



Open Data and the

Economics

Of Affordable Access

Three Economies



Fernand Braudel

Global Economy

Large companies, financial institutions, the State: serves global markets

Local Market Economy

Small businesses, self-employment: serves local needs

Subsistence Economy

Few market economy activities and mainly informal activities: serves a subsistence economy



A Jar of Stones Metaphor

**Even though
the stones
appear to fill
the jar, it is
less than have
full by volume.**

Local Operators

Smaller operators don't necessarily need to scale individually but rather scale in number of operators



Subsistence Operators

**Cooperative and
common pool
resource models
may create
sustainable
access where
commercial
models fail.**



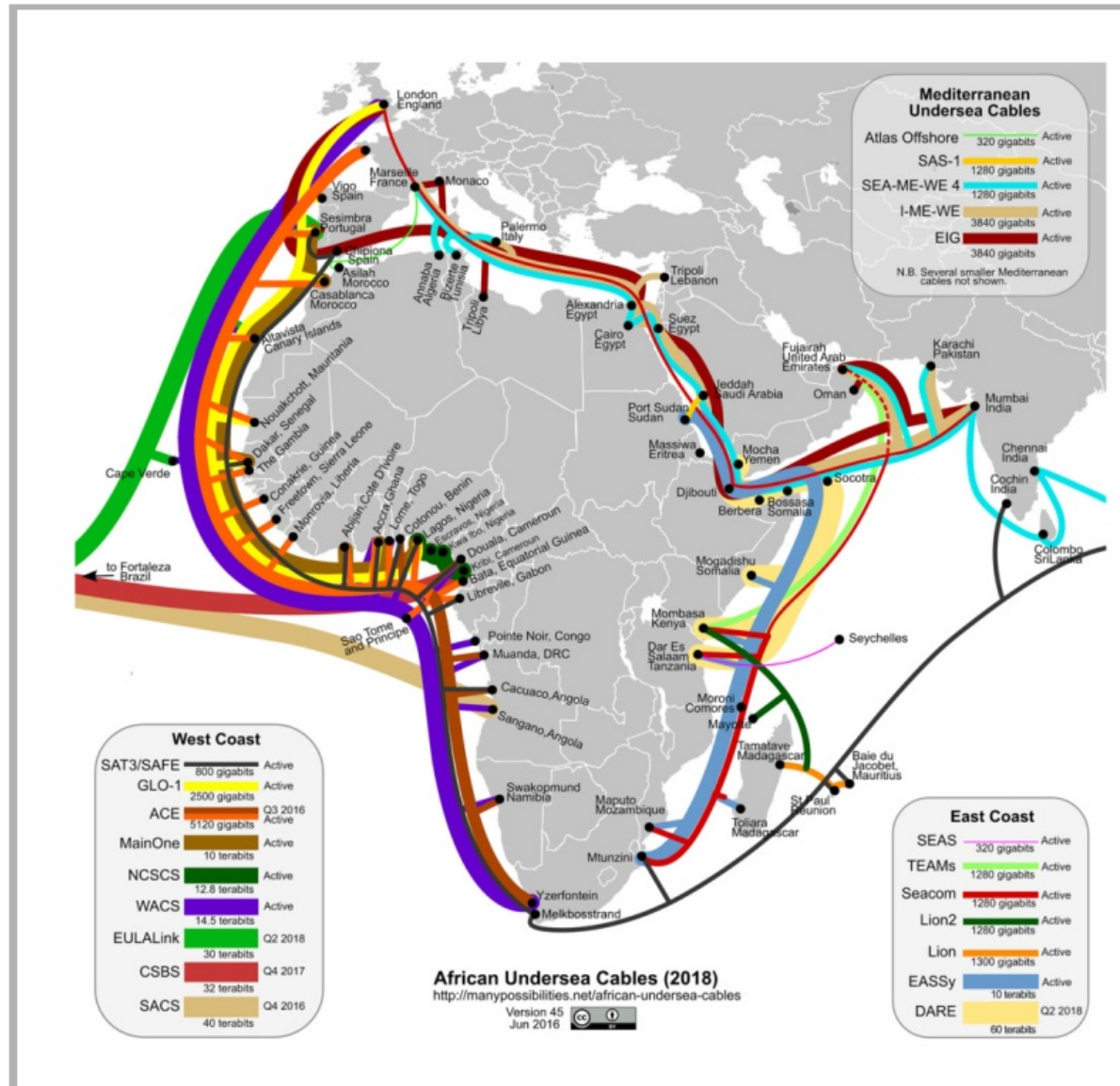
A large, diverse group of people is gathered for a public engagement event. In the foreground, a table covered with a blue cloth displays various informational materials, including brochures and a laptop. Several individuals are seated at the table, while others stand around them, some looking at the materials. The background is filled with a large crowd of people, many of whom are wearing blue shirts, suggesting they are part of the organizing team or staff. The setting appears to be an outdoor or semi-outdoor area with a wooden structure in the background.

