



## **DIGITAL INNOVATION, CLIMATE CHANGE AND CITIES**

A view from ACC's sustainable infrastructure financing research programme

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## African Centre for Cities (ACC)

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*ACC is an interdisciplinary hub at the University of Cape Town with a mandate to conduct meaningful research on how to understand, recast and address pressing urban crises. Since most urban challenges—for example, food security, climate change adaptation, economic inclusion, cultural vitality and tolerance—are inherently interdisciplinary and spatially layered, ACC nurtures the co-production of knowledge between academia and other social sectors.*

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### Project: Platform mobilities and Silicon Savannahs

*Funded by Volvo Foundation (VREF)*

*Looking at the digitization of paratransit, especially platform-enabled two-wheel logistics*

- *How are governance systems in African cities responding and nurturing these innovations?*
- *What are the implications of digital platforms for sustainable mobility?*



# Sustainable Infrastructure financing

## Background:

Collaboration between **ACC** and **AHG mbH** (Alfred Herrhausen Gesellschaft mbH) on sustainable urban infrastructure financing

Starting a conversation between financial players and other infrastructure players (eg. DFIs) to:

- *Understand current and future bottlenecks for investment in sustainable urban infrastructure*
- *Develop synergies between the research sector and the infrastructure finance*
- *Imagine new protocols of interplay for the delivery of sustainable urban infrastructure*

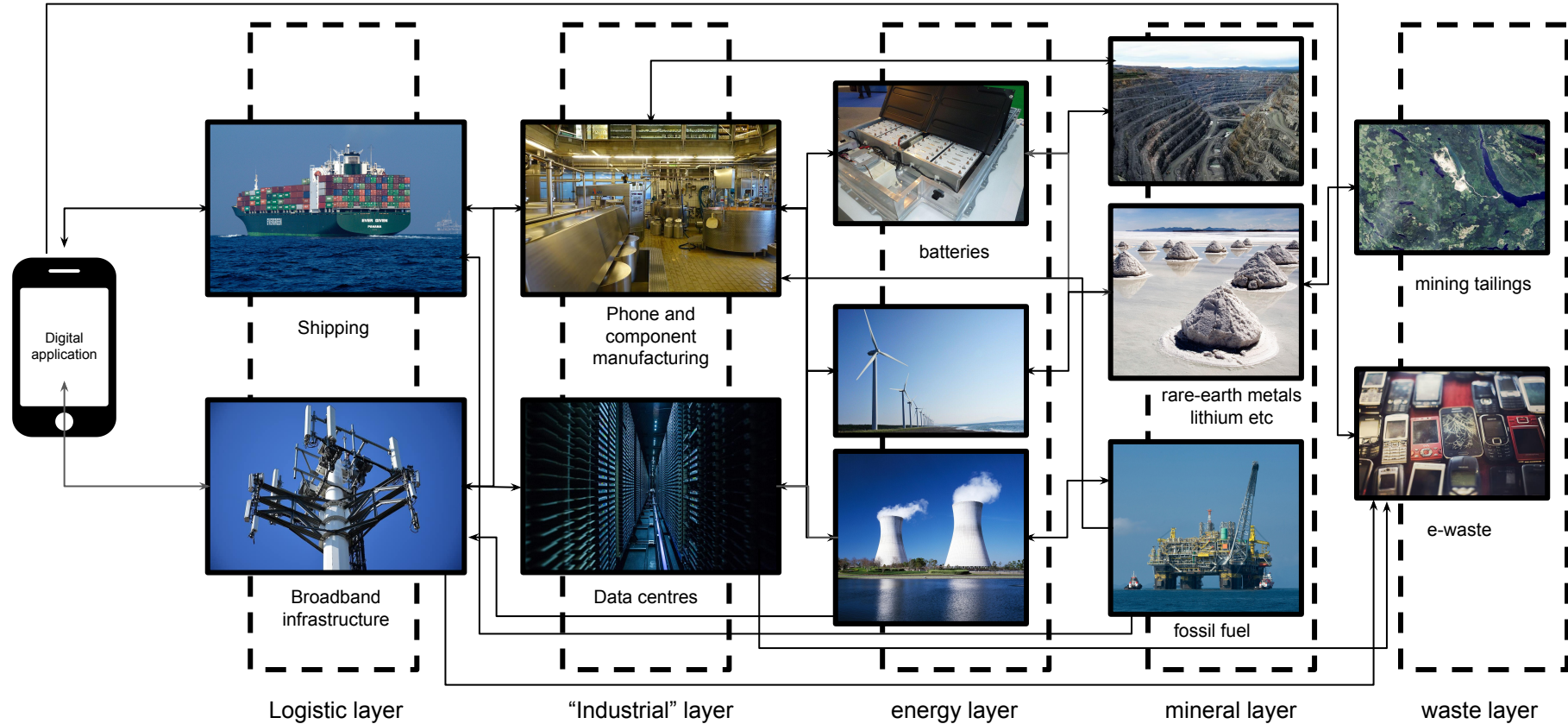
## Infrastructure financing in Africa: Overview, research gaps and research agenda

