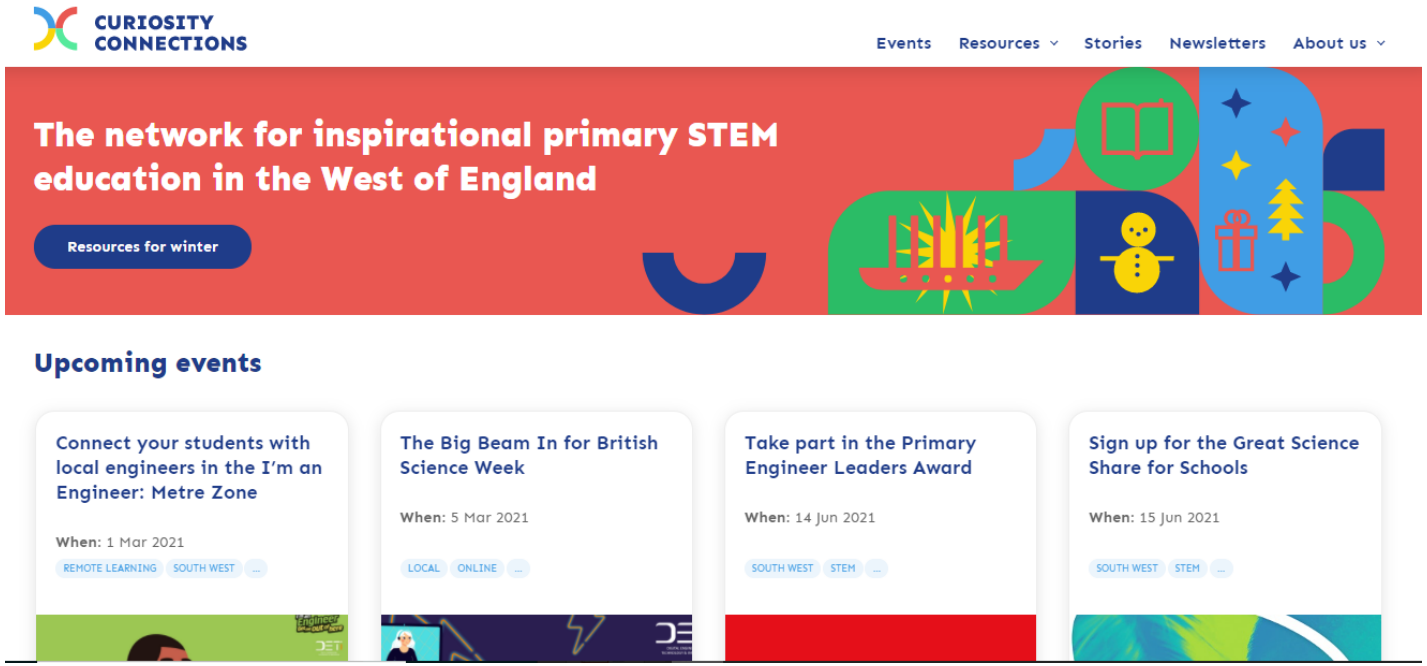
STEM Ambassadors

COVID

www.we-count.net

Curiosity Connections

The network for inspirational primary STEM education in the West of England region