Transparency and Public Engagement

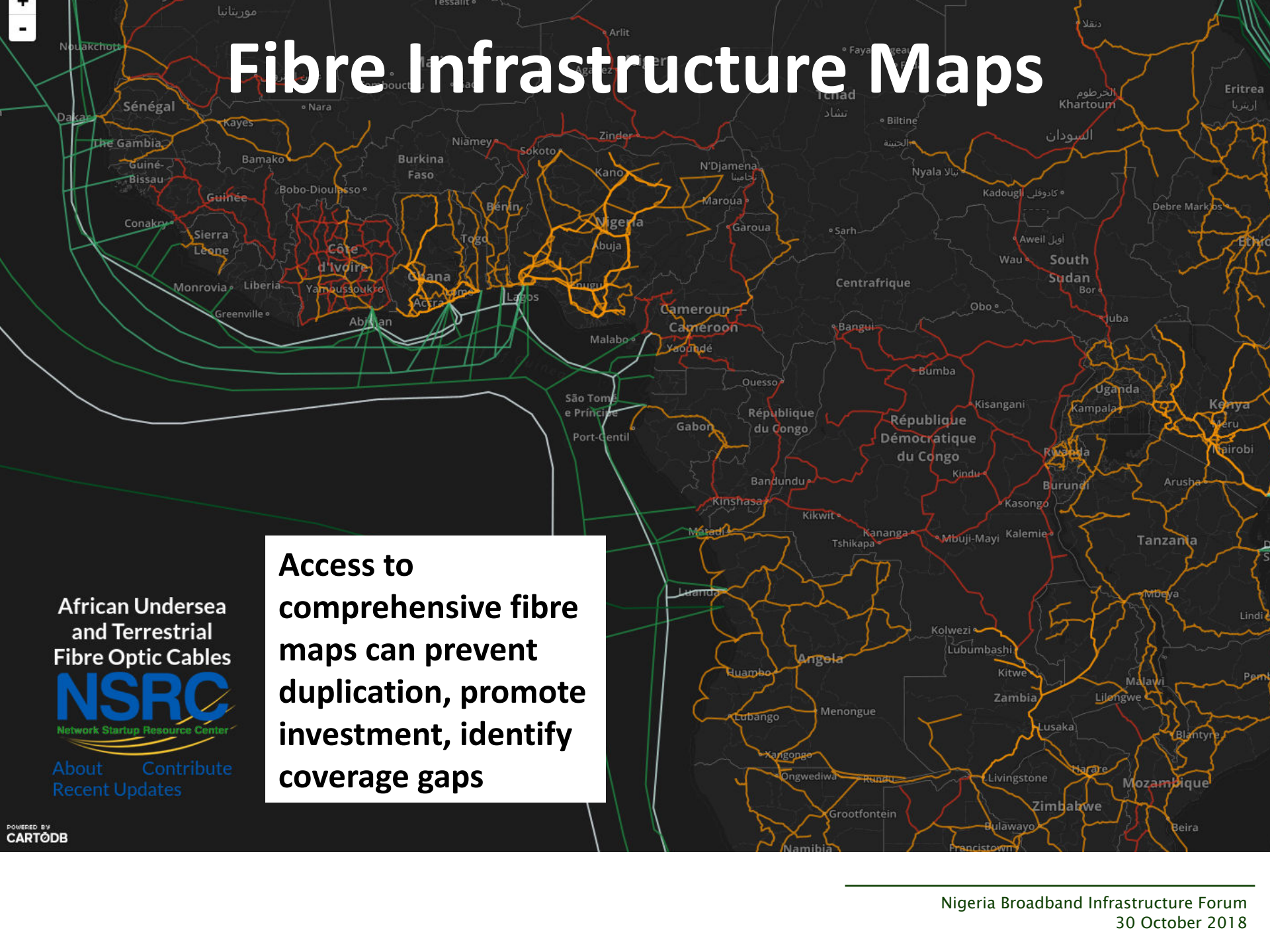
The Impact of Fibre on Wireless

The growth of undersea fibre optic capacity has been a catalyst for change.

The impact of technological change often takes years to manifest



Fibre Infrastructure Maps



Access to comprehensive fibre maps can prevent duplication, promote investment, identify coverage gaps

