Using and integrating non-traditional data sources in urban monitoring

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DATA AND ANALYTICS

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UN-Habitat at a glance

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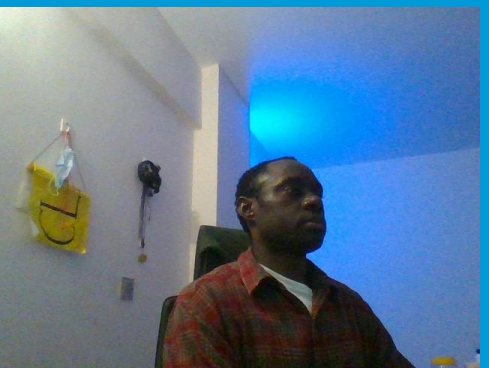


Mandate

To promote socially and environmentally sustainable towns and cities with the goal of providing adequate shelter for all

Focus

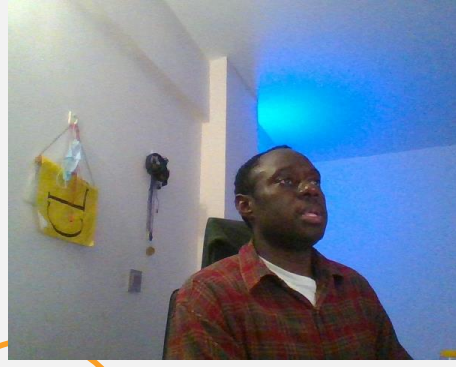
To promote transformative change in cities and human settlements through knowledge, policy advice, technical assistance and collaborative action to leave no one and no place behind

Data

Our work is anchored on scientific data, rigorous research and analysis

SDG 11, *10 Targets*:

Make cities and human settlements inclusive, safe, resilient and sustainable.

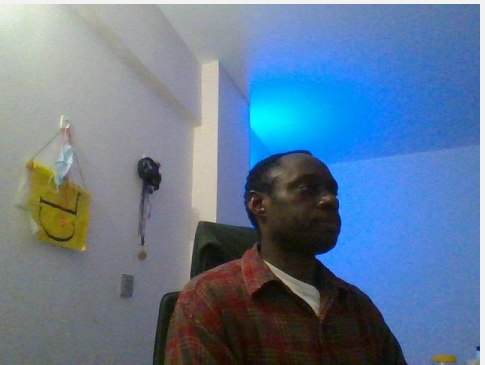


- Housing and slums
- Suitable transport
- Participatory planning
- Cultural heritage
- Disaster and risk reduction
- Air quality and waste management
- Public spaces
- Rural-urban and regional planning
- Mitigation of climate change and resilience
- LDCs support - Buildings

Bigdata and SDG 11 applications



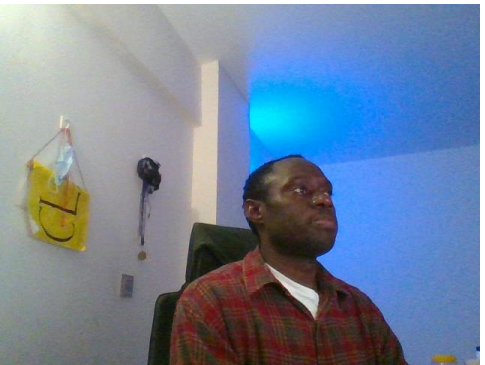
For any smart city, big data lies at its core of technological innovations

