

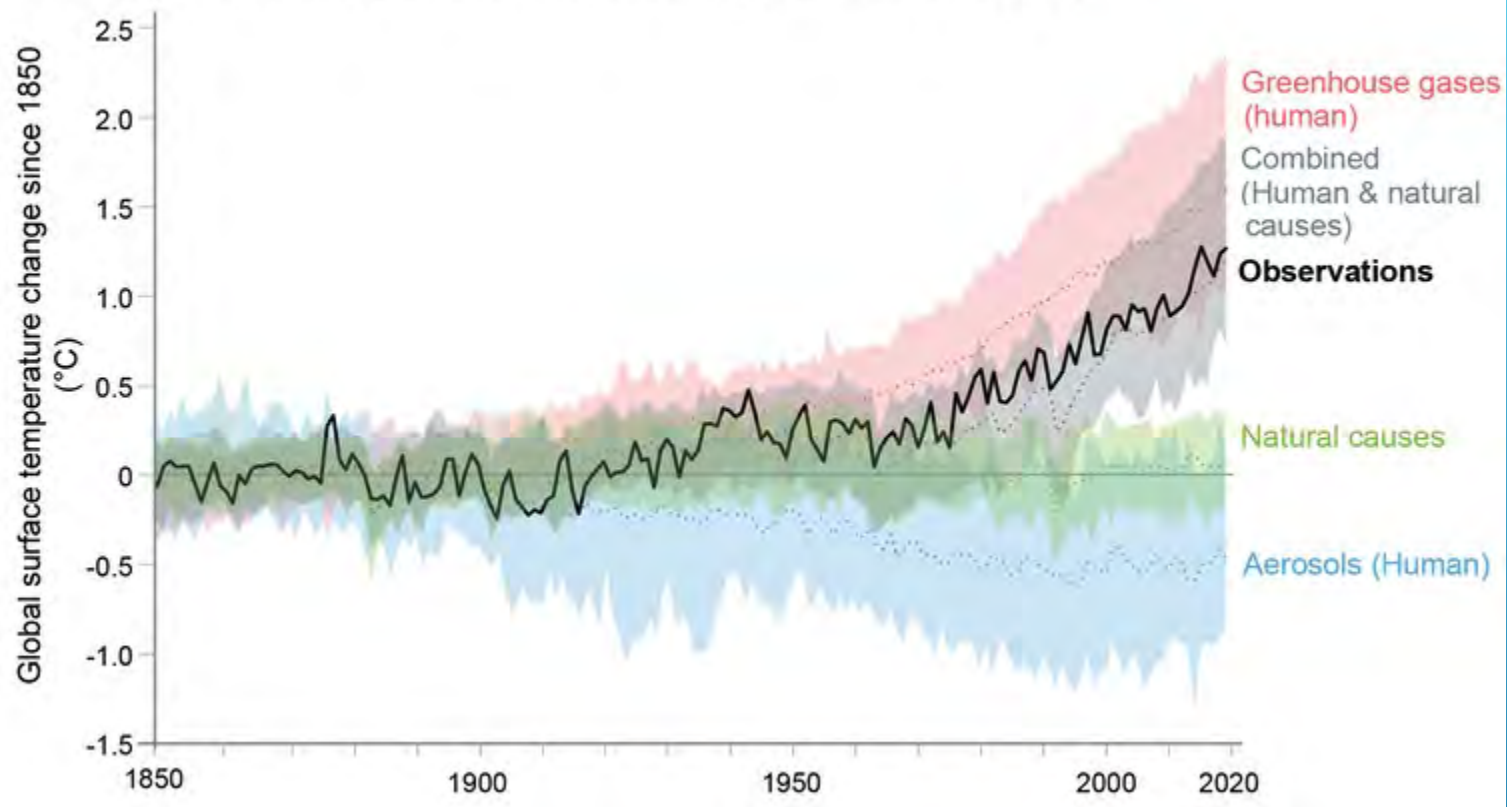
EUROPEAN CARBON NEUTRAL CITIES AND REGIONS

