

#EUCircularTalks


Towards a Circular European Infrastructure

Facilitated by **Kaitlyn Dietz**

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11 May 2021



Breakout Session (4):
***Local government levers to
promote circular infrastructure***



Towards a Circular European Infrastructure

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SESSION OUTLINE :

What can be done at the local level to promote circular infrastructure?

...to complement/ accelerate efforts at national & EU level?

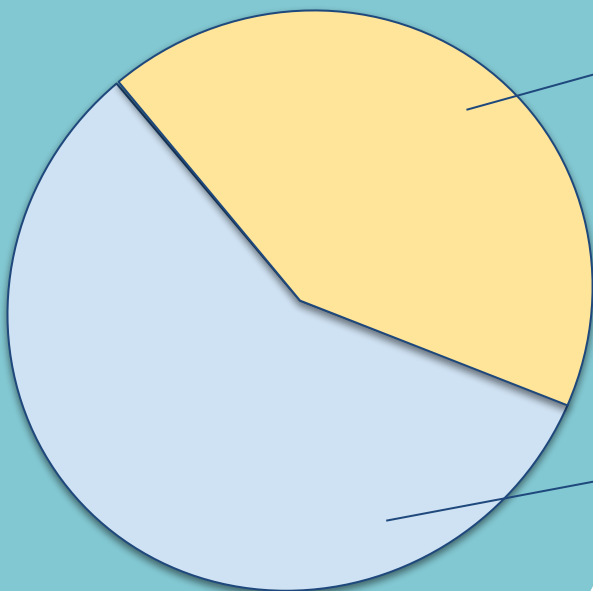
CONTENT INPUT .

- . Role of local governments in territorial transition
- . Municipal levers for circular infrastructure
- . Best practice examples from the *Big Buyers* working group

PARTICIPANT DISCUSSION .

- . Q&A on presentation
- . Guiding questions and moderated discussion

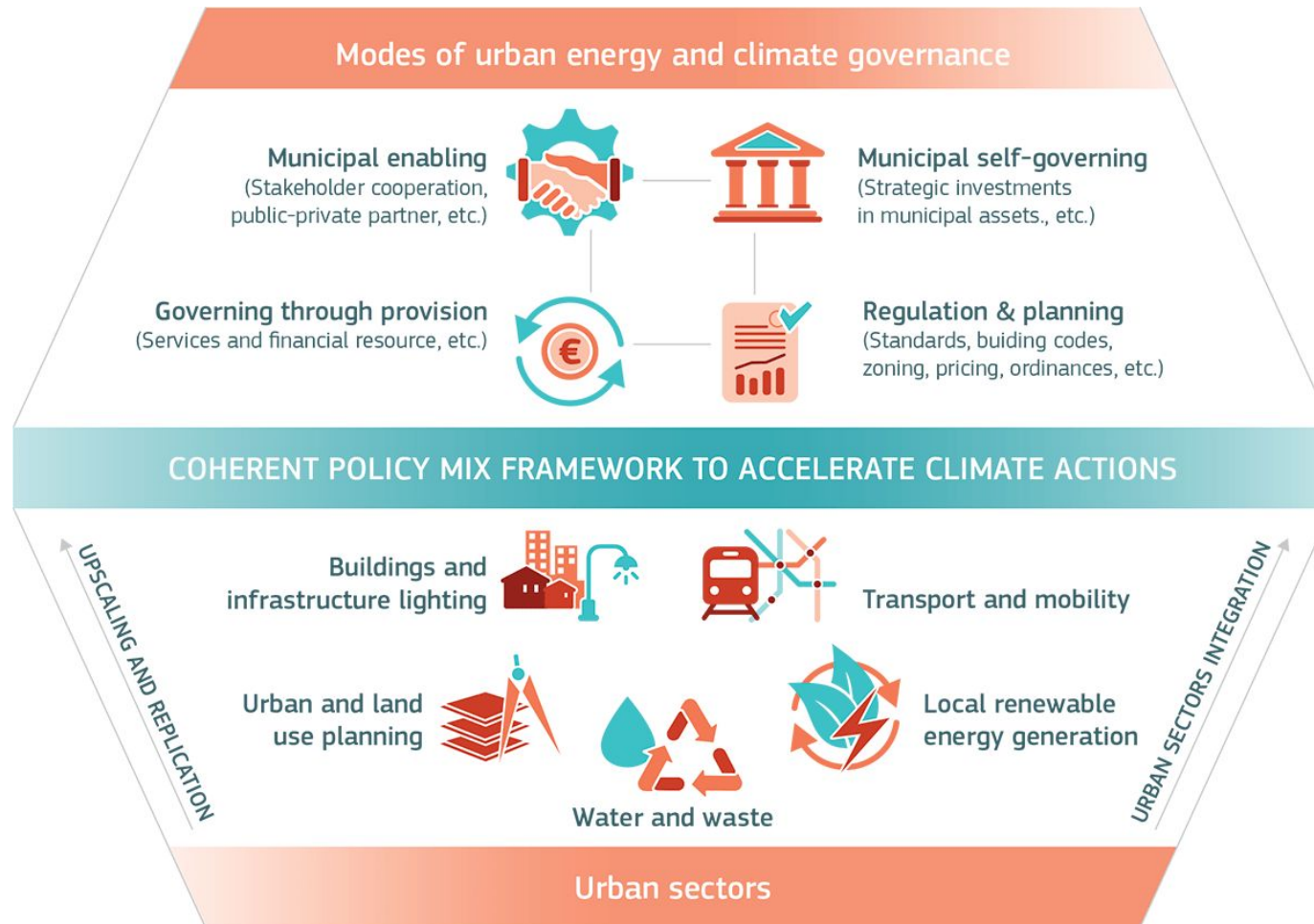
Welcome!