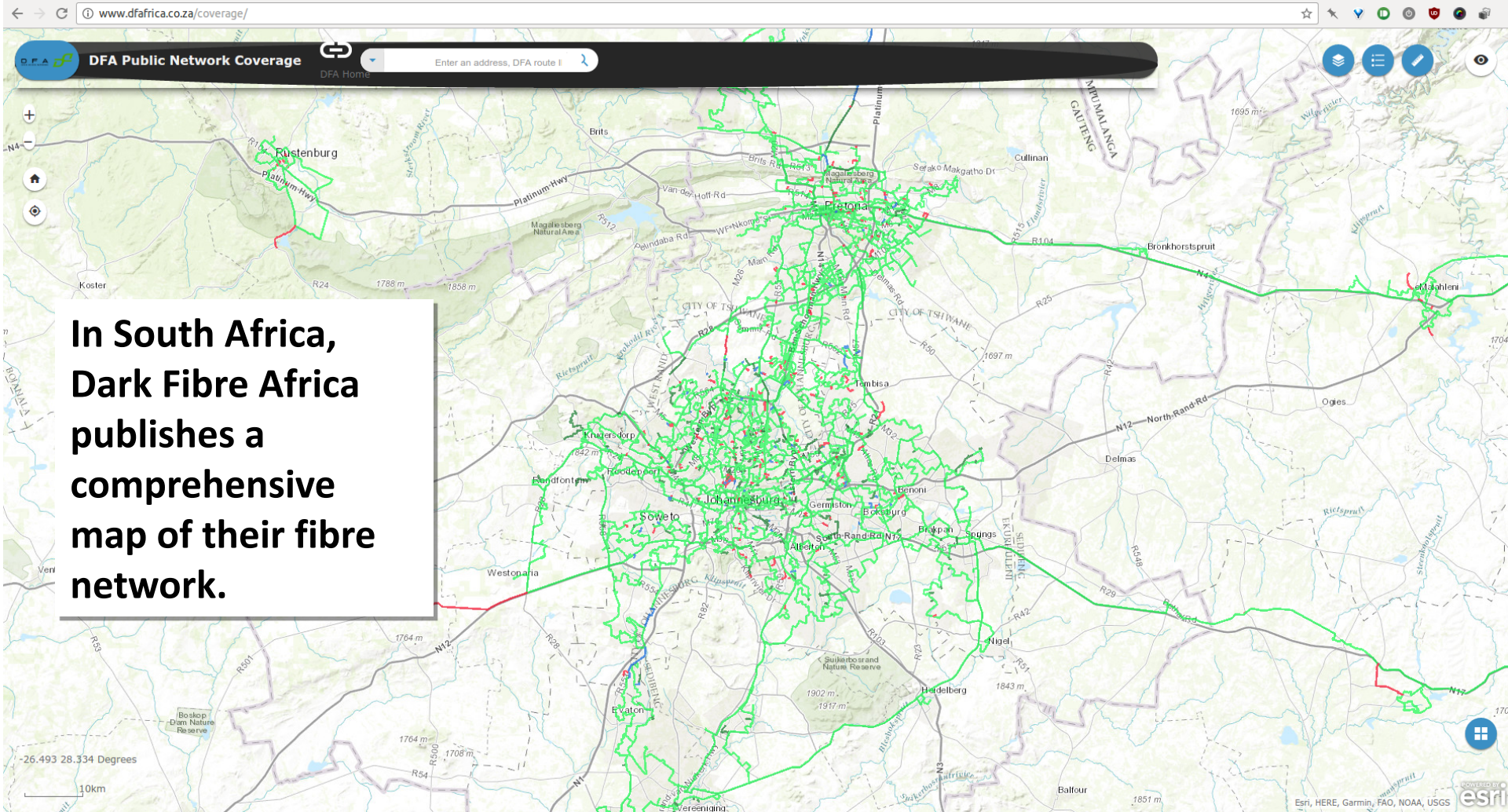
African Undersea and Terrestrial Fibre Optic Cables

