BAM
Bundesanstalt für Materialforschung und -prüfung

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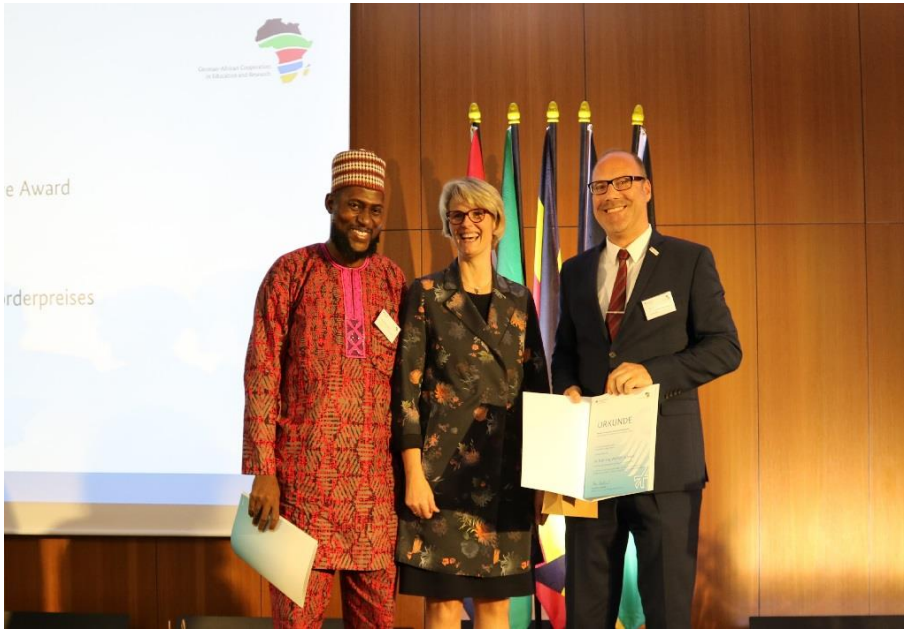
Synergistic circular value chains – from rural waste to urban high-tech construction materials

Wolfram Schmidt

BAM Bundesanstalt für Materialforschung und –prüfung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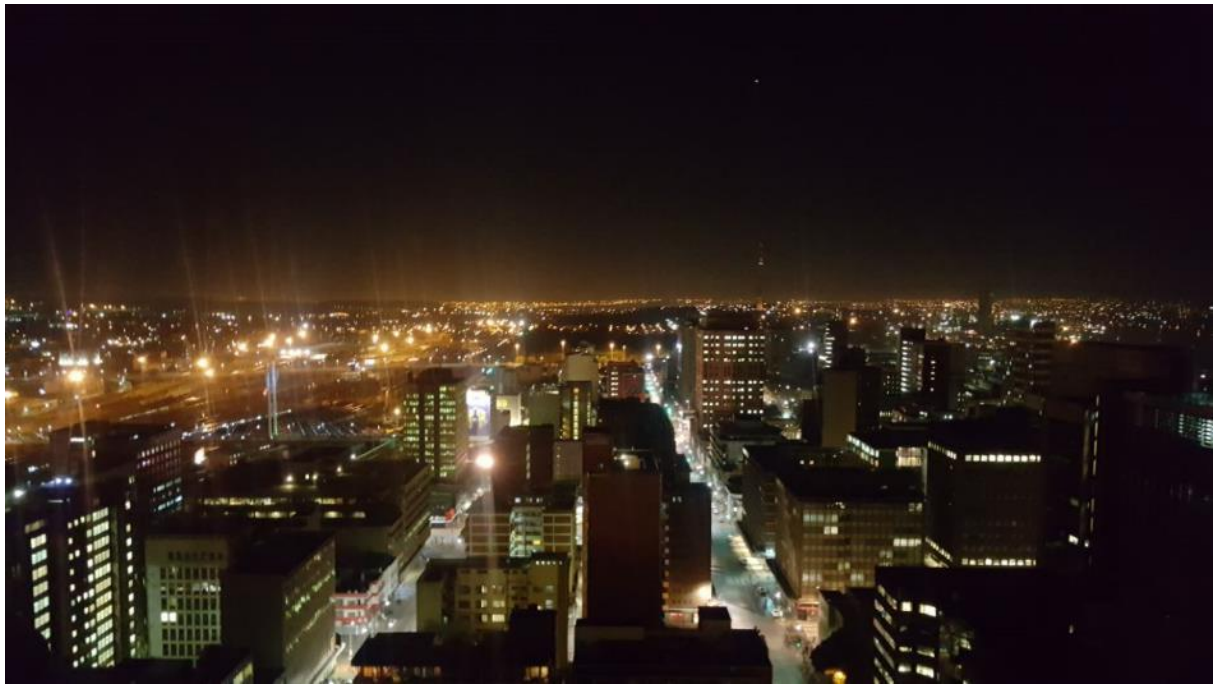
Challenges of the 21st century

Major topics

Urbani-sation	Habitat	Infra-structure	Environ-ment	Sustain-ability



Challenges of the 21st century

Major topics

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Challenges of the 21st century