Twitter - Curiosity Connections - @BrisPrimarySTEM

- 422 profile visits
- 16,344 impressions
- 12 new followers

Curiosity Connections Website

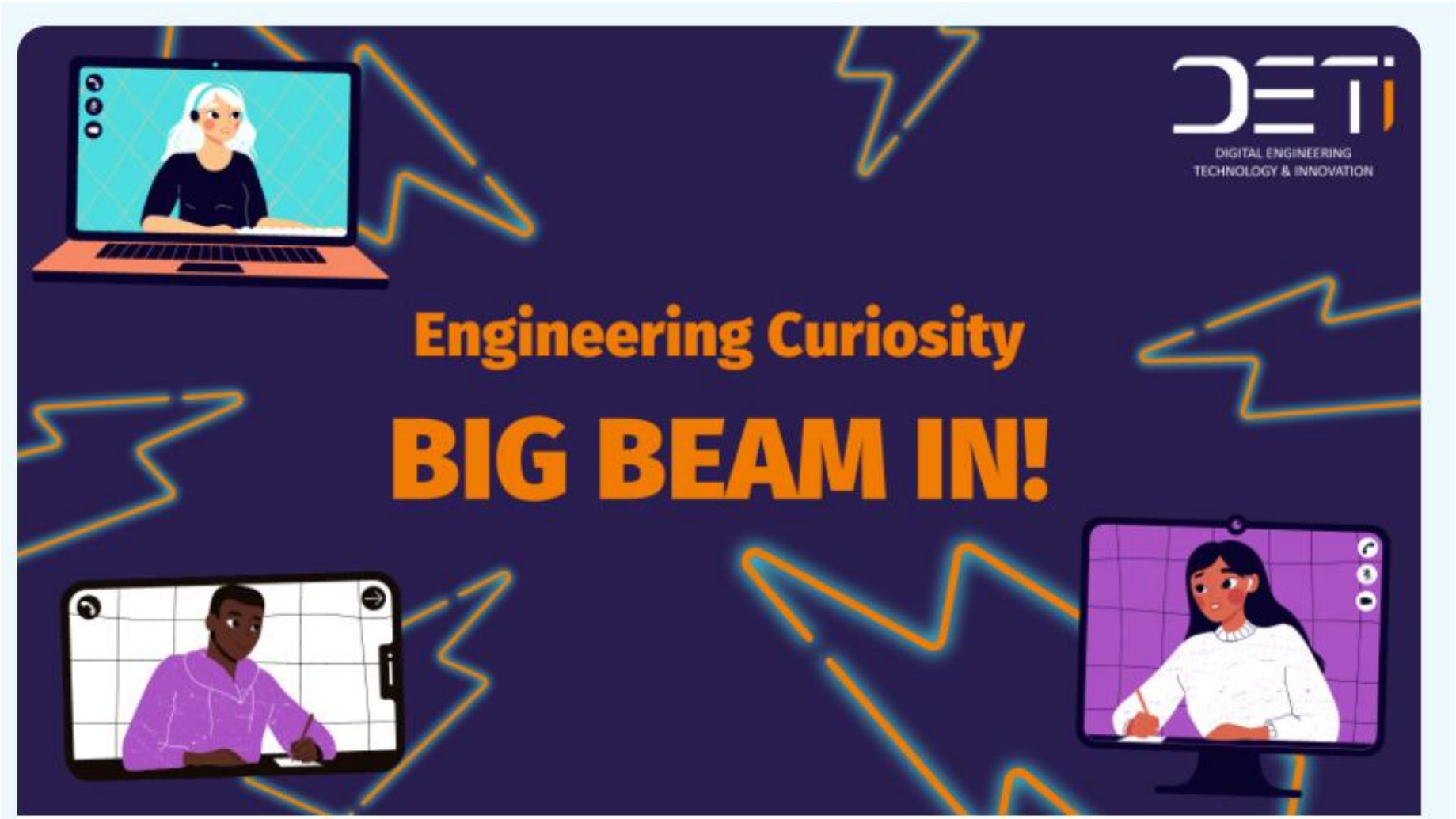
- 1,108 visitors
- 1,977 page views

www.curiosityconnections.net

British Science Week

8-15th March