NSRC
Network Startup Resource Center

About Contribute
Recent Updates

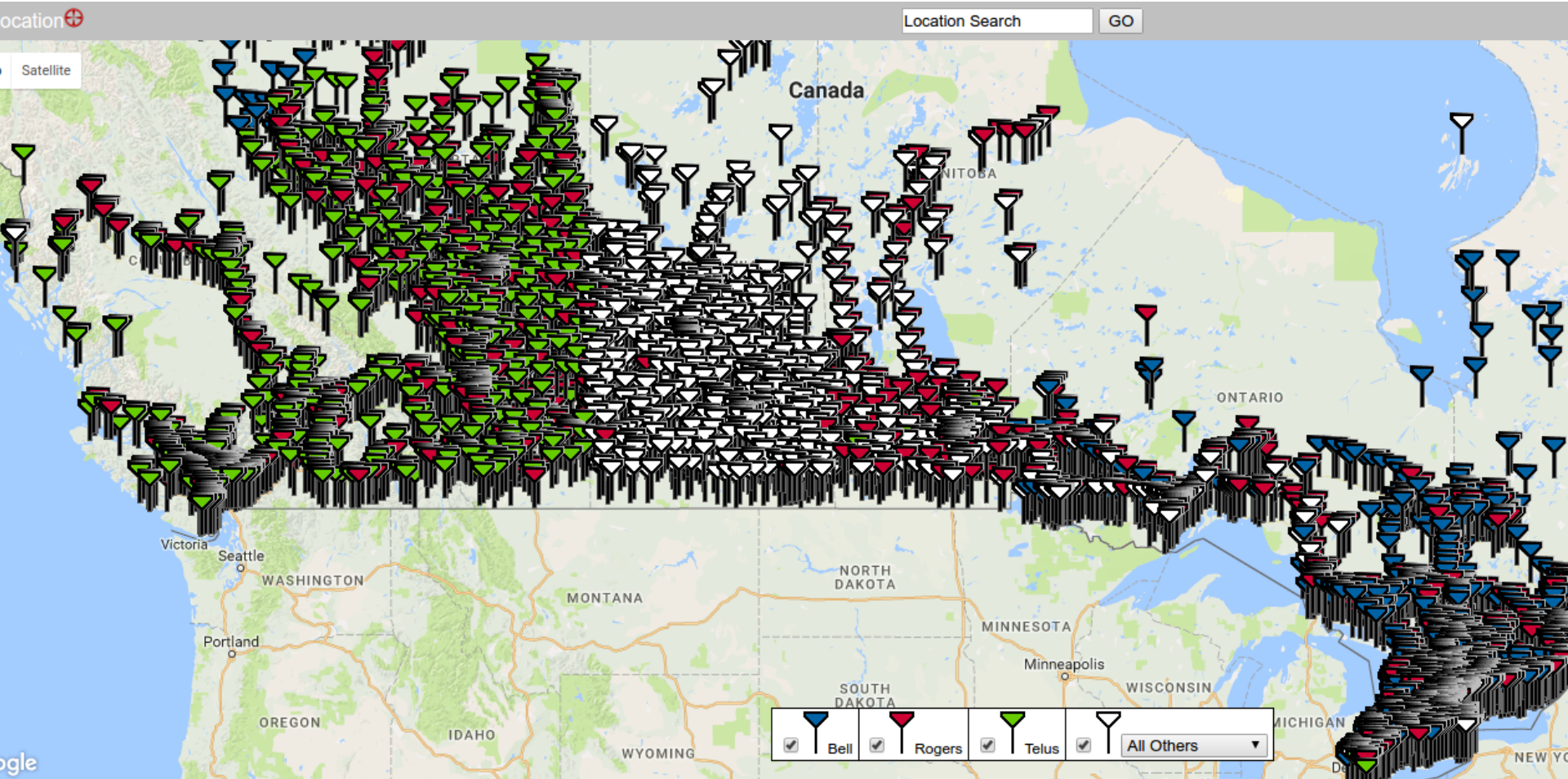
POWERED BY
CARTODB

Good Practice



In South Africa, Dark Fibre Africa publishes a comprehensive map of their fibre network.