Role of local governments in territorial transition

- Cities and regions are key actors in implementing EU strategies for circular development (EU Green Deal, CEAP, etc.)
 - Closest to citizens; Managing key production/ consumption chains, and delivering on people-centred priorities like housing, mobility and jobs
- Crux of consumption & Cradle of innovation
 - $\frac{3}{4}$ of global GHG, $\frac{3}{4}$ of natural resource consumption, $\frac{1}{2}$ of waste produced,
 - $\frac{3}{4}$ of European population lives in cities and towns
 - Creative solutions for systemic change: high concentration of talent, resources, capital, data...

Role of local governments in territorial transition



LG levers for promoting circularity

... as market driver, first-adopter and role model!

- as owner and asset manager (procurement, use models & maintenance)
- as service provider (mobility, utilities, public space)
- as enabler / regulator (development of secondary material markets, financial incentives, zoning & permitting)
- as convener / facilitator (coordination, digital/ physical platforms)



Big Buyers WG: Circular Construction Materials



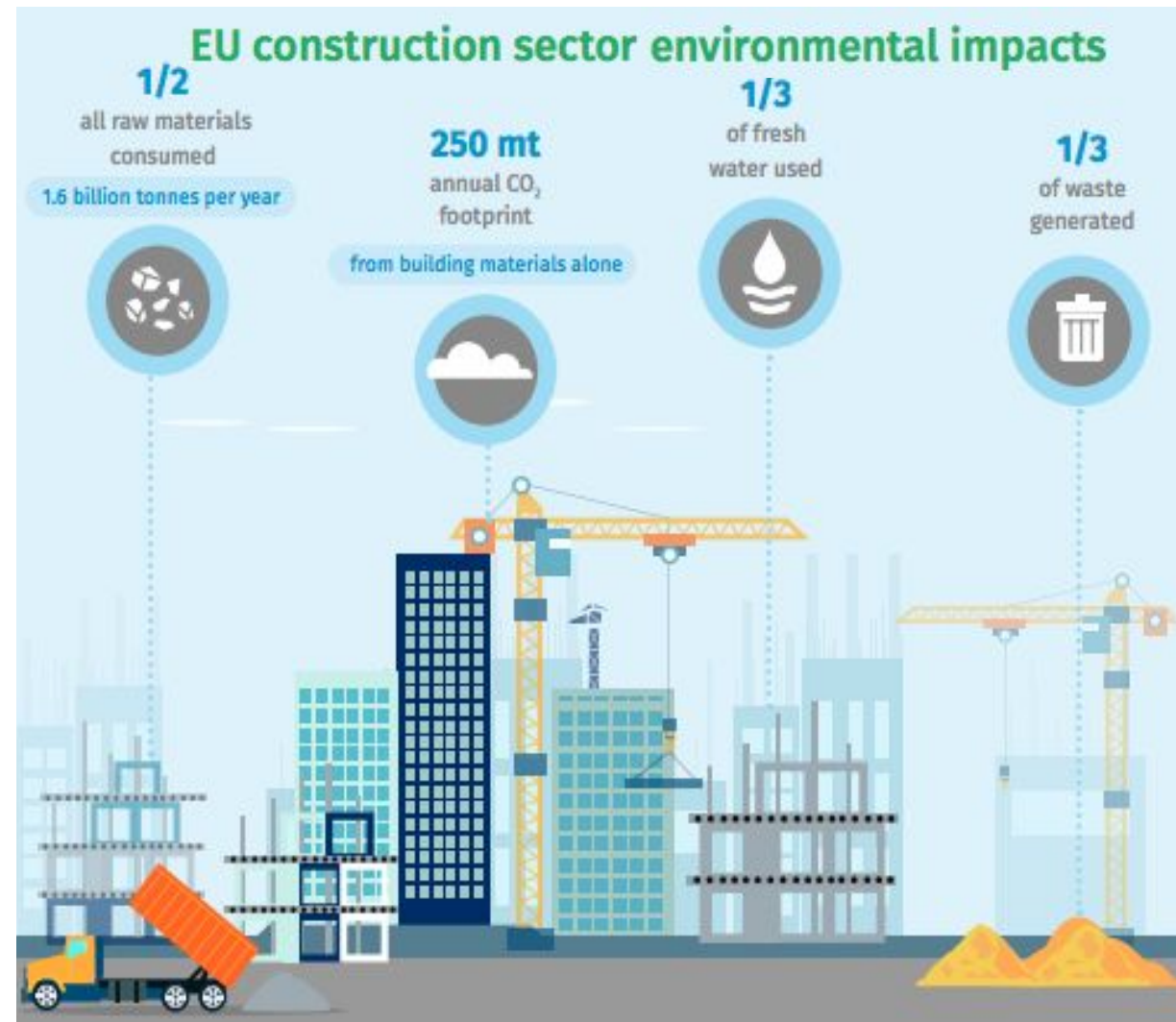
Focus: Improving circularity in the construction sector by fomenting procurement of reused, recycled or reusable construction materials and circular works

Participants (2019-2020)

Vienna, Haarlem, Amsterdam, Rotterdam, Paris, Oslo, Stavanger, Helsinki, Vantaa, Zurich, Lisbon, Porto, Brussels, Budapest

Participants (2021-2022)

Vienna, Haarlem, Rotterdam, Zurich, Brussels Mobility, Belgian Post, Madrid, Lisbon, Porto, Toulouse, Bordeaux, Sète, Neukölln (Berlin), Valladolid, Barcelona, Zeeland Province, Wallonie, Andalusian Housing Agency, Danish Building and Properties Agency, Motiva, Rijkswaterstaat, Circular Flanders