Cliff Hague

Wrocław

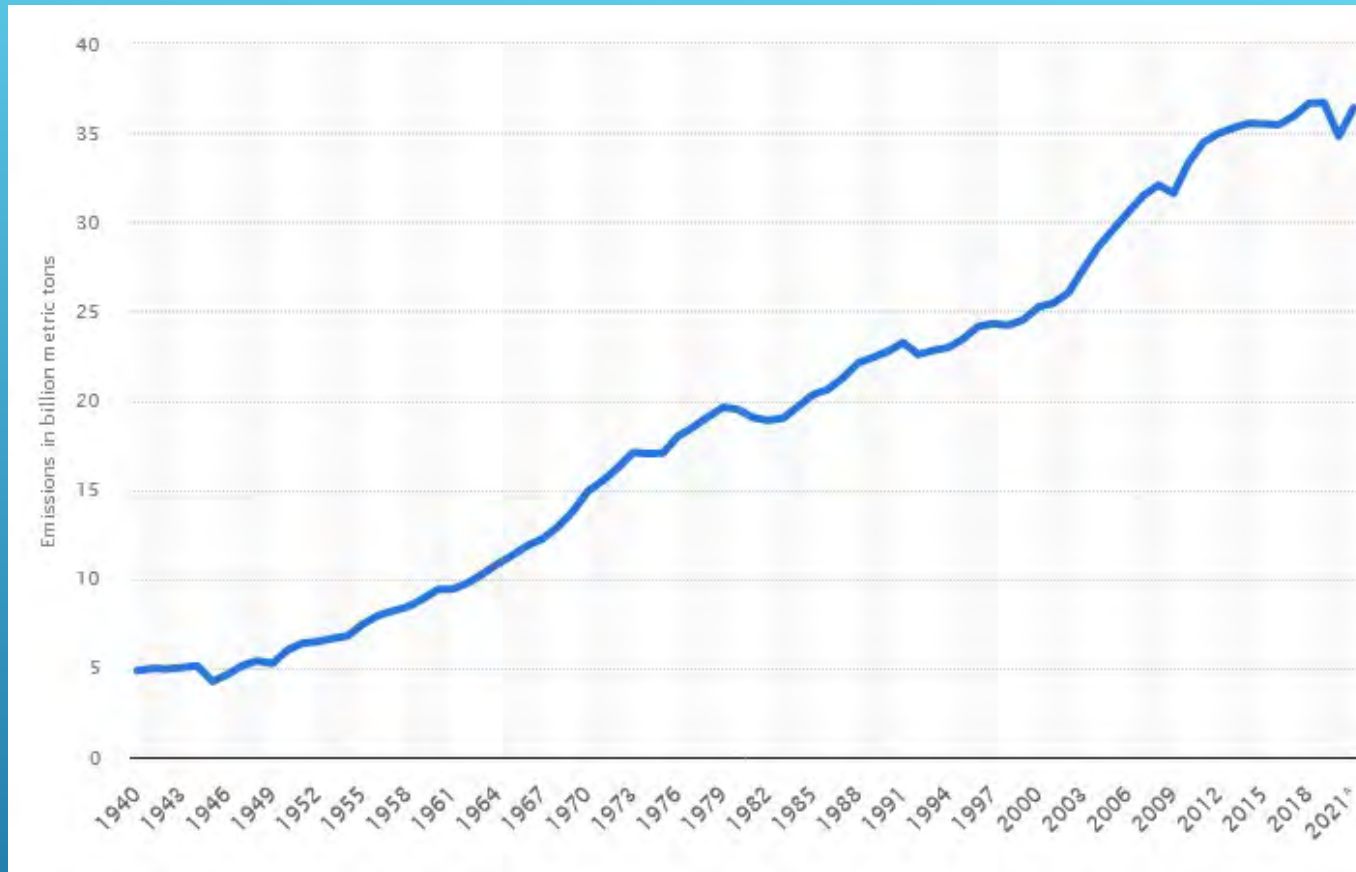
28 April 2022

How do we know humans are causing climate change?



IPCC, 2021,
6th
Assessment
Report

WHY?