Tower Data



Uganda

Population

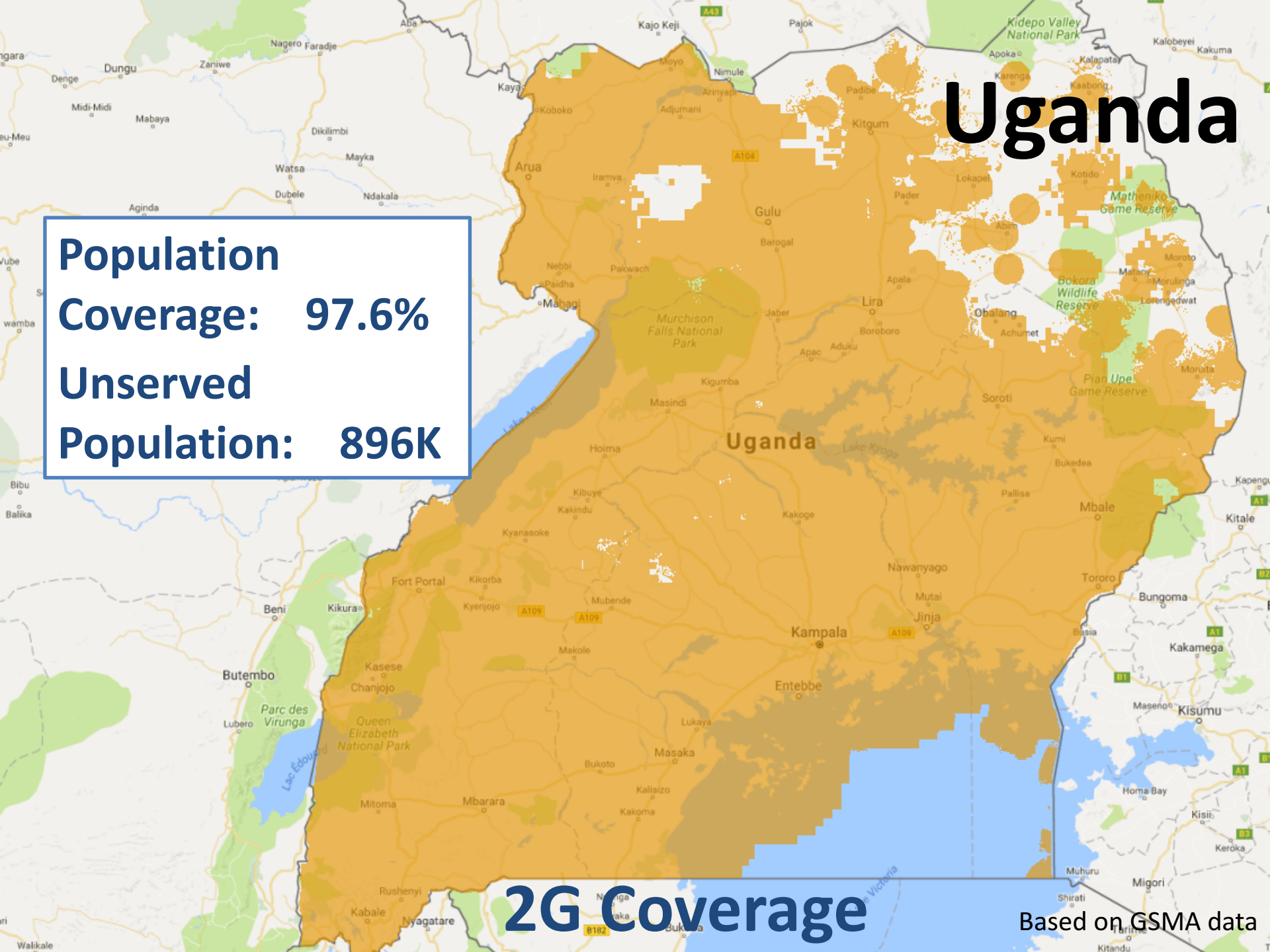
Coverage: 97.6%

Unserviced

Population: 896K

2G Coverage

Based on GSMA data



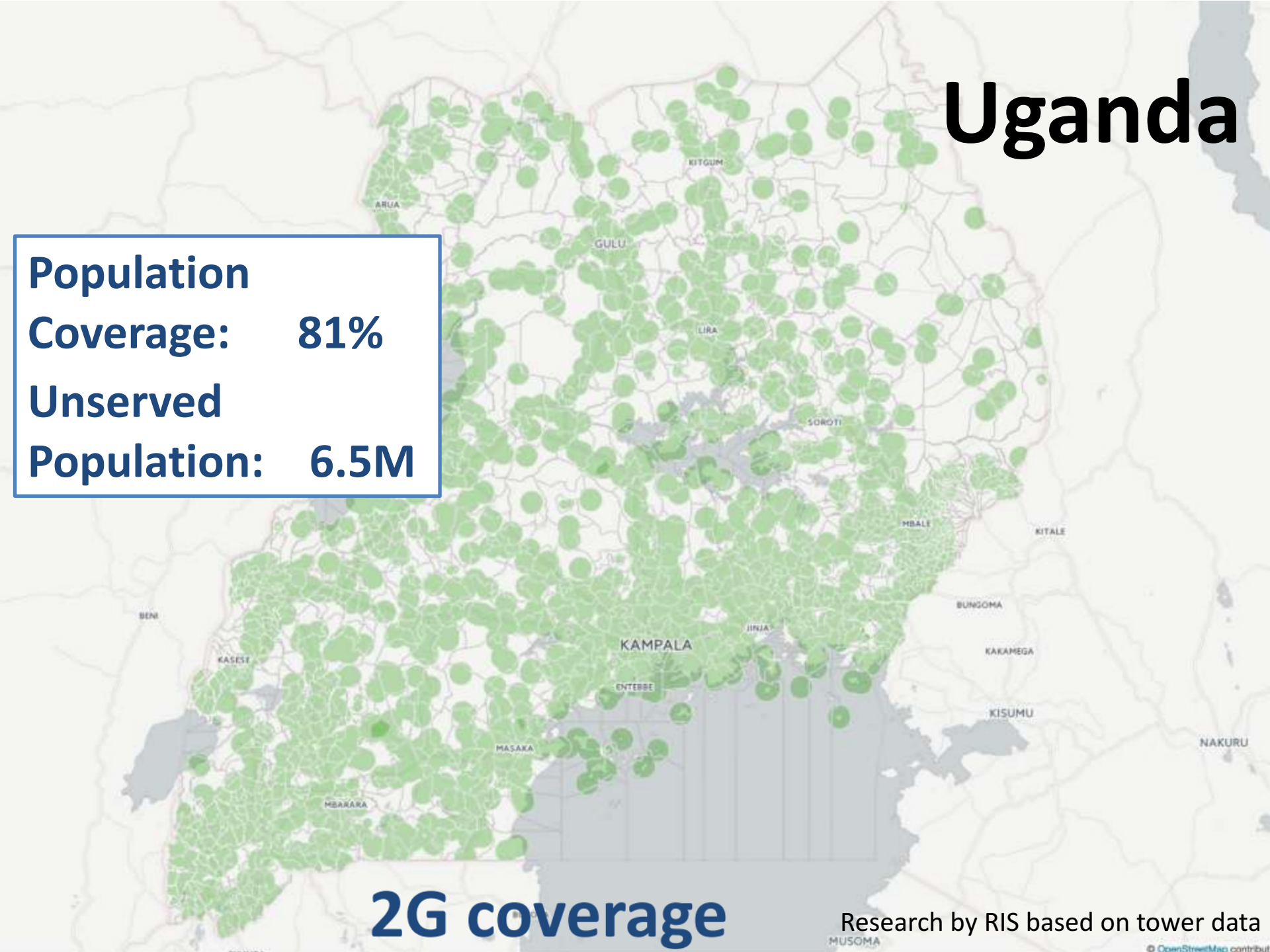
Uganda