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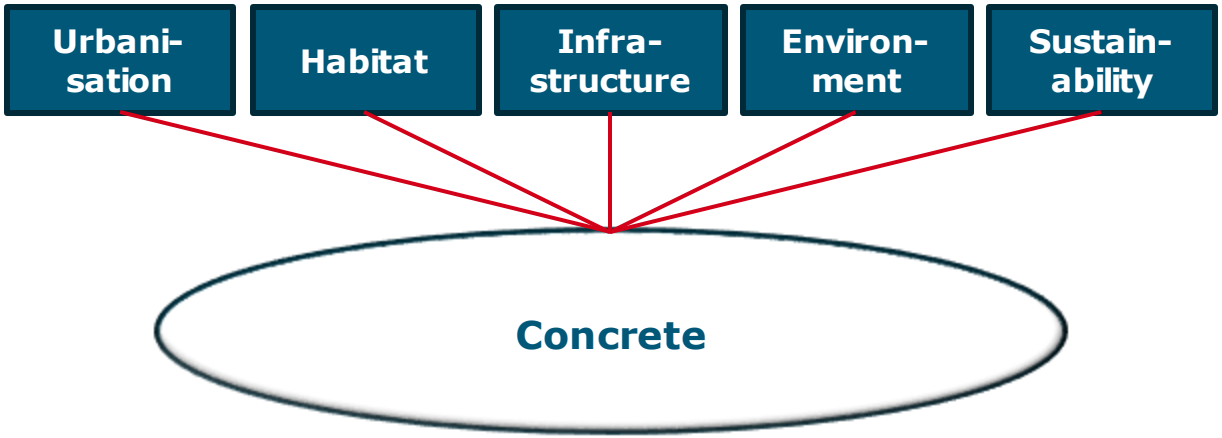
Challenges of the 21st century

The role of concrete



Challenges of the 21st century

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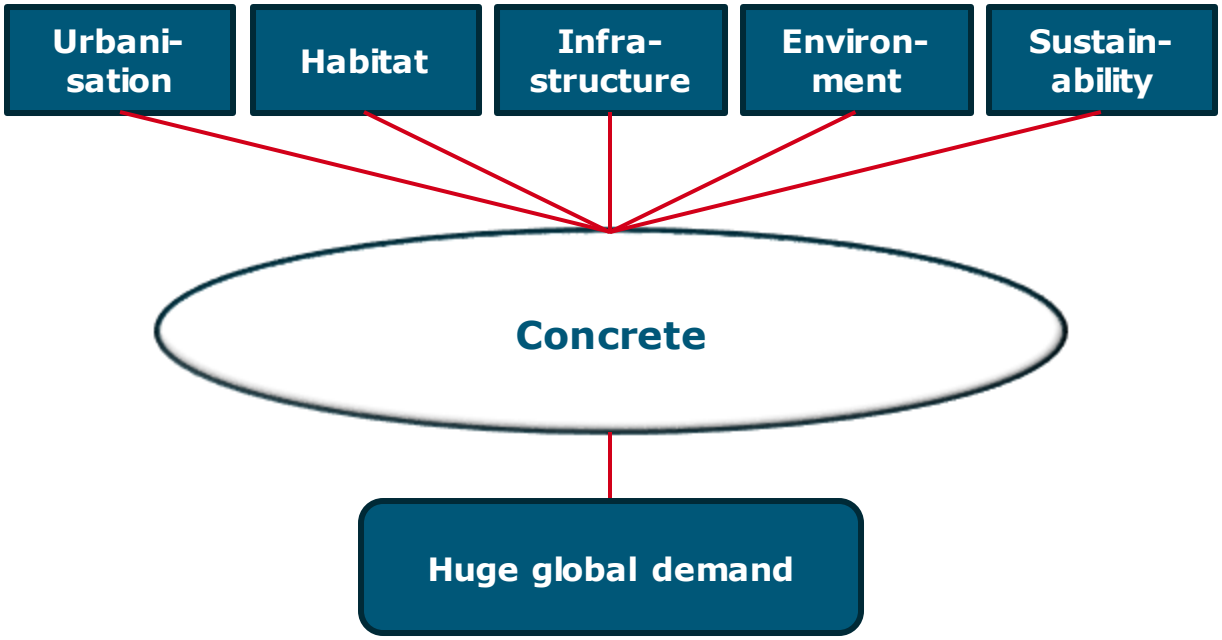
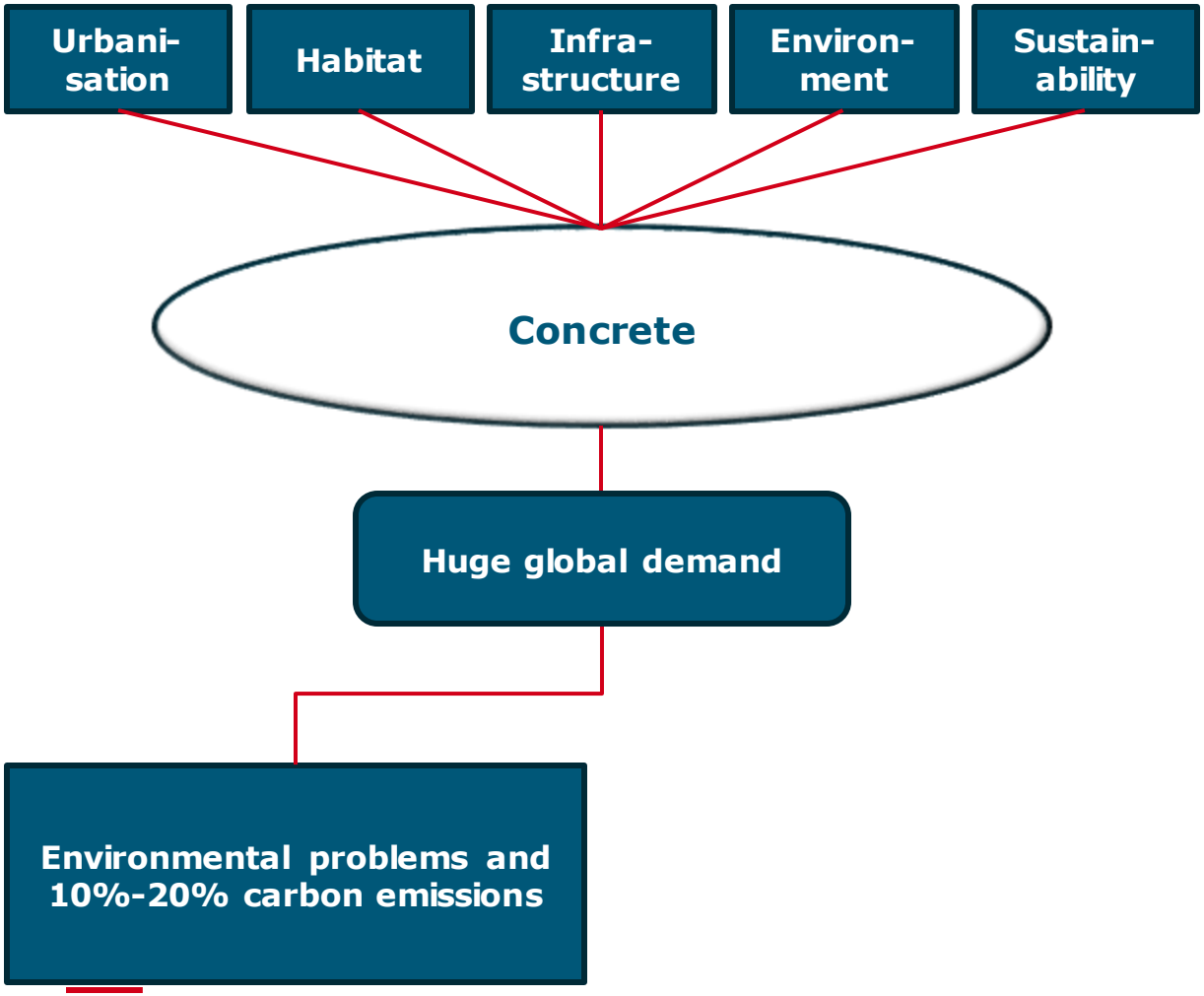