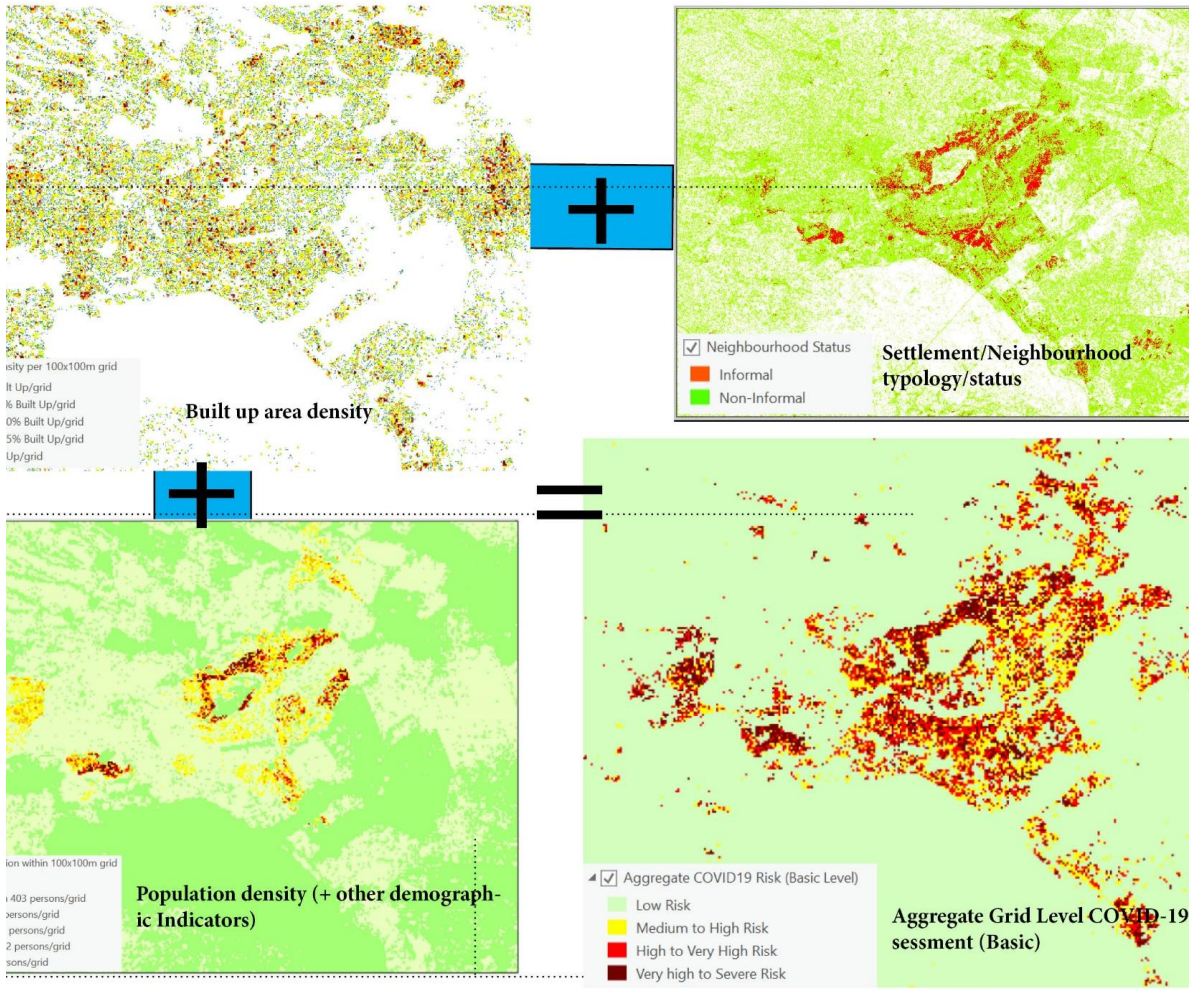


- Smart-traffic decision system depend on big data analytics.
- Bigdata for public safety management.
- Bigdata for Smart decision making for spending effectively on repairs, beauty, renovations, expansions etc.
- Urban sprawl management and city planning
- Transport services development
- Waste management
- Air quality monitoring
- Health and happiness of the city
- Building energy efficiency (heating and lighting costs management)
- Hyper-local weather forecasting

Grid-Level COVID-19 Risks Assessment at City Level

- DAU model assesses risks against:
    - Built-up area density
    - Population density
    - Settlement morphology
    - Basic Service availability
    - Risk accelerators – age, health status
- Grid level focus helps understand intra-city & intra-settlement risk variations