Using our Engineering Curiosity cards



www.curiosityconnections.net

DIGITAL TRAILBLAZERS

DIGITAL ENGINEERING TECHNOLOGY & INNOVATION

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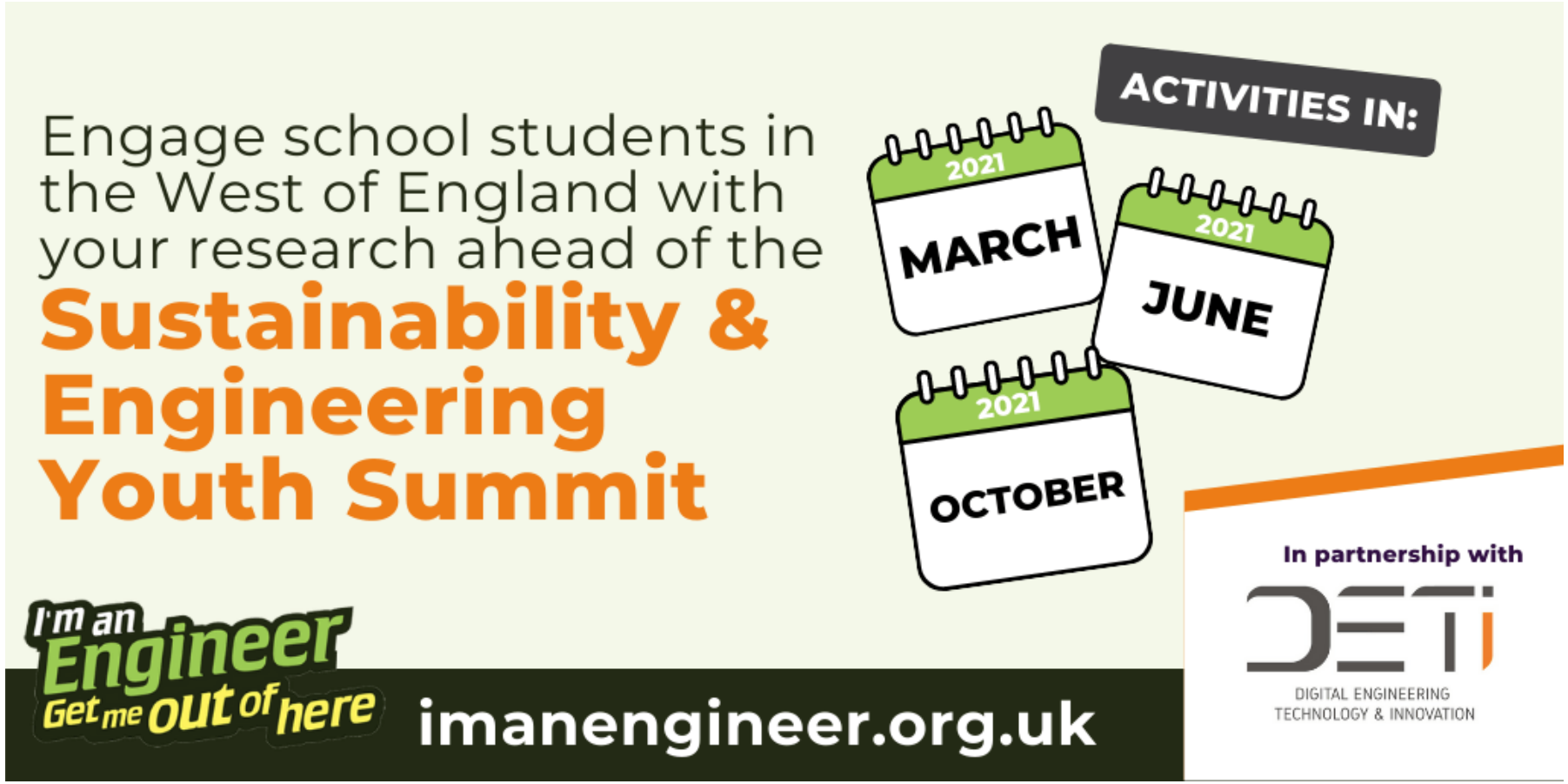
Youth Engagement with Engineering for Sustainability Summit (YEESS!)