Best Practice: Zurich

Concrete

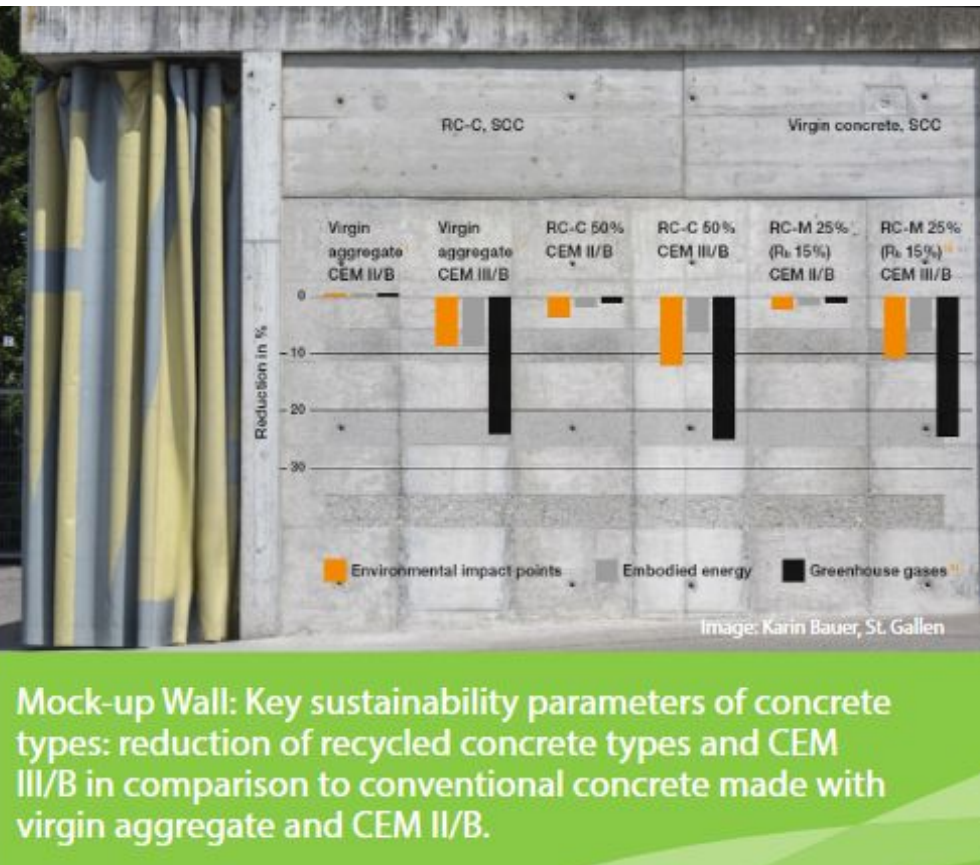
- High % recycled aggregates
 - Began with 25% minimum recycled aggregates in 2005; Now up to 98% recycled concrete
 - RC-C minimum(crushed concrete), RC-M preferred (mixed CDW)
- Low CO₂ cement (clinker substituted with byproducts)

Roads

- High % secondary asphalt and sub-base
 - 60-80% reclaimed asphalt

Kerbstones

- Direct reuse saves 0.2-1.4 kg CO₂e per stone



Best Practice: Zurich

Find out more: [GPP Case Study](#)

How?

Increasingly stringent minimum requirements for public projects over 15 years to build market; Proven quality

Lessons learned:

Experience shows ***supply follows demand***;

Supply of secondary materials depends upon **circular demolition processes**;

Transport emissions should be considered to ensure carbon benefits of using secondary materials

(e.g. recycled aggregates must be from <25 km from site)



Best Practice: Helsinki

Municipal Land Mass Coordination

- Since 2011, **reuse of excavated land masses** to expand new coastal residential areas, groundworks, infrastructure construction (streets, parks), noise barriers, etc. (0.7-1.1 million tonnes per year)
- City owns the excavated earth, sees it as an important resource and plans where to reuse it (minimising storage, transport, CO₂e)
- Since 2019, Coordinator also manages of the use of **crushed concrete** from demolished buildings



Best Practice: Helsinki

Municipal Land Mass Coordination

Requires:

- A coordinator
- Information from projects about land masses
- Clear, accessible process for designers and contractors
- (temporary) Land mass storage areas (Helsinki has 8)

How it works:

Master planning phase

- Coordination and reuse of land masses is considered already in the master planning phase (planned storage areas)

City planning phase

- Requirements for the reuse of land masses are set in city plans (for plots and new areas)

Planning phase

- Designers identify and count what kind of land masses will be excavated and what is needed in the project using an excel form
- Designers define the quality of soil

Land mass coordinator

- Coordinates needs between projects and construction sites
- Specify how land masses should be handled and where transported (requirements for contractor)

Construction phase

- Contractor counts actual land masses using an excel form, handle and transport land masses as required

Circular construction - Challenges



- **Secondary materials:** heterogeneous, limited in quantity, lack of data on availability and certification of quality
- **Awareness and acceptance of architects/ engineers:** Need larger demand for inclusion of secondary materials from construction clients, proven performance and aesthetic quality
- **Digital tools:** Extra cost and time of material inventory/ passports hard to justify without proven business case for reuse - need more (and more accessible) data, standardised and industry-accepted tools
- **Closing the loop: Demo - new Construction value chain** Need for storage, new market actors to address logistics of matching and facilitating exchange of materials

Big Buyers: Key takeaways

Find out more: www.bigbuyers.eu



- **Start now** collecting, storing and sharing **data** about available **materials** (quantity, quality, location, etc.) and developing benchmarks for embodied **carbon**
- **Make use of multiple roles** of a local govt. to support and strengthen efforts by capitalising on synergies
- **Waste hierarchy** Beware of downcycling and tradeoffs
- **Learn by doing, together** Circular economy requires a collaborative approach with other actors across the value chain, and to figure things out by testing through pilots

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Big Buyers WG: Zero-emission construction sites

Focus

Promoting low- and zero-emission construction works

- Non-road mobile machinery (machines on-site)

Participants (2019-2020)

Oslo, Copenhagen, Helsinki, Amsterdam, Lisbon, Brussels Mobility, Budapest, Trondheim and Vienna



Key takeaways

Find out more: www.bigbuyers.eu

- **Political will & dedicated funding:** use carbon, local air quality, livability (noise, worker health) arguments. Set targets to signal market.
- **Market dialogue:** set ambition and adjust based on market maturity
- **Procurement process:** consider innovation partnerships & build trust through long-term relationships with suppliers
- Choosing **pilot site:** visible, at an appropriate scale, and with accessible, decarbonised electricity
- **Join forces:** coalition with other cities, networks and projects to push the issue forward at scale



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Big Buyers Initiative
Lessons Learned Report

[Download here](#)

Public Procurement of Circular Construction Materials

Key takeaways from the Big Buyers Initiative working group



The Big Buyers Initiative is a European Commission Initiative for promoting collaboration between big public buyers in implementing strategic public procurement. Public procurement can be a key tool in driving the development of innovative goods and services on the European market. By working together and pooling their purchasing power, cities, central purchasing bodies, and other major public procurers can maximise their market impact.



The Big Buyers Initiative is currently managed by ICLEI - Local Governments for Sustainability and Eurocities.



The Big Buyers Initiative is funded by the European Commission, Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs. The sole responsibility for any error or omissions lies with the editor. The content does not necessarily reflect the opinion of the European Commission. The European Commission is also not responsible for any use that may be made of the information contained herein.



Guiding questions for discussion



European
Circular Economy
Stakeholder Platform



(1) *What can be done at the local level to promote circular infrastructure?*

- *Do you have ideas beyond the actions mentioned previously?*
- *What is being done in your city/ region?*
- *What are LGs' 'special strengths' to implement circularity?*

Guiding questions for discussion



- (2) *How can local and regional governments complement/ accelerate efforts at national & EU level?***
- *What kind of support (technical, financial) do LGs need from the EU to do this?*
 - *How can municipalities learn from and collaborate with each other and national/ EU actors?*

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A large-scale construction site featuring several yellow tower cranes and a building under construction covered in scaffolding. The sky is filled with a large flock of birds flying in various directions.

Thanks for taking part!