Challenges of the 21st century

The role of concrete



Challenges of the 21st century

The potential of sustainable concrete

Urbani-sation | Habitat | Infra-structure | Environ-ment | Sustain-ability

Concrete

Huge global demand

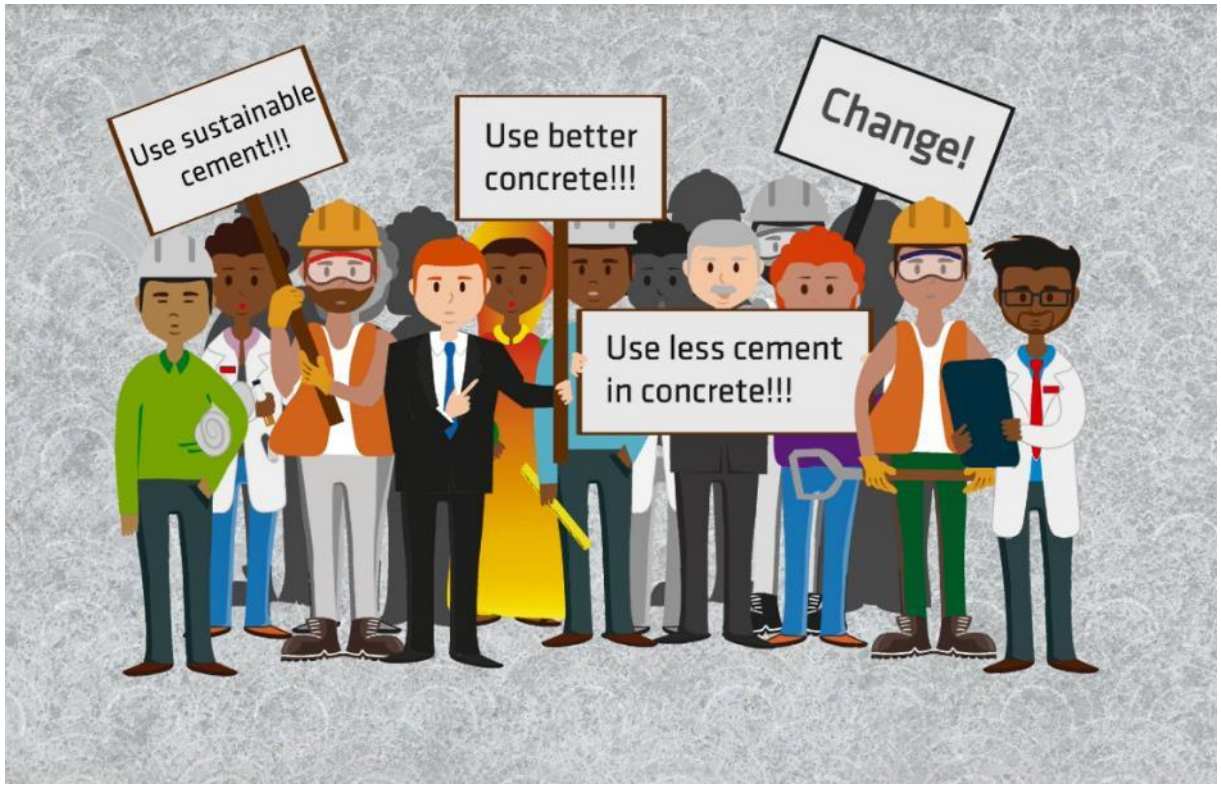
Environmental problems and 10%-20% carbon emissions