<https://www.statista.com/statistics/276629/global-co2-emissions/>

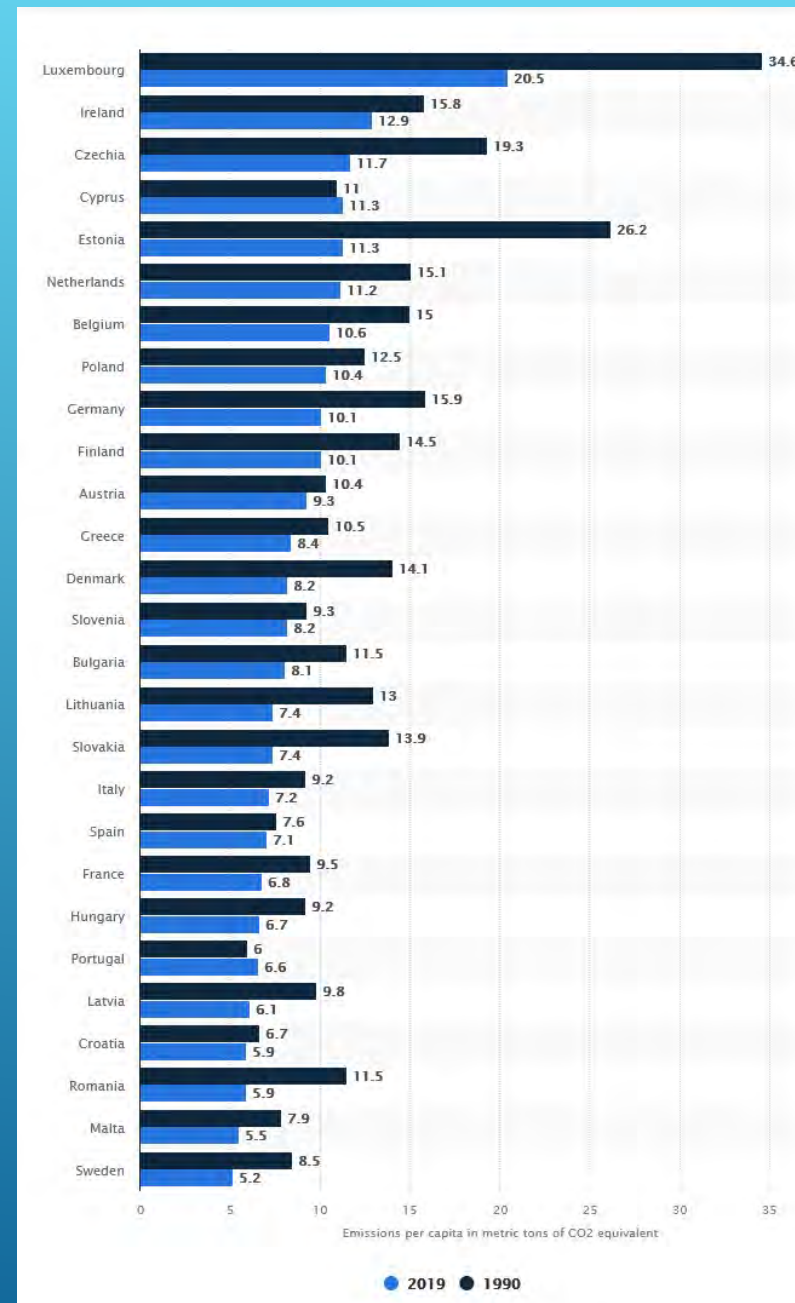
ANNUAL WORLDWIDE CO2 EMISSIONS

Significant reductions in some countries, e.g. Estonia, Czech Republic, Lithuania, Latvia, linked to industrial change post-1990.

However, Estonia is still the 5th worst emitter, Poland 8th.

Nobody is at zero.