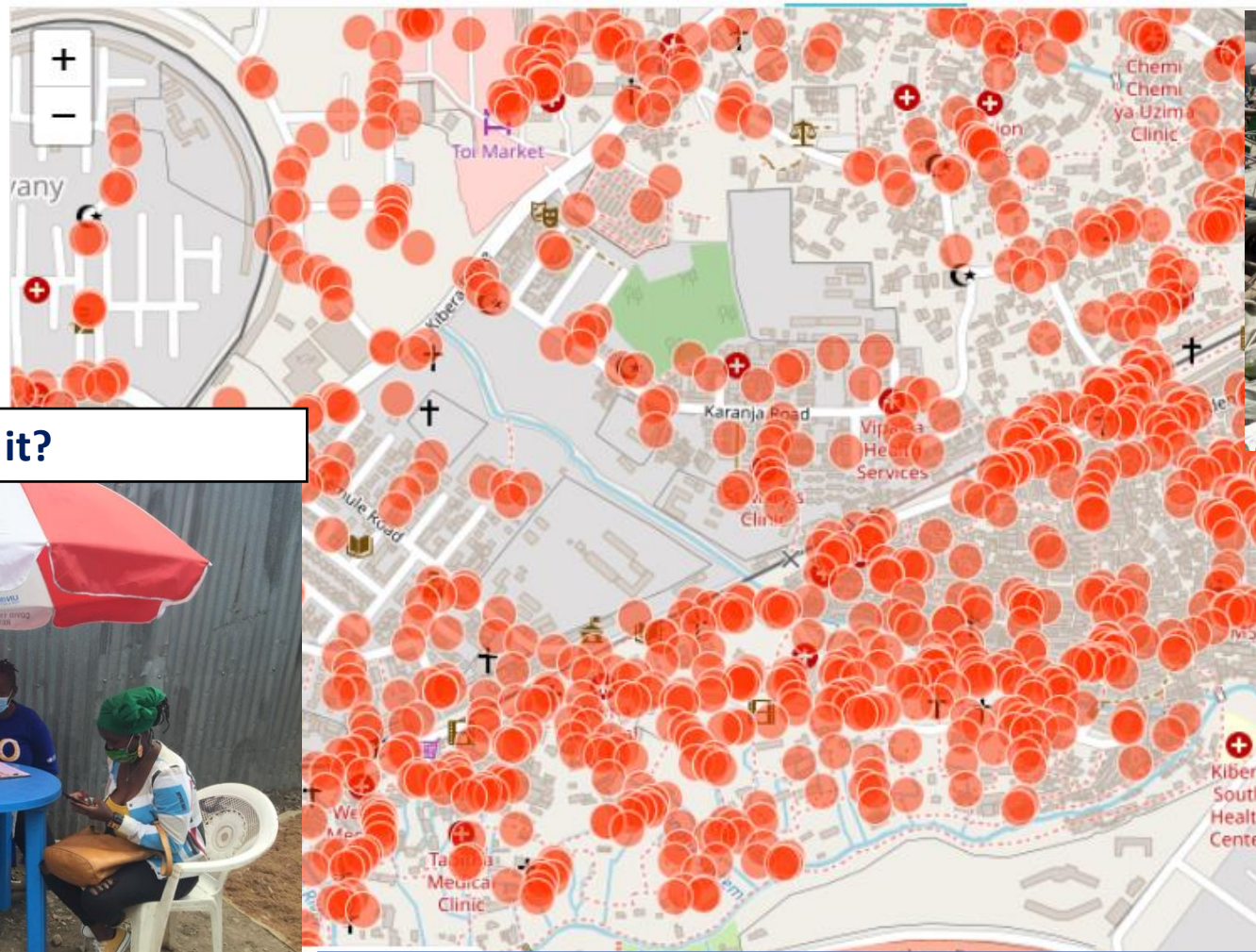


Slum mapping to assess COVID-19 vulnerabilities

What exists

- Water point
- Public space
- Health facility
- Hand washing facility
- Communal sanitation facility (eg
- Communal kitchen
- Education Facility
- Social hall / community centre / r
- Market
- Transport stops (matatus/ boda-

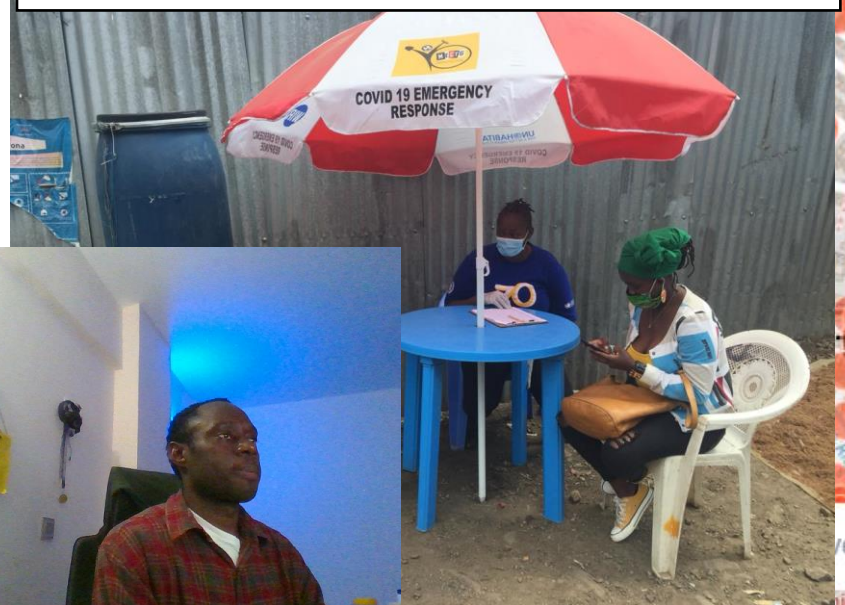
Where is it?