Concrete is key for their solution

Challenges of the 21st century

The potential of sustainable concrete

Urbani-sation	Habitat	Infra-structure	Environ-ment	Sustain-ability



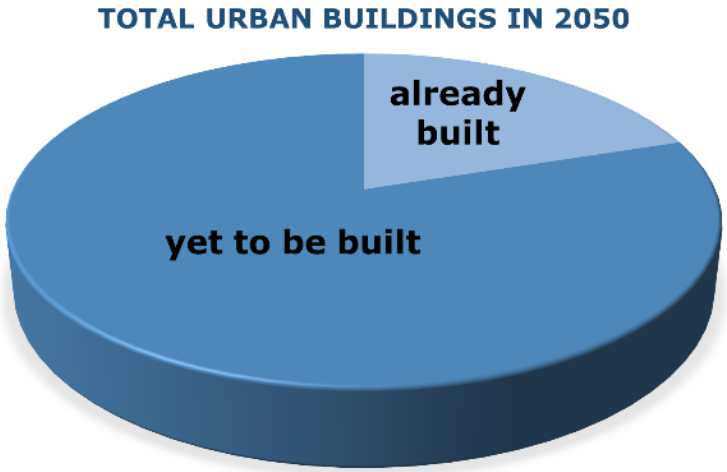
Urbanisation challenges and potentials

Projection for 2100

Countries with the 20 most populated cities in 2100

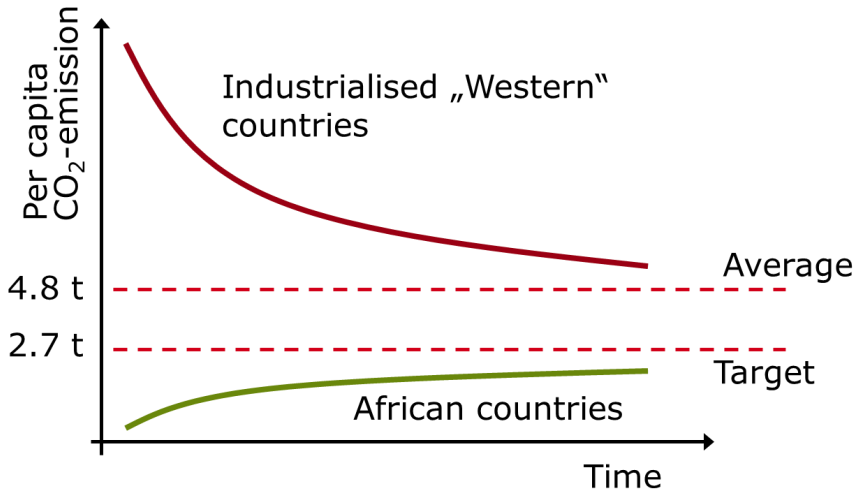
Urbanisation challenges and potentials

Africa‘s potentials



80% of all African urban buildings in 2050 have not yet been built.

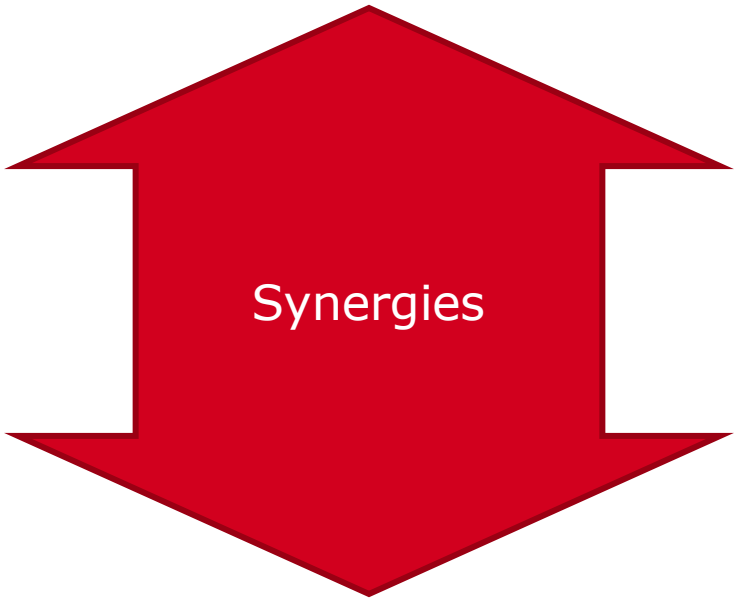
Africa‘s carbon footprint is significantly lower than that of the rest of the world.