PER CAPITA CHANGE IN CO2 EMISSIONS 1990 (BLACK)-2019 (BLUE)



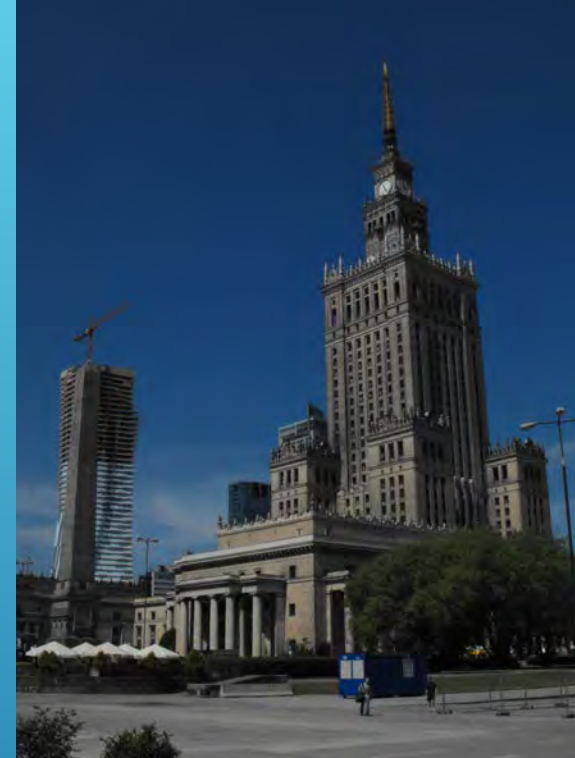
<https://www.statista.com/statistics/986392/co2-emissions-per-cap-by-country-eu/>

- ▶ To contain warming to 2C or less, we need globally to reach net zero by 2050.



ACTION IS NEEDED NOW

- ▶ 72% of global greenhouse gas emissions.
- ▶ 'Cities are the melting pot where decarbonisation strategies for energy, transport, buildings and even industry and agriculture coexist and intersect.'
(European Commission, 2020)



CITIES AND LOCAL GOVERNMENTS
ARE CRUCIAL

- ▶ BSR INTERREG objective 3 is Climate-neutral societies.
- ▶ Objective 3.1: The Programme supports actions **that facilitate the shift from linear to circular** resource use. This implies **keeping products and materials in use** for as long as possible without increasing pressure on the environment. The **holistic** approach shall go beyond waste management to **connect with water, energy, transport and land use**.