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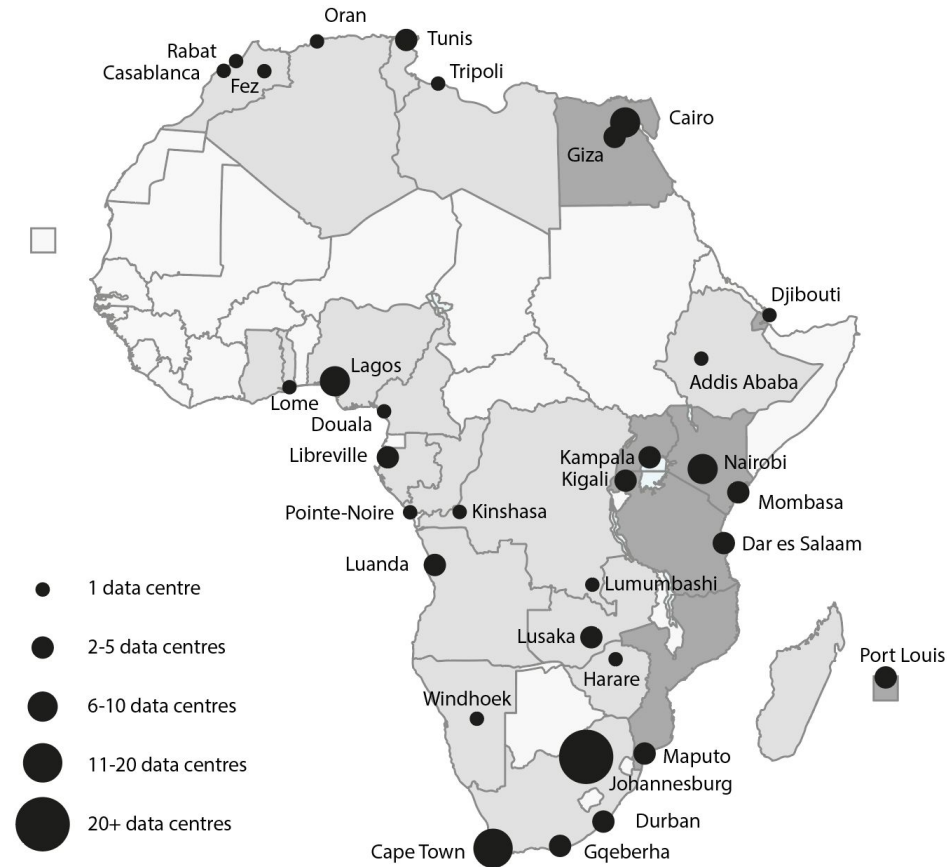


# Understanding the “infrastructure” of digital infrastructure



## Data centre industry in Africa

- *An urban phenomenon (a matter of urban planning)*
- *A fast-moving investment landscape*
- *A necessary infrastructure for data sovereignty and personal data protection*
- *A necessary infrastructure for low latency and availability of content*
- *A necessary infrastructure for the broader ecosystem (cloud services, hosting, etc)*
- *An uneven distribution of data capacity*
- *An energy-intensive industry*



Map drawn by Pollio & Cirolia (2021) based on Cloudscene database



## ***How do we factor in the hidden costs of digital innovation in the processes of digital innovation?***

- *Extractive costs (energy and mineral layers)*
- *Human costs (exploitation in mining and other industries)*
- *Waste costs (e-waste, mineral tailings)*

### **Provocations:**

- *Approach the nexus digital innovation/urbanization/sustainability also with an infrastructural perspective, taking into account the whole value chain of digital infrastructure*
- *Think of digital infrastructure in conversation with other infrastructure sectors, such as water & sanitation, energy and mobility*
- *Consider digital infrastructure as a design concern not as an externality*





# THANK YOU

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Get in touch

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