Rural to urban synergies

Need for link between urban and rural growth

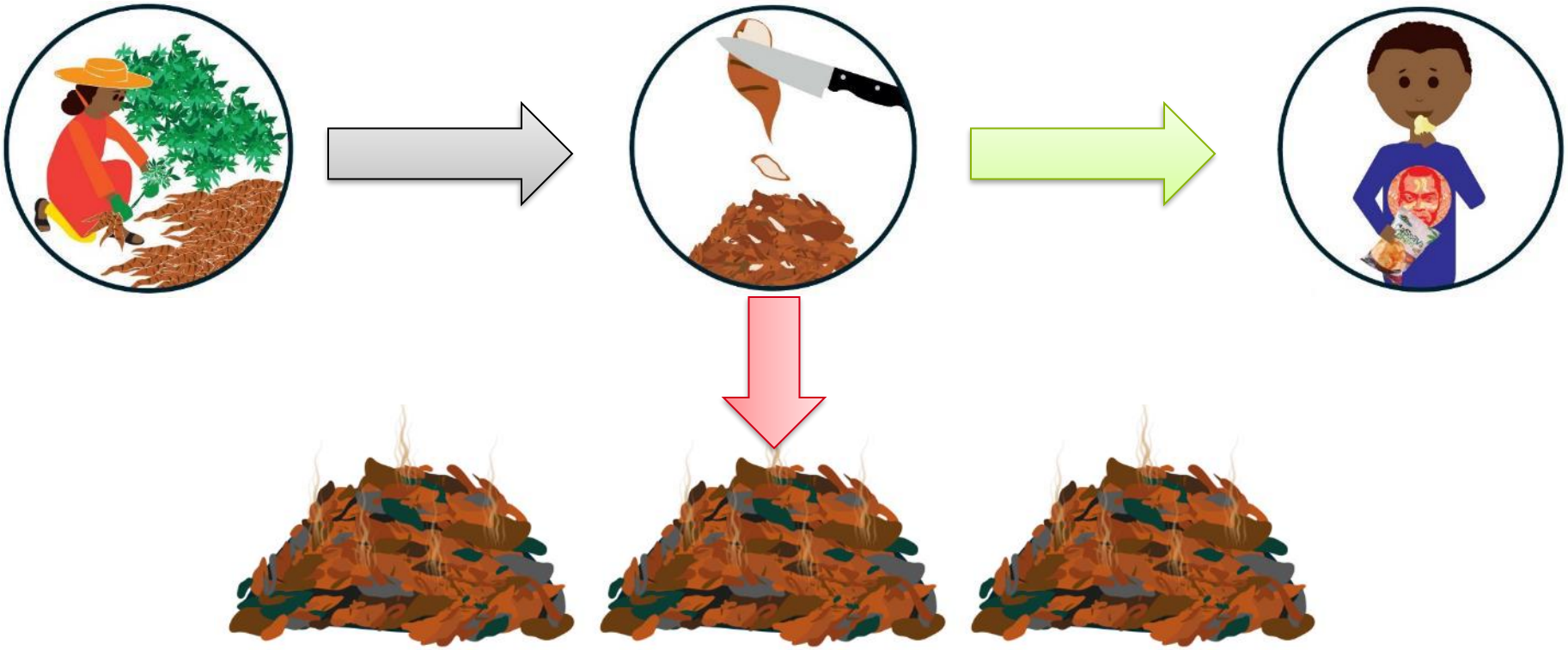
Vast urban growth



Vast agricultural potentials

Case study – cassava in Nigeria

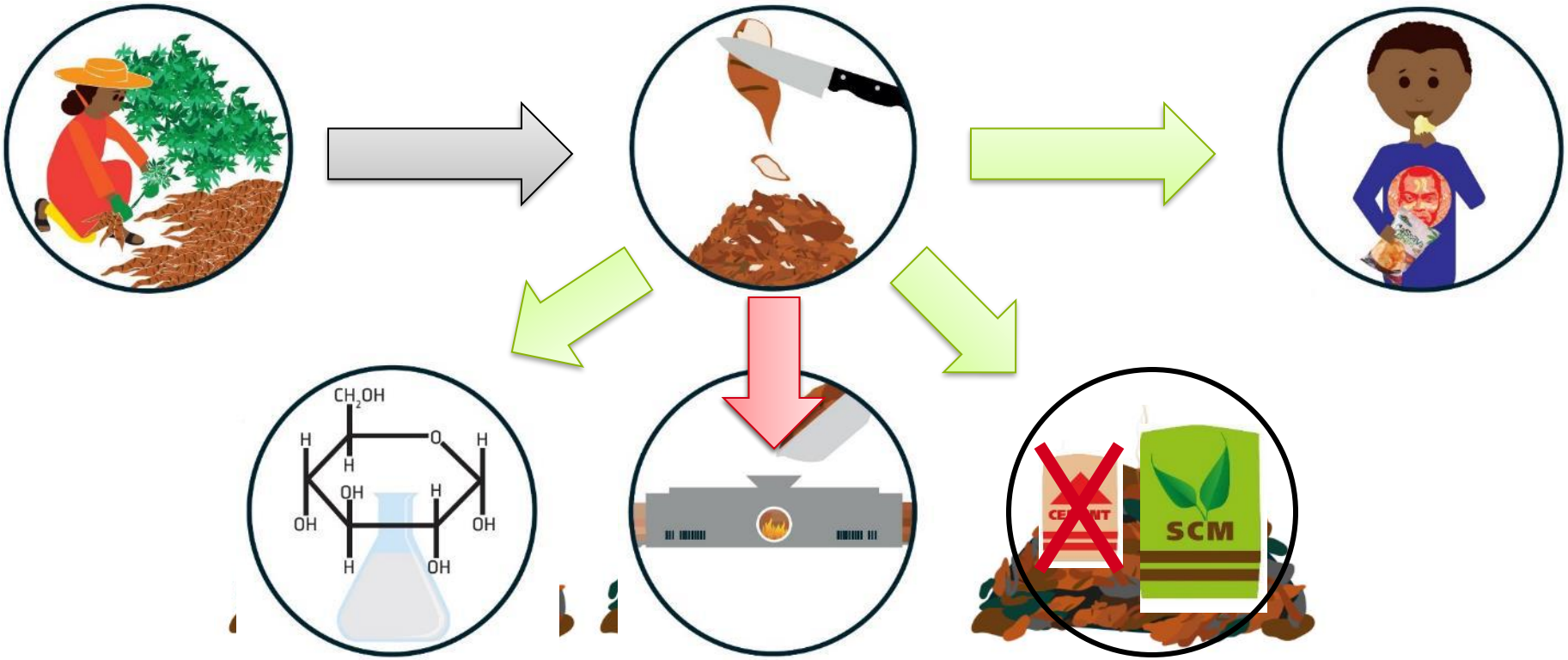
Today's process