Is it working?



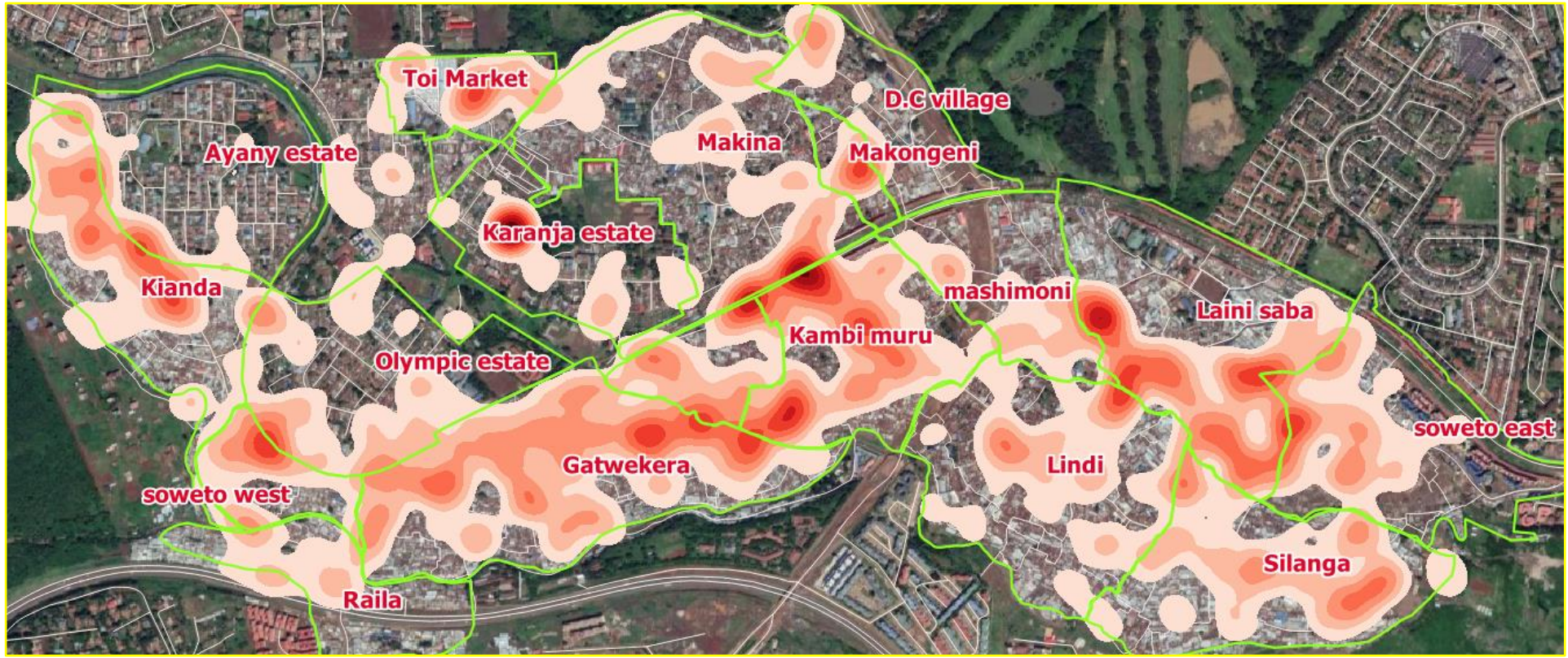
Who manages/ pays for it?