Sustainable Global Resources Ltd.
Image: Recycling Council of Ontario

CIRCULAR ECONOMY

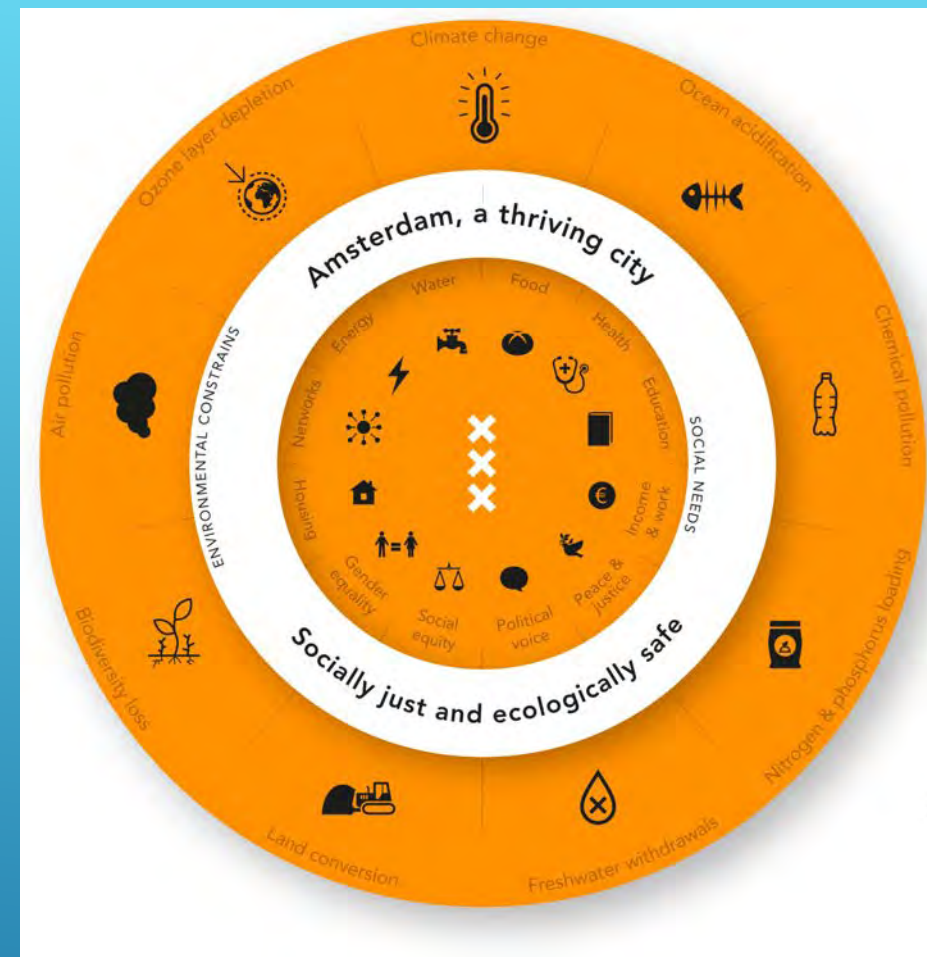


CIRCULAR ECONOMY AND WASTE



- ▶ National strategy aims for a waste free economy by 2050.
- ▶ National Strategy for Spatial Planning and the Environment 2020 (NOVI) seeks to move to a circular economy. It focuses on **resources and materials used in buildings, roads and engineering structures** such as viaducts and bridges so that they retain their value so that no waste flows remain following the use phase.
- ▶ Notes that a circular economy requires new logistic concepts and a '**stable ecological system with sufficient biodiversity**'.
- ▶ Warns that 'The consequences of this transition on transport flows, use of space, the environment and security remain **uncertain**'.

NETHERLANDS / AMSTERDAM



AMSTERDAM USES THE 'DOUGHNUT' CITY MODEL (RAWORTH): GREEN & SOCIAL

- ▶ Food and organic waste
- ▶ Consumer goods
- ▶ Built environment


THE STRATEGY FOCUSES ON 3 VALUE
CHAINS

A decorative graphic consisting of several parallel white lines of varying lengths, slanted upwards from left to right, located in the bottom right corner of the slide.

- ▶ Create circular **food production** in (and for) urban areas.
- ▶ Encourage healthy, sustainable and plant-based **food consumption** by all inhabitants.
- ▶ Minimise **food waste** by retail, hotels & restaurants, and households.
- ▶ Scale up the separate **collection** of organic waste from households and businesses for high-quality processing.
- ▶ Scale up high-quality **processing** of biomass and food waste streams.
- ▶ Accelerate the closure of local nutrient cycles from biomass and (waste) water streams.



FOOD AND ORGANIC WASTE

- 
- A man with a grey beard and hair, wearing a blue button-down shirt, is focused on working on a bicycle wheel. He is using a tool to adjust the spokes. The background is a workshop with various tools and equipment, including a wooden chair and another bicycle. The overall lighting is dim, with a blueish tint.
- ▶ **Reduce consumption** and avoid overconsumption.
 - ▶ Stimulate high-quality **recycling** of complex consumer goods.
 - ▶ Aim for **shared** and long-term use of products.
 - ▶ Increase the number of local craft centres for **repair** and restoration of products.
 - ▶ Use and design standardised and **modular products** that are suitable for reuse, repair, and recycling

CONSUMER GOODS

A circular approach to the existing city



BUILT ENVIRONMENT

- ▶ Stimulate **circular area development** with urban design, an integrated approach and climate-proof construction, with special attention paid to closing cycles.
- ▶ Use circular criteria in **land allocation** and **tendering** of all construction and infrastructural projects and in the public space.
- ▶ Develop **buildings with adaptable functions** and systems.
- ▶ Scaling up **circular disassembly** and separate collection for the purpose of high-quality applications.
- ▶ Use renewable and secondary **building materials**.
- ▶ Stimulate circular **renovation** in private and social housing.



- ▶ Scope to involve local residents in identifying under-used resources, as an alternative to new buildings (embodied energy / carbon saving).
- ▶ Schools (including playgrounds), empty shops, under-used car parks etc.
- ▶ West Kilbride, Scotland, reuse as town branding as a Craft Town.