W. Schmidt, and M. J. Barucker-Sturzenbecher, "Bio-based concrete (**https://vimeo.com/310549146**)," 2019, 7:51

Case study – cassava in Nigeria

Future potentials



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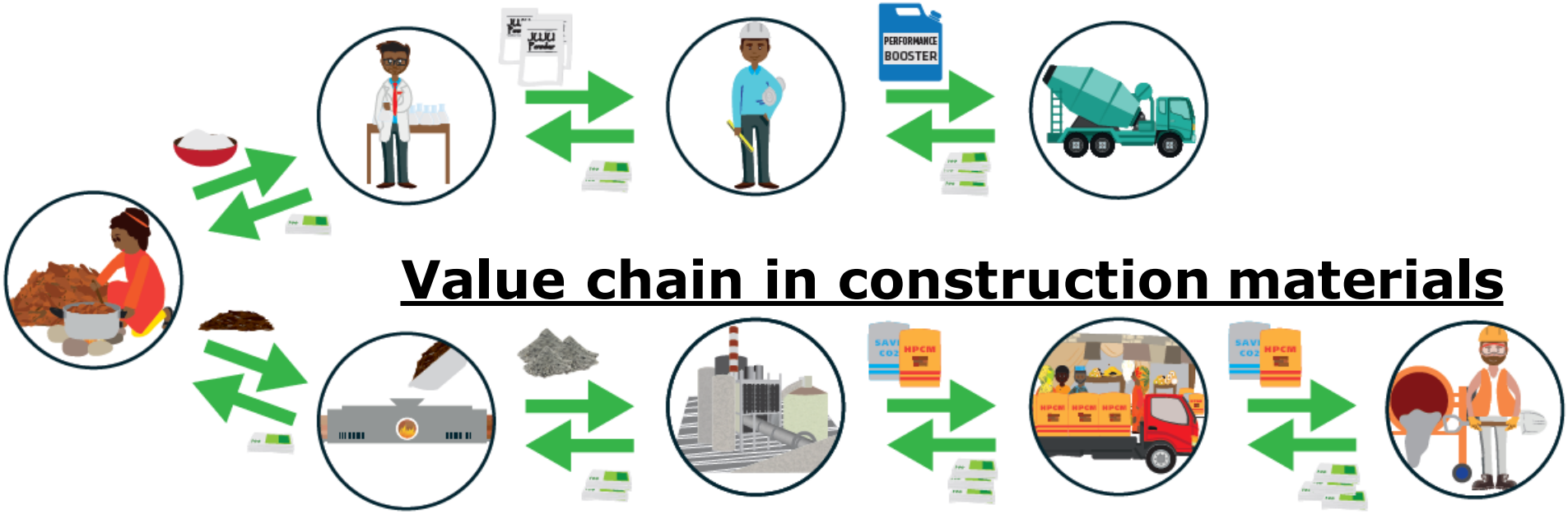
Future value chains