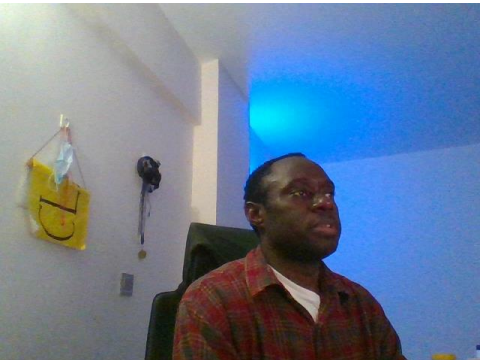


Collaborative process with partners, slum residents

Facilities density mapping/heatmaps from Kibera, Nairobi

Facility Densities

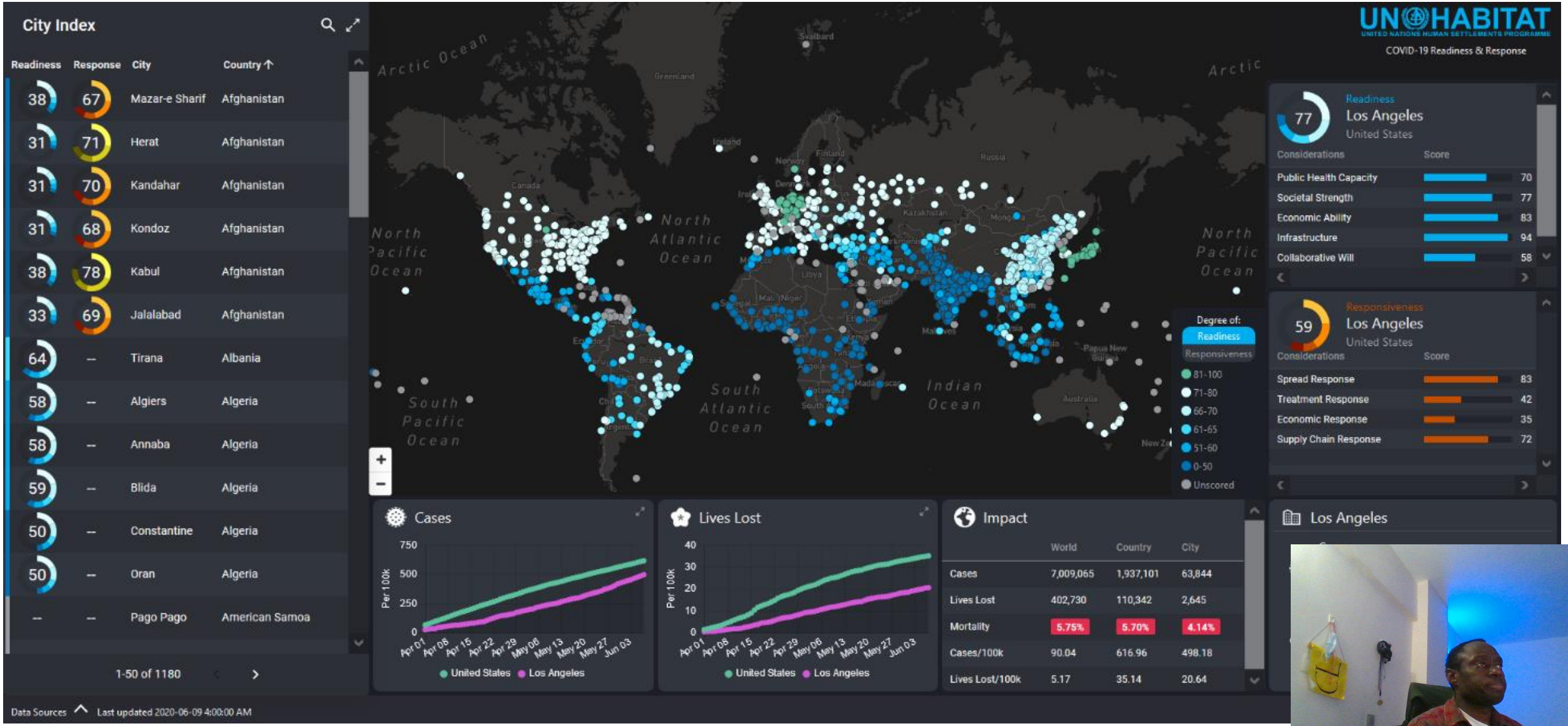




Villages with the highest concentration of facilities are Gatwekera, Kambi Muru and the lower parts of Laini Saba. Ayany and the norther parts DC, Makongeni, Mashioni and Laini Saba have the least concentration of facilities.