Population Coverage: 81%
Unserviced Population: 6.5M

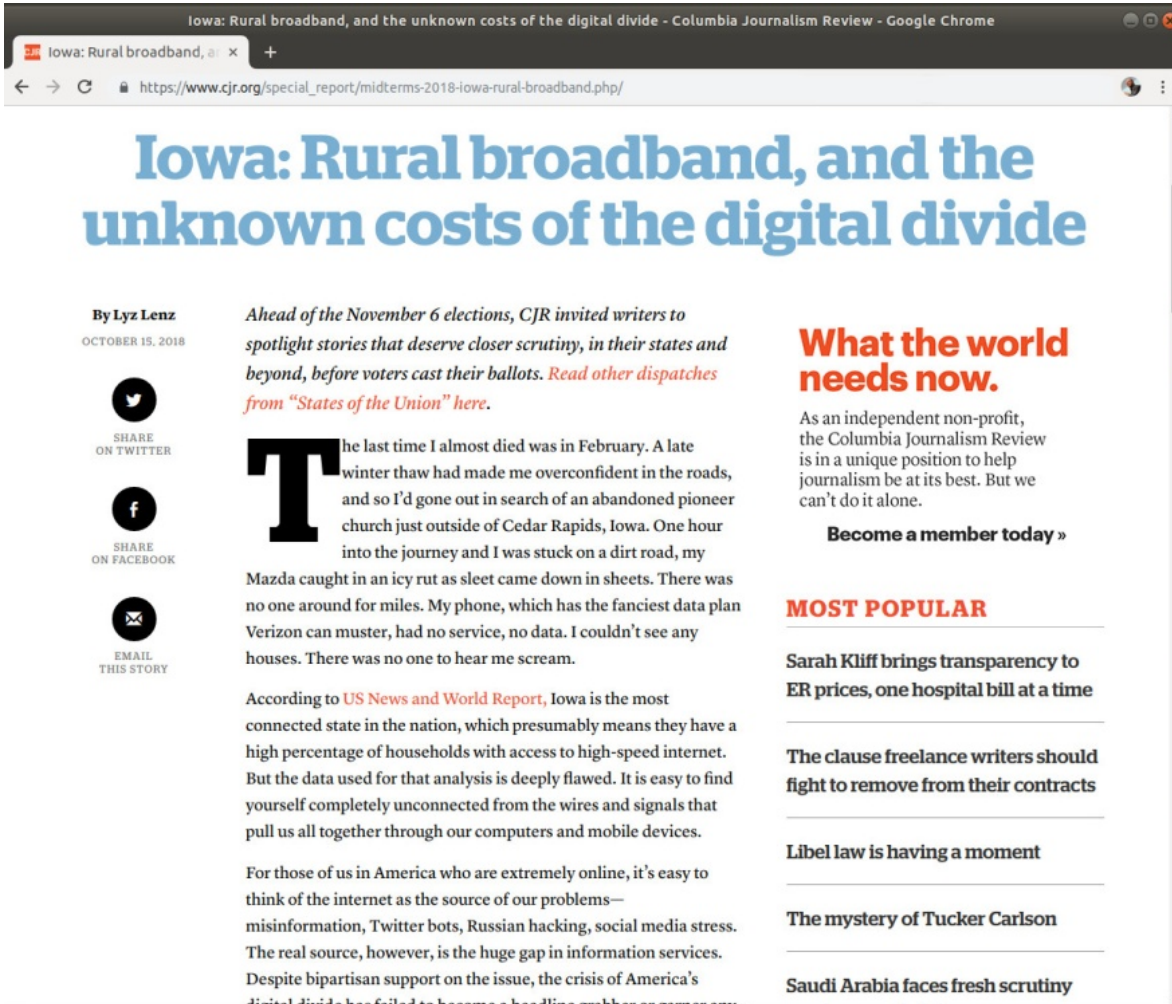
2G coverage

Research by RIS based on tower data
MUSOMA

© OpenStreetMap contributors

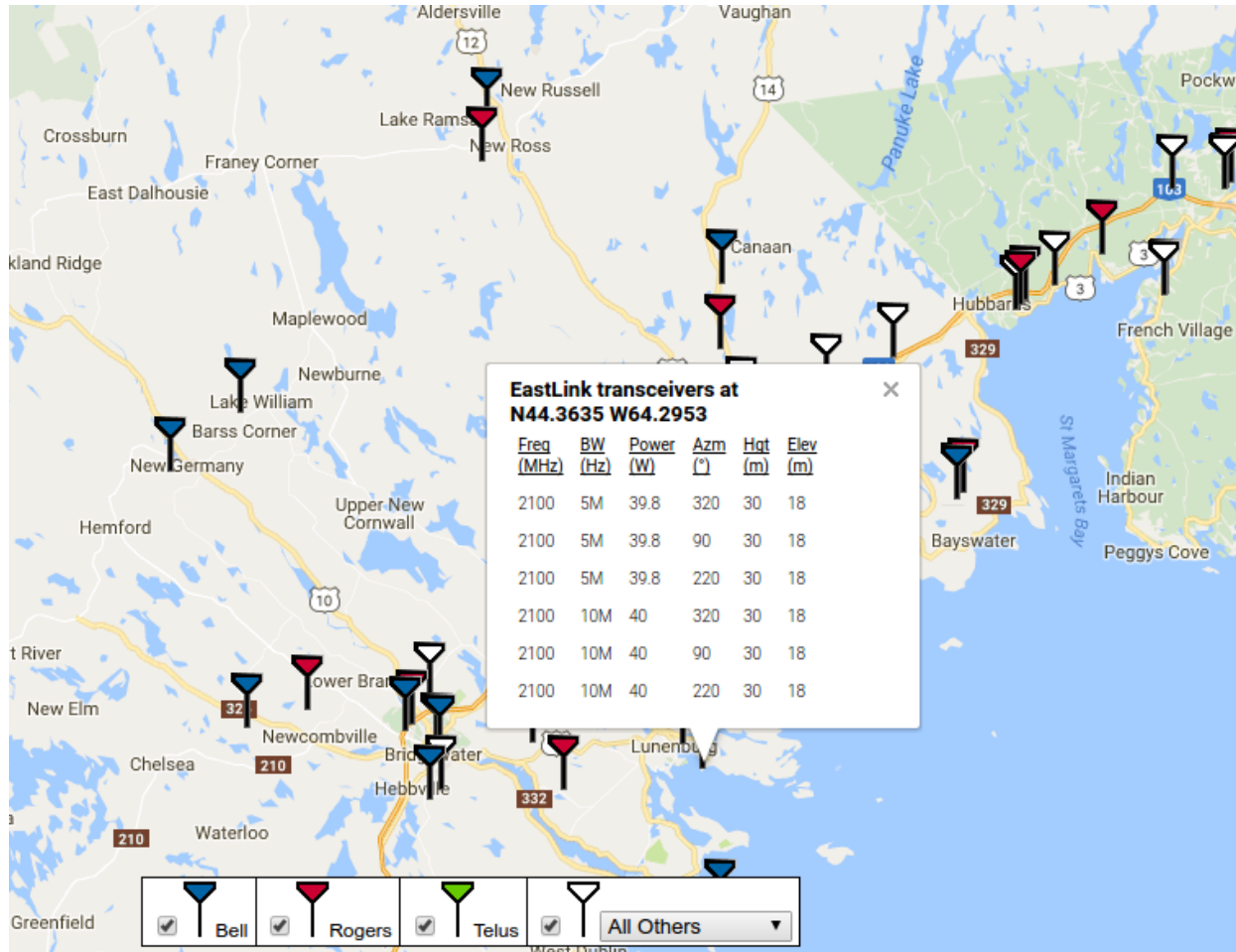


A Global Problem



Reports of Iowa's connectivity are greatly exaggerated... many providers, large and small, often overestimate their connectivity because they simply lack accurate, independently verified maps.