REPURPOSE BUILDINGS AND SPACES

- 
- A person wearing a white and red helmet, sunglasses, a yellow safety vest, and dark shorts is riding a white cargo bike. The bike has a large front wheel and a smaller rear wheel. Attached to the back of the bike is a white metal trailer with a single large wheel and a flatbed. The person is riding on a paved path with green grass and trees in the background.
- ▶ E-vehicles
 - ▶ E-scooters
 - ▶ Cargo bikes

TRANSPORT AND CARBON NEUTRAL PLACES

- ▶ Places that include most of the things that most people need for their everyday lives within a short and pleasant walk or cycle ride.



20 MINUTE NEIGHBOURHOODS



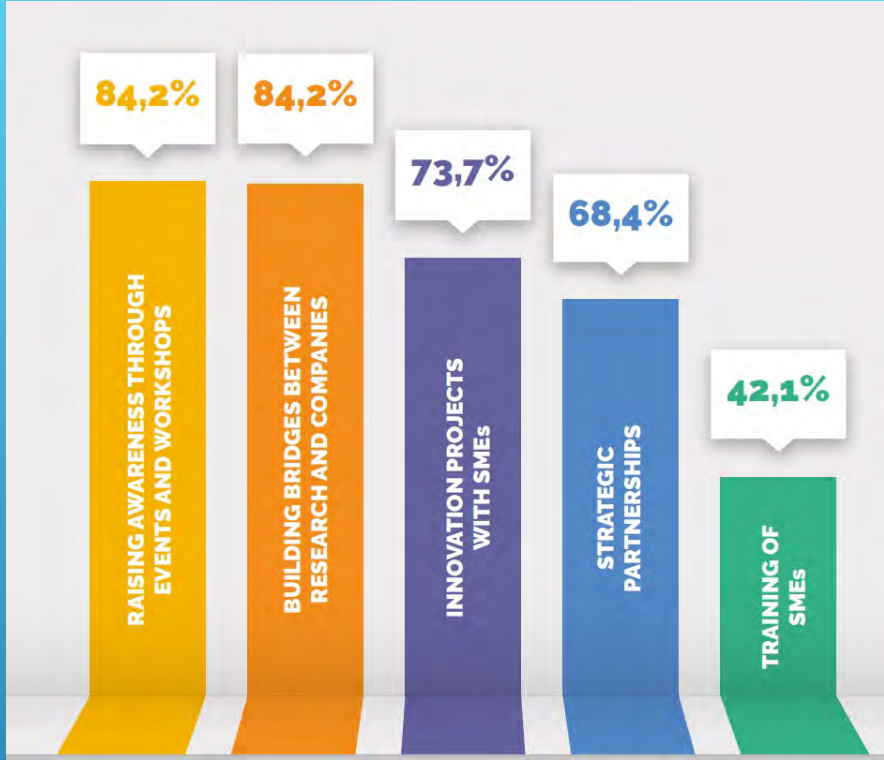
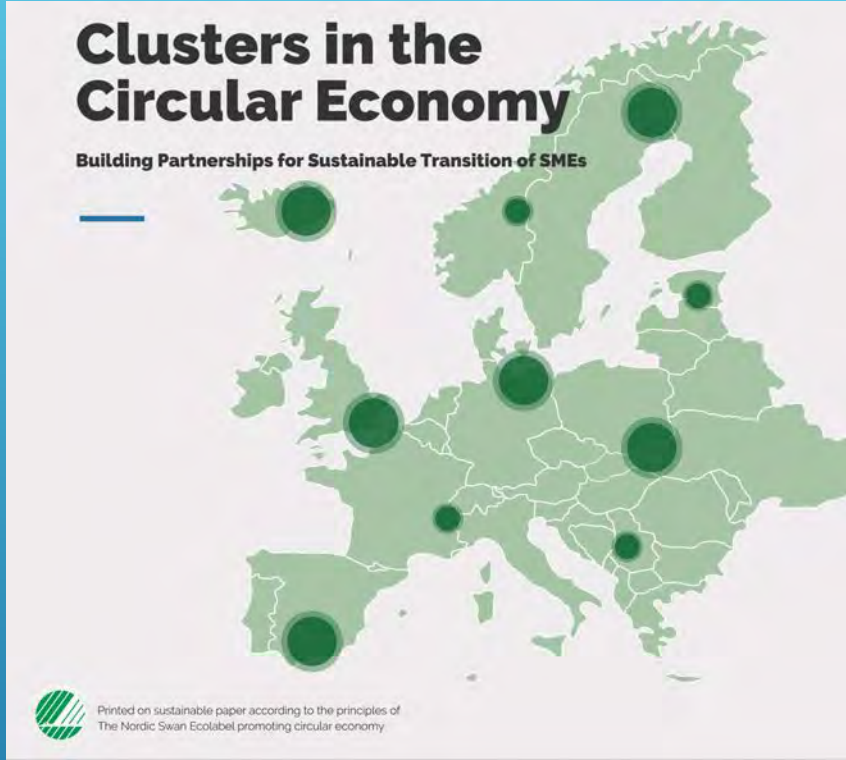
- ▶ Strong political leadership.
- ▶ Transformation of existing places to accommodate multiple uses, rather than building new facilities: e.g. planting and out-of-hours use of school playgrounds by community.
- ▶ Semi-public organisations support small independent businesses and local shops; local product labelling.
- ▶ Citizen kiosks – neighbourhood advice centres.

