


CONSTRUCTION and DEMOLITION Waste and the Role of Digitisation

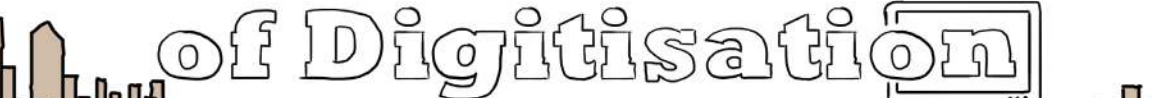
25TH MAY
2022

Online



CONSTRUCTION and DEMOLITION

Waste and the Role of Digitisation



An invitation to a visual journey of the DEEP DIVE Webinar
in words and images

For those who could join...

...the keywords and connecting structures to help us remember

For those who could not join..

... a visual perspective of the dialogue to pique your curiosity



elizabethsmaloba@gmail.com and gmuthoka@gmail.com

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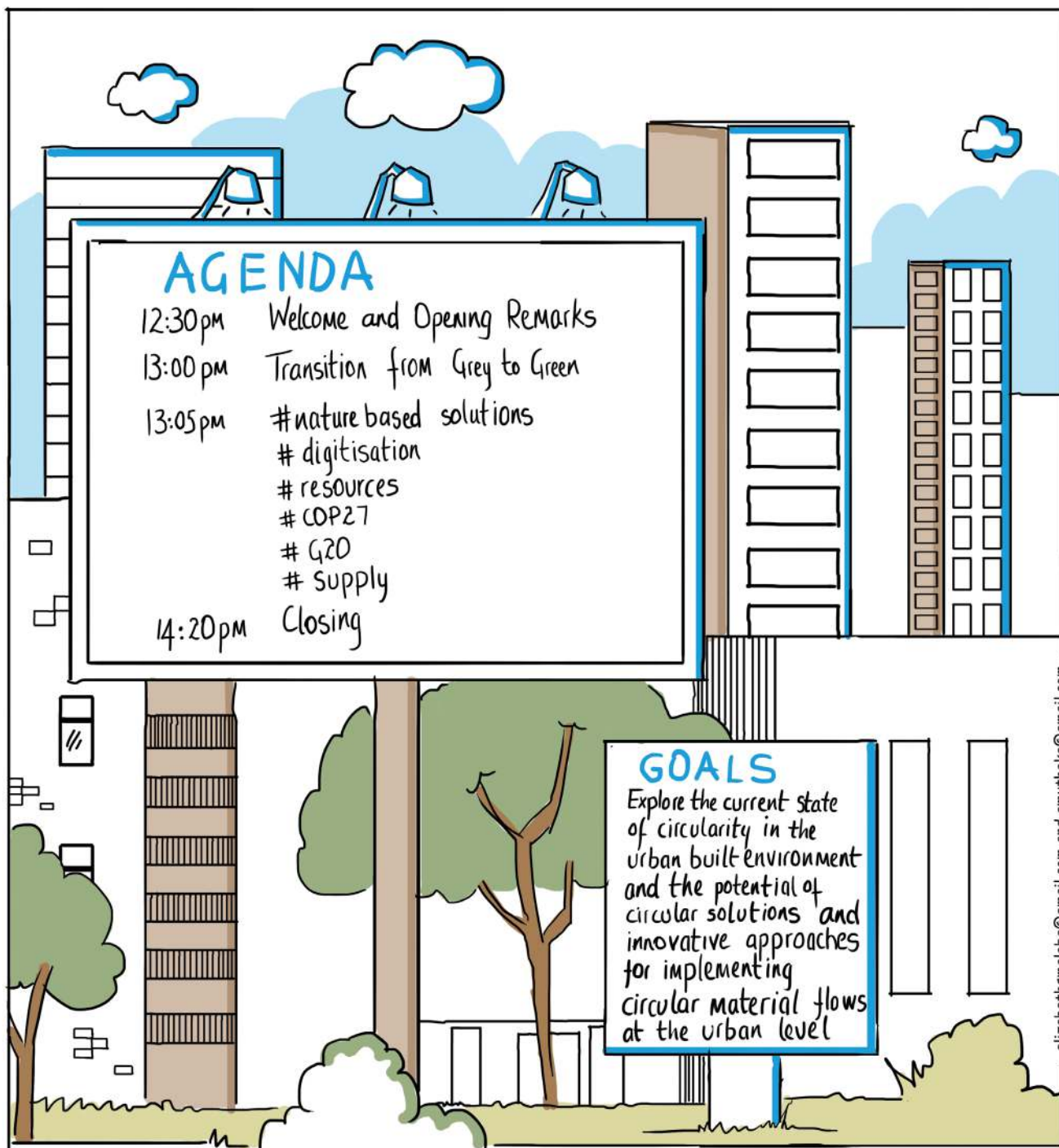
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AGENDA

- 12:30pm Welcome and Opening Remarks
- 13:00pm Transition from Grey to Green
- 13:05pm #nature based solutions
digitisation
resources
COP27
G20
Supply
- 14:20pm Closing