The COVID-19 Preparedness and Response Platform

https://unhabitat.org/innovative-new-platform-tracks-cities%E2%80%99-readiness-and-response-to-covid-19



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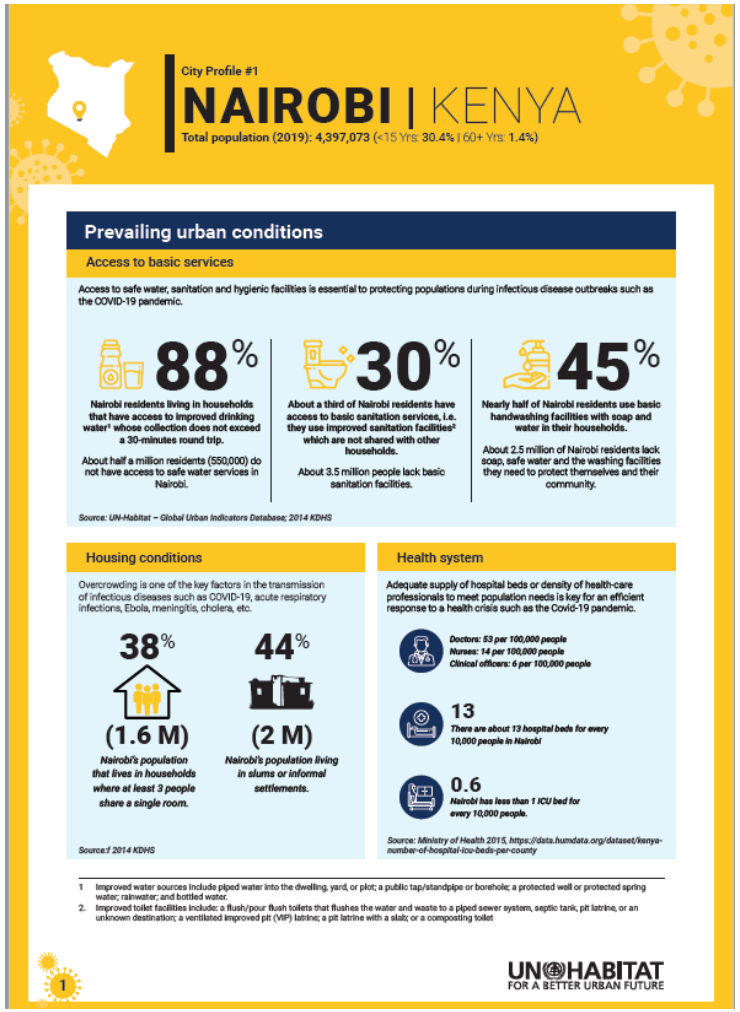
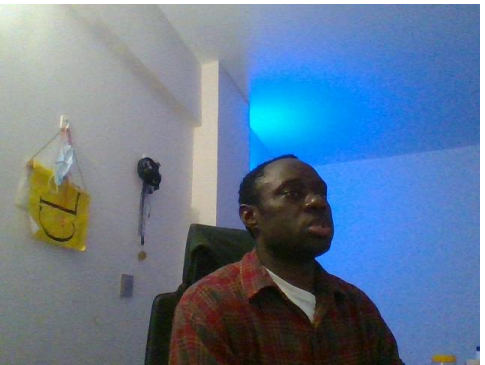
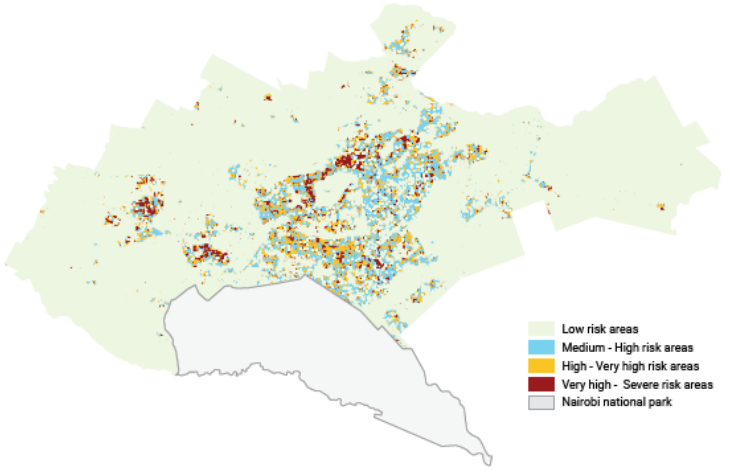
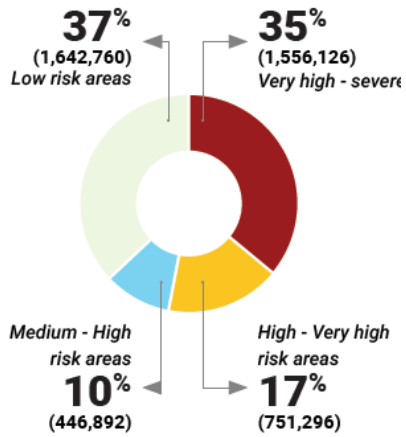
City profiles