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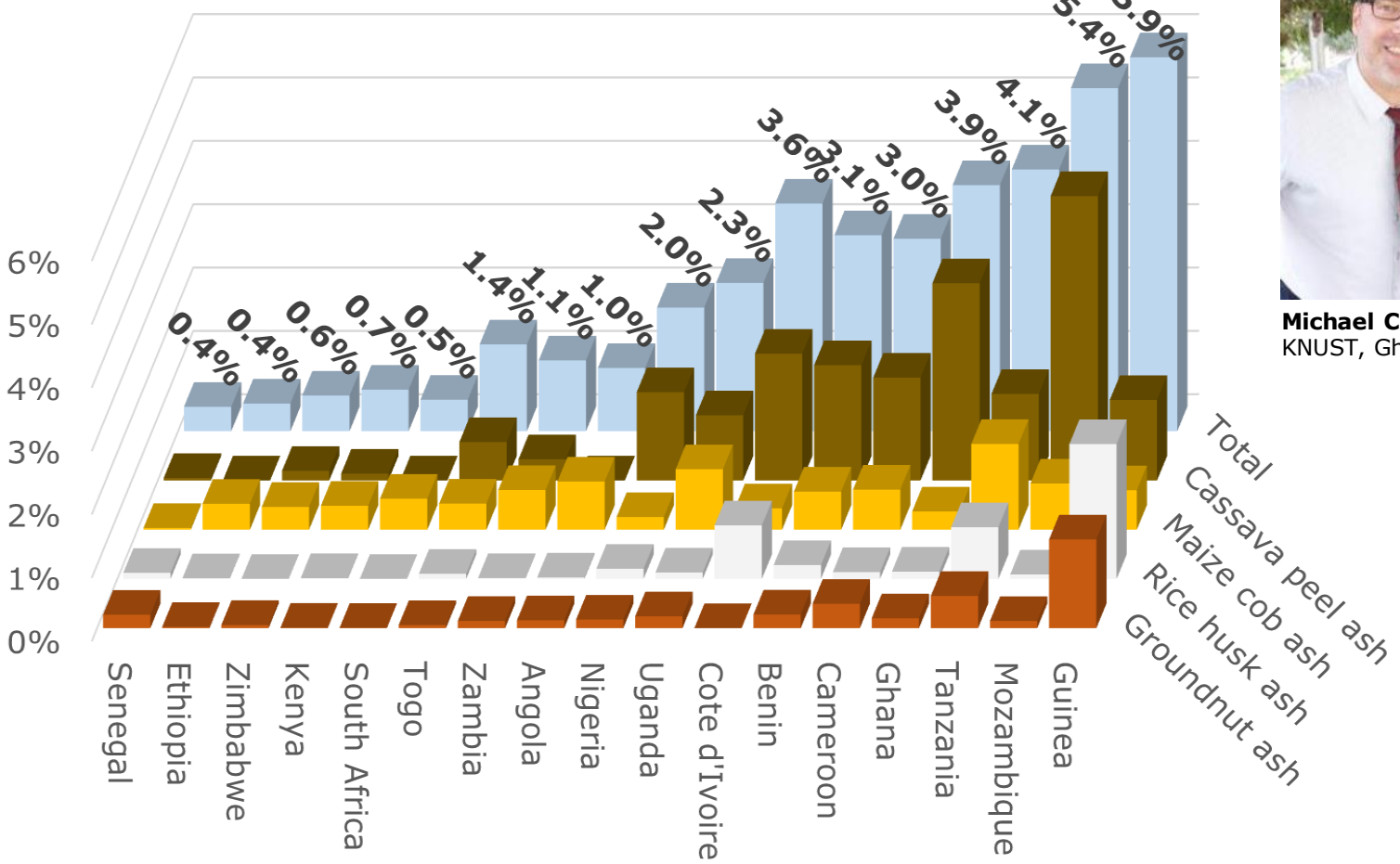
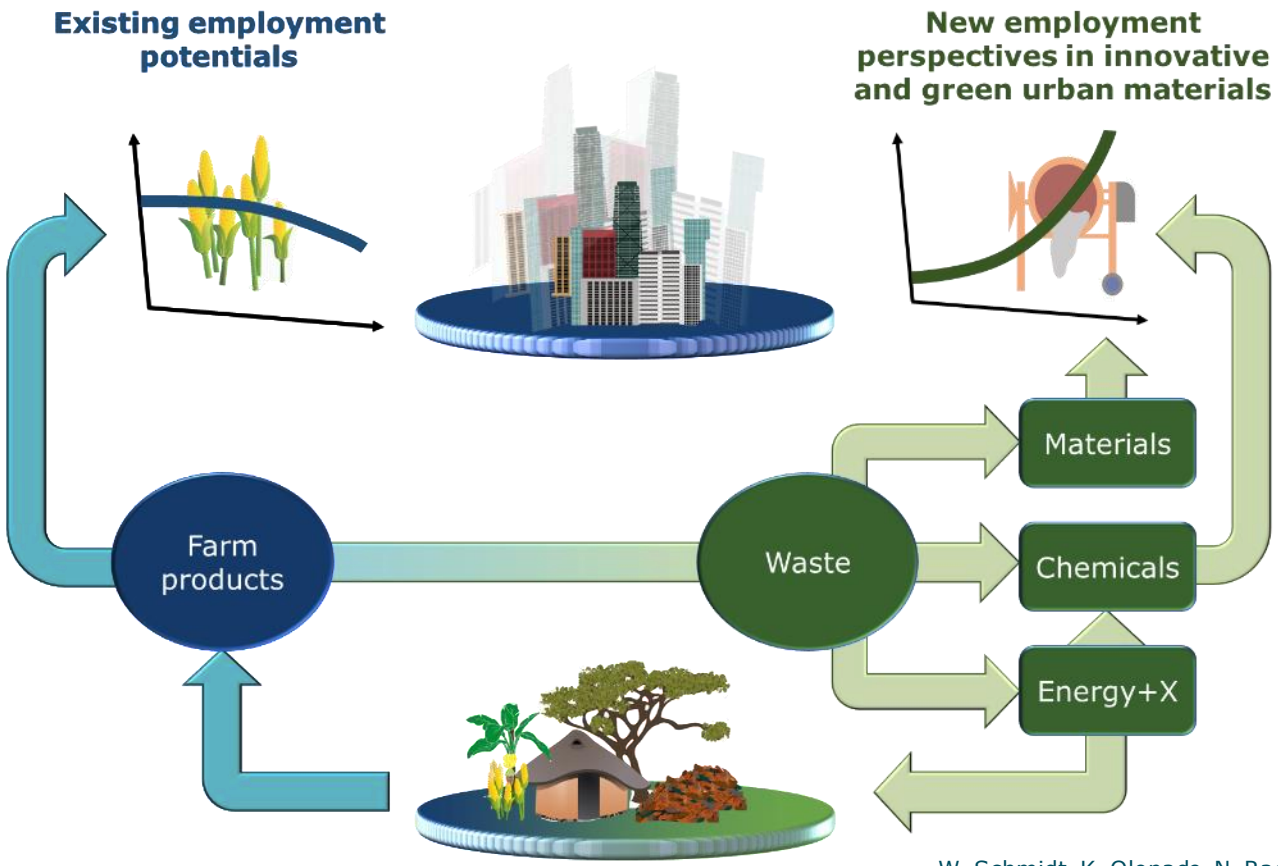