GOALS

Explore the current state of circularity in the urban built environment and the potential of circular solutions and innovative approaches for implementing circular material flows at the urban level

- What are key factors to achieve circularity in the urban built environment?
- How can circular procurement effectively integrate bio-based solutions?
- How can reverse logistics and resource recovery in the construction and demolition waste sector be implemented?
- To what extent can nature-based solutions and circular solutions embed and make use of construction and demolition resources?
- In what ways could construction waste be prevented or reduced?
- What are the main challenges to introduce more circularity to the construction and demolition waste sector? What differences in terms of diverse materials or urban settings?
- How can digital tools improve and enable construction and demolition waste discussion?

CRITICAL QUESTIONS

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HOLGER KUHLE

Started
2
years ago

Dialogue Cycle 1
Plastics

Dialogue Cycle 2
Global Value
Chains

Dialogue Cycle 3
Urban
Metabolism

Implemented by GIZ



In partnership with GSI



Commissioned by BMUV



...is one of the
most resource
intensive sectors
of the economy

...is responsible
for more than
30%
of natural resource
extraction

CONSTRUCTION SECTOR

+25%
of waste
generation



Cities have a role
in paving the way
to achieving
circularity

- 1 Generation of waste should be avoided
- 2 Unavoidable waste kept at a minimum
- 3 Disposing of unavoidable waste should be done properly



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What are the challenges to introducing circularity to Construction and Waste Management?

Cities are systems of systems

Africa is different
- sheer size
- inequalities

So our governments have other priorities

One word - "NEED"

- transitions from principle to practice
- link research to practice addressing inequalities
- building skills and capacity

Are there pioneering cities?

• Kigali

• Cape Town

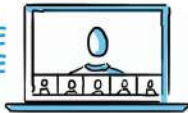
• Nairobi

There are so many blindspots ...so many competing priorities

But the challenge is rural urbanisation

- governance is weak
- technical capacity is lacking
- skills are deficient
- villages growing into cities

YAME NGKOWE



The biggest footprint is within the occupation phase

Positive drivers:
• Emissions trading systems
• Nascent EPR systems

Our economic model is supporting a destructive pattern in the world

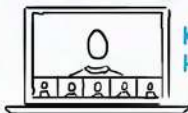
The elephant in the room

- Less cooling
- Less lighting
- Less carbon embedded
- Less building -60% highrise buildings are empty

We need to focus on two things

- Building design
- Incentives and barriers during design phase

KAI HOFFMAN

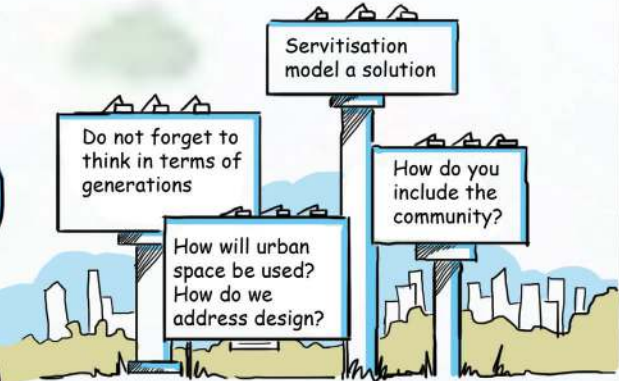


Do not forget to think in terms of generations

Servitisation model a solution

How will urban space be used?
How do we address design?

How do you include the community?



How to embed circular approaches in procurement processes

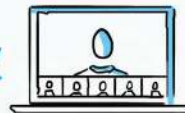
Loans, grants and assistance to governments - to create shifts in the market

Decarbonisation can only bring us so far

Challenge: How to expand approaches to the formal sector

Work on more local scale by: capacity building
rethinking procurement

JEREMY BOURGAULT

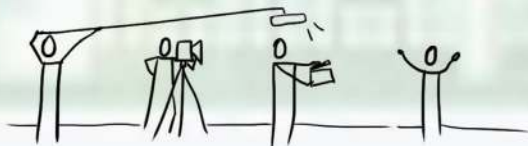


There's a need for:
• Data
• Standards

Better building design

...embodied carbons account for 30% of materials

...more climate friendly buildings



PERSPECTIVE of CONSTRUCTION and DEMOLITION Waste

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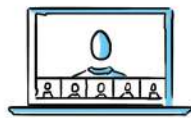
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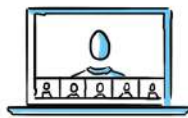
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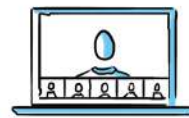
#digitisation
#resources
#COP 27
#G20
#supply



Eduardo Croci



Daniel Rondinel-Oviedo



Virgine Bloyet

Milano Sesto brownfield regeneration

- owned previously by a large steel company
- large area of city abandoned
- regeneration initiated by a developer and a financier
- Conservation of some of the older structures

- Recycling of material in situ during construction



- Regenerative perspective should be considered and promoted by policies

Construction and Demolition Waste Management in Developing countries

Lima Metropolitan area

lack of information applies to developing country contexts
• Most of the urbanisation is taking place in developing countries

- Waste from high income cities transported to low income cities

- Responsibility should be with the waste generators not the transporters.