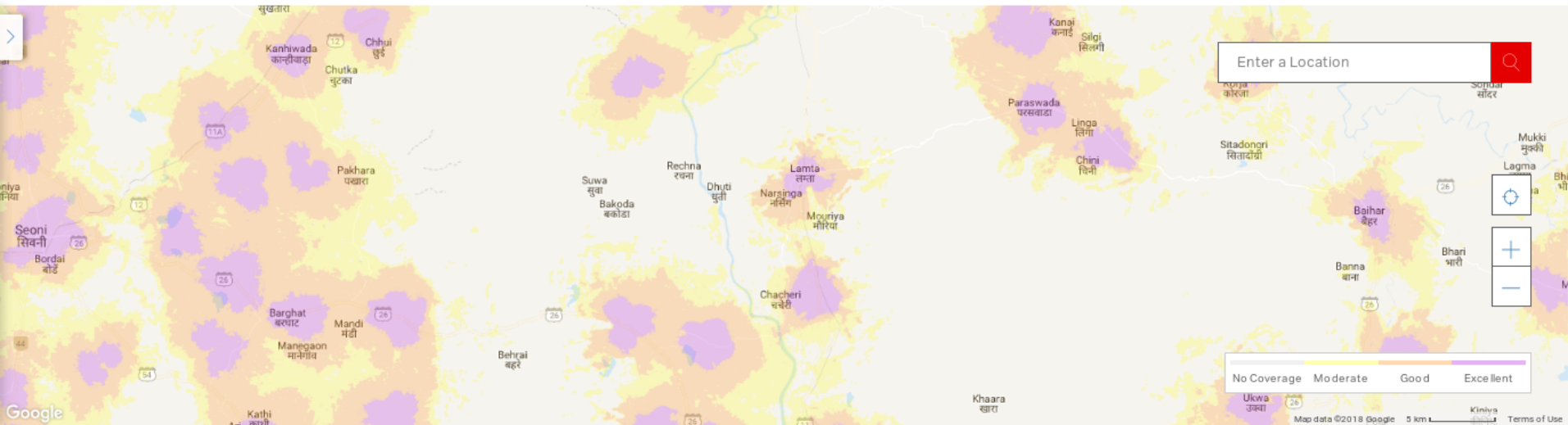
Good Practice – Canadian Regulator



- Operator
- Location
- Frequency
- Height
- Power

openNETWORK

Because you have a lot to say. And we have nothing to hide.



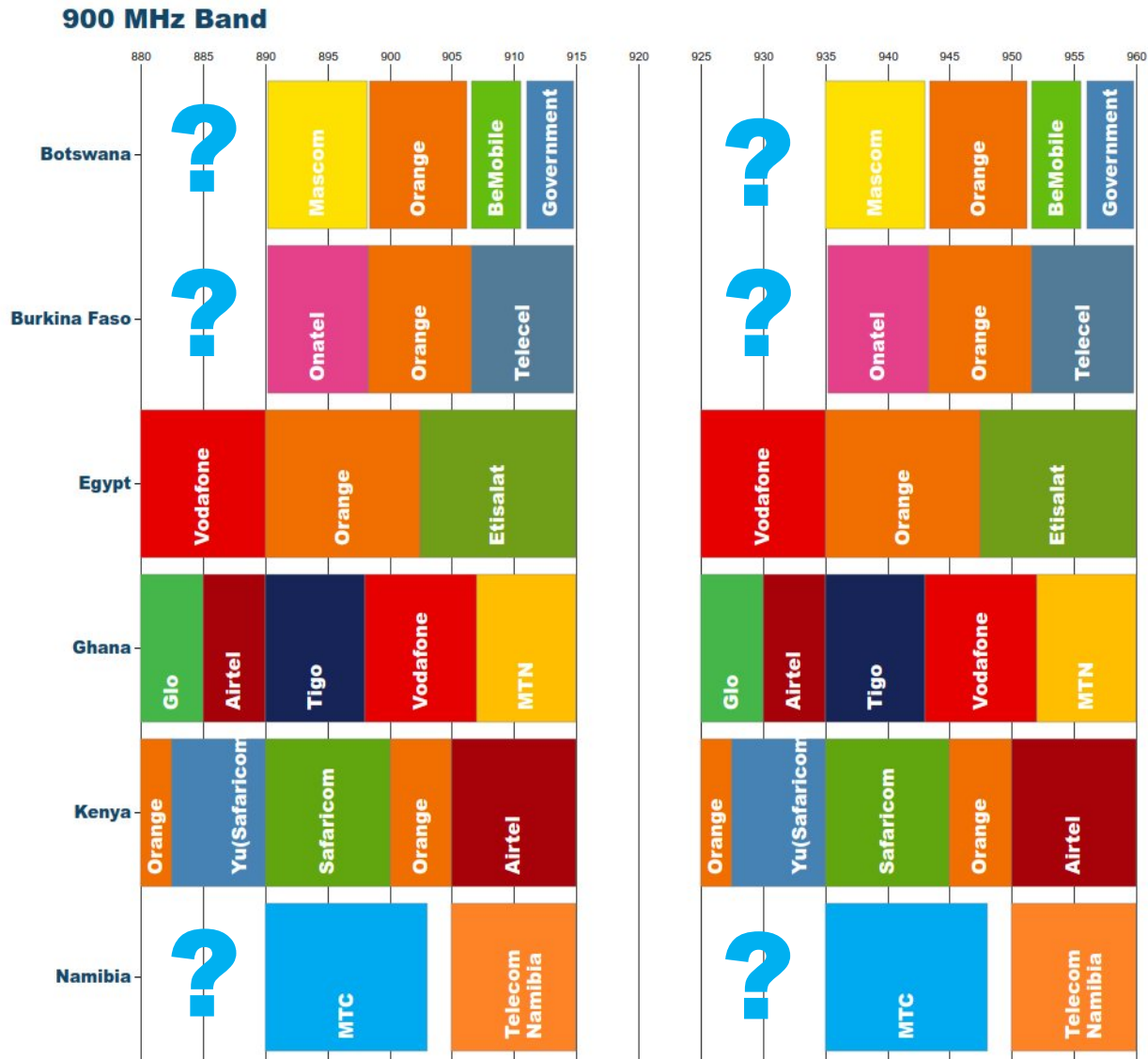
2G coverage 4G/3G coverage

- Existing Towers
- Towers Upgrading
- Towers Needed
- Towers Forcibly Shutdown