COVID-19 vulnerability level

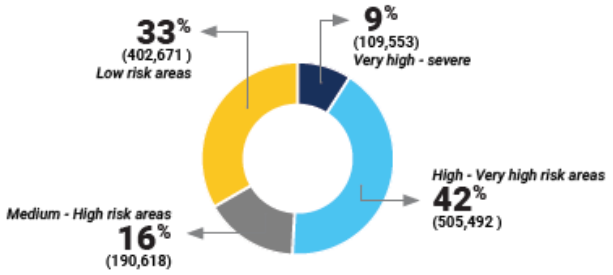


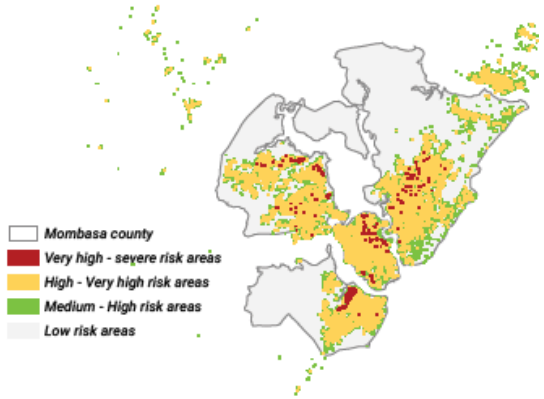


Source: UN-Habitat – Global Urban Indicators Database

COVID-19 vulnerability level

Based on a grid-level analysis of built-up area density, population density, and the prevailing preventive and governance structures, Mombasa residents face varying COVID-19 risk levels.

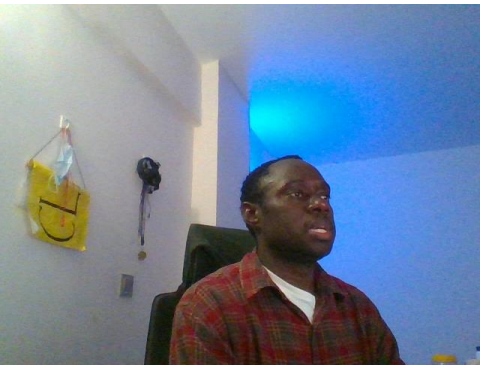




Source: Global Urban Indicators database

Main challenges

- Much of the big data with the most potential for public good is collected by the private sector. Public-private partnerships are key.
- In developing cities, the reality is that operations are uncoordinated and data capture is still a heavy manual process.
- Scale up of technology and pricing and regulation.
- Data aggregation for nations with many cities---quality assurance.





Millions of Ugandans quit internet services as social media tax takes effect

Economic fears raised as online subscriptions plummet in months following launch of levy created to curb 'gossip'

ough her WhatsApp messages. Critics say Uganda's social media tax is a restraint

Thank You

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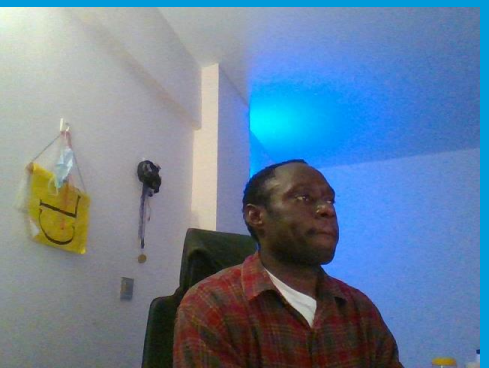

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