- There is a need for generation of data

Key Issues

- Information asymmetry
- Market potential
- Licensing
- Digitisation
- Data

- Intention Sustainability is key

both a tool and a process

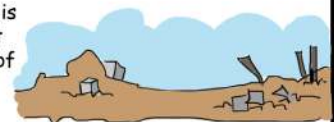
- democratisation is where opportunities lie

- Market potential is huge

- Data is everything



- Demolition is the biggest generator of waste



KEY TAKEAWAYS



Extended producer responsibility as an option?



What new methods are needed to make invisible visible?



How to capture knowledge within the informal sector?



Data collection and archiving is imperative!

Next edition of intersecting

NATURE BASED SOLUTIONS

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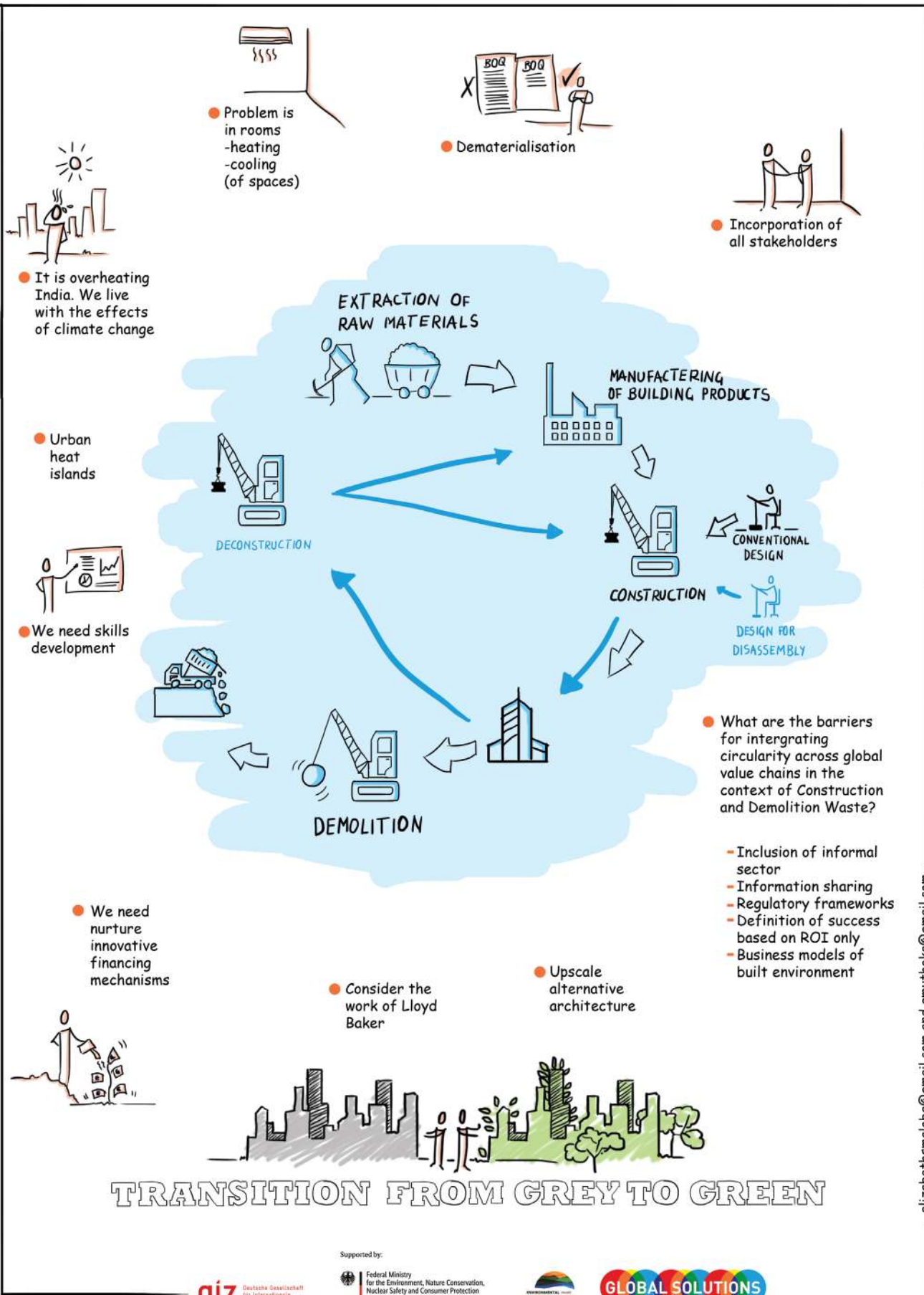
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