Michael Commeh
KNUST, Ghana

Conclusions

New synergistic rural to urban value chains



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Conclusions

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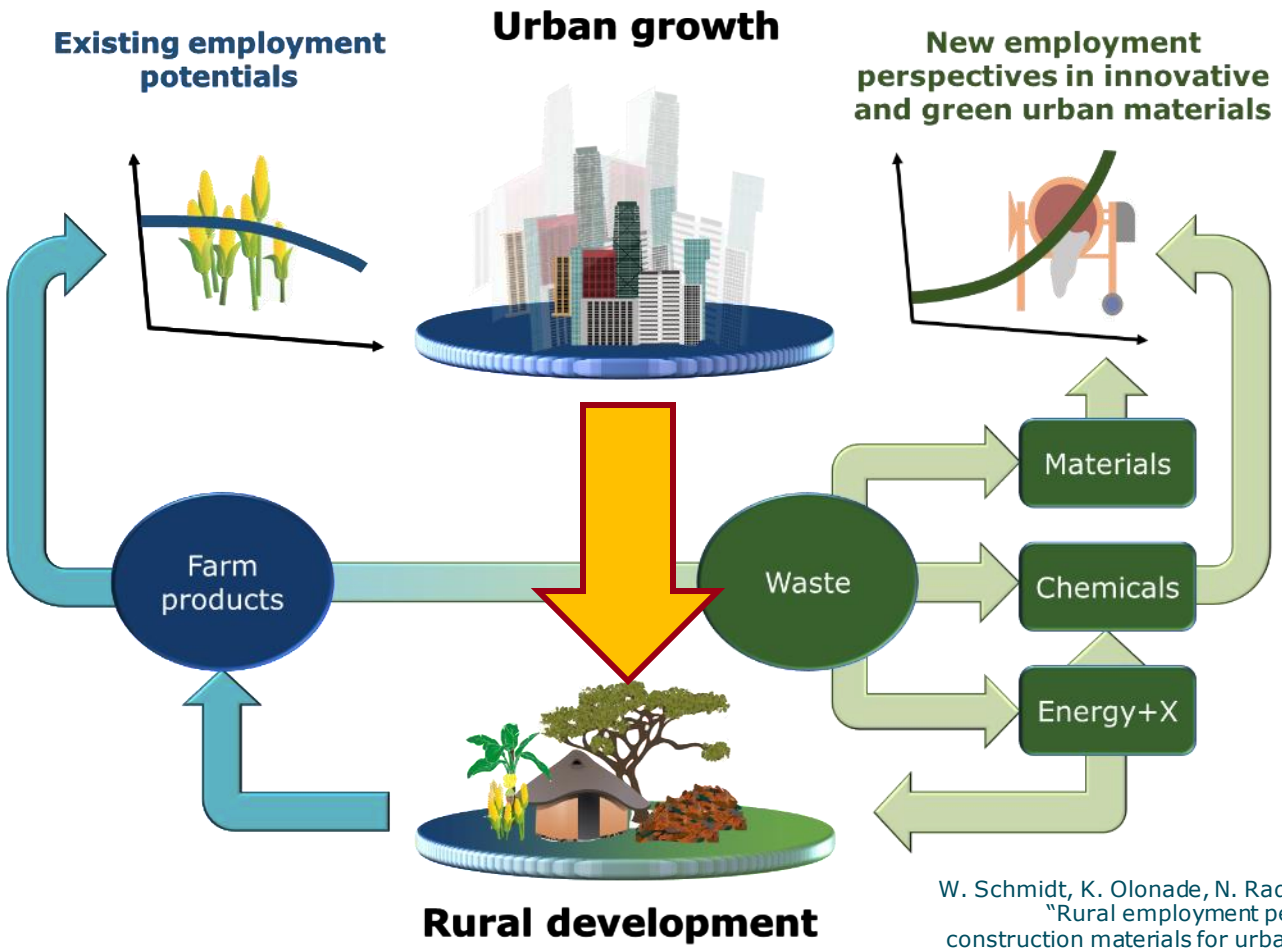

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Summary

Subheader

Africa and the global South can pioneer green construction solutions.

Thank you very much for your kind attention!

Meu lap'teu!

E sé ún púpò!

Medaase!

Siyabonga!

Asante sana!

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