PARIS – 15 MINUTE CITY



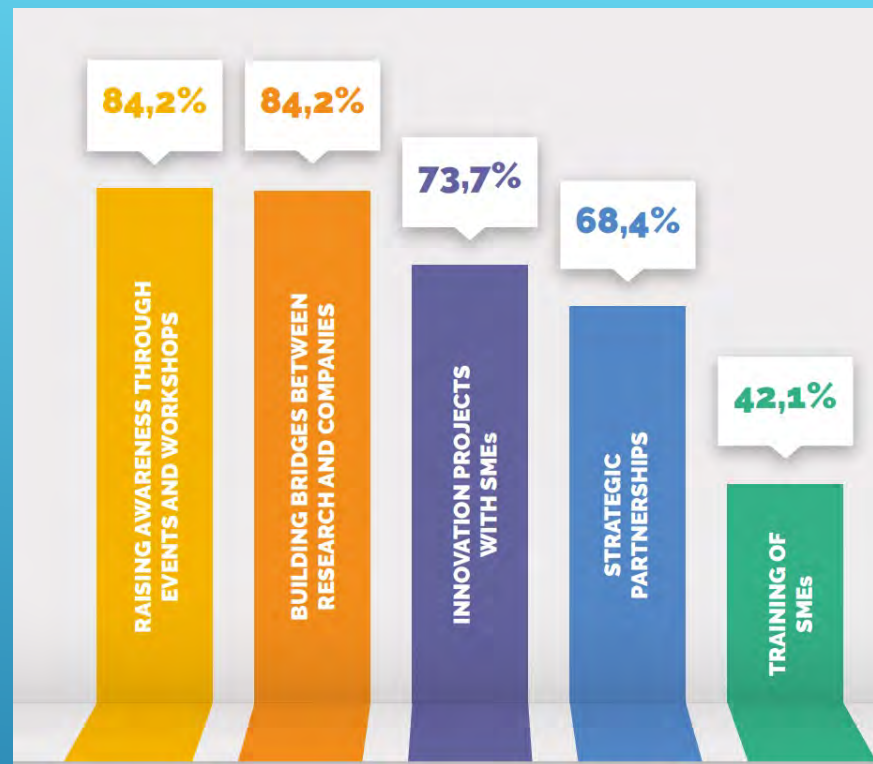
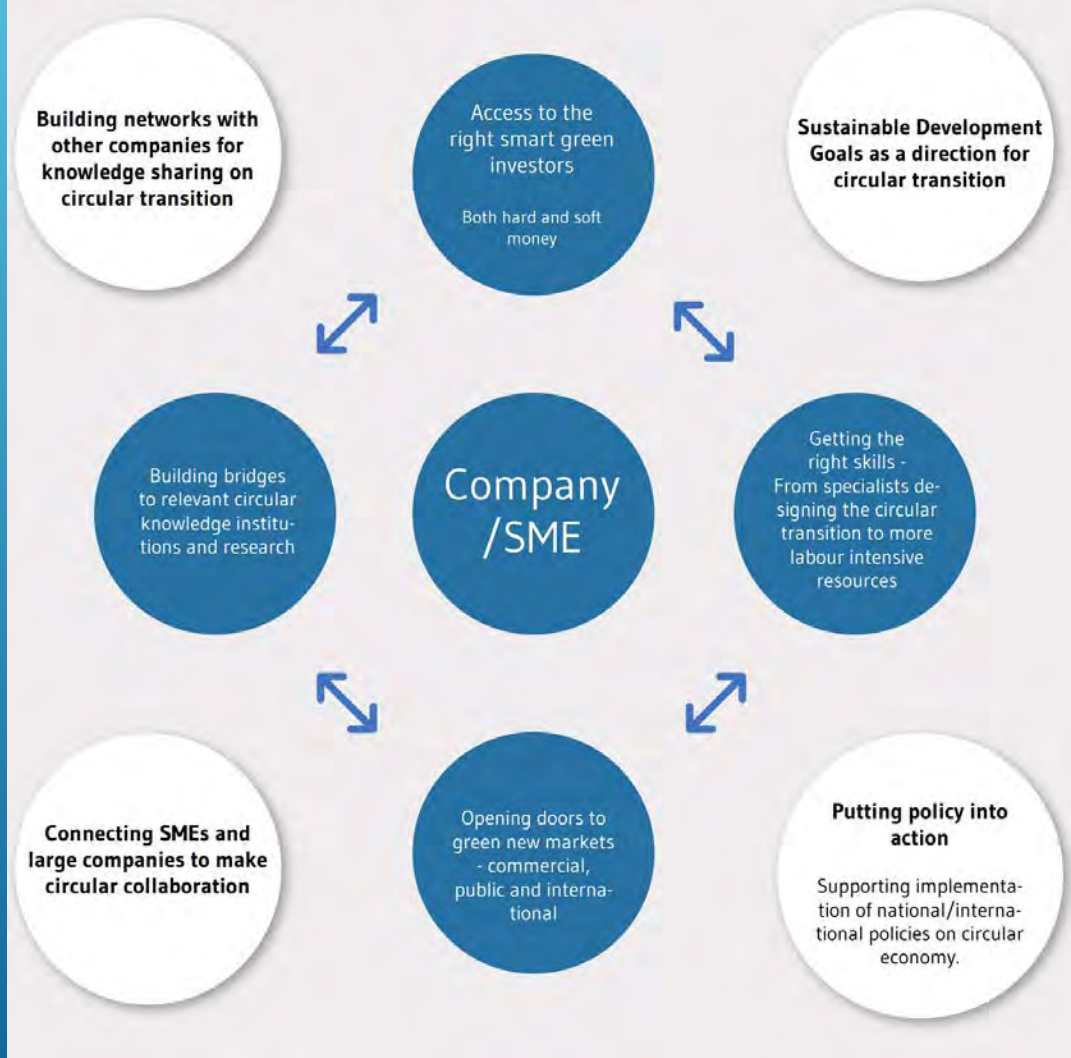
- ▶ 400 m walk out (10 mins) and the same back.
- ▶ People whose mobility is not impaired can walk 1600 m in 20 mins.
- ▶ Needs to be by streets/footpaths, not 'as the crow flies', so local lay-outs matter.
- ▶ Is it a safe, attractive walk?
- ▶ How does it fit small towns and rural areas?

20 MINUTE NEIGHBOURHOODS



DANISH WORK ON BUILDING CLUSTERS

How clusters are building green partnerships for circular transition of SMEs



IMPACTS OF CLUSTERS SUPPORTING SMES IN CIRCULAR ECONOMY

- ▶ <https://www.youtube.com/watch?v=PP2HPIzAwQ8>



BSR INTERREG FOCUS ON CIRCULAR ECONOMY



▶ Let's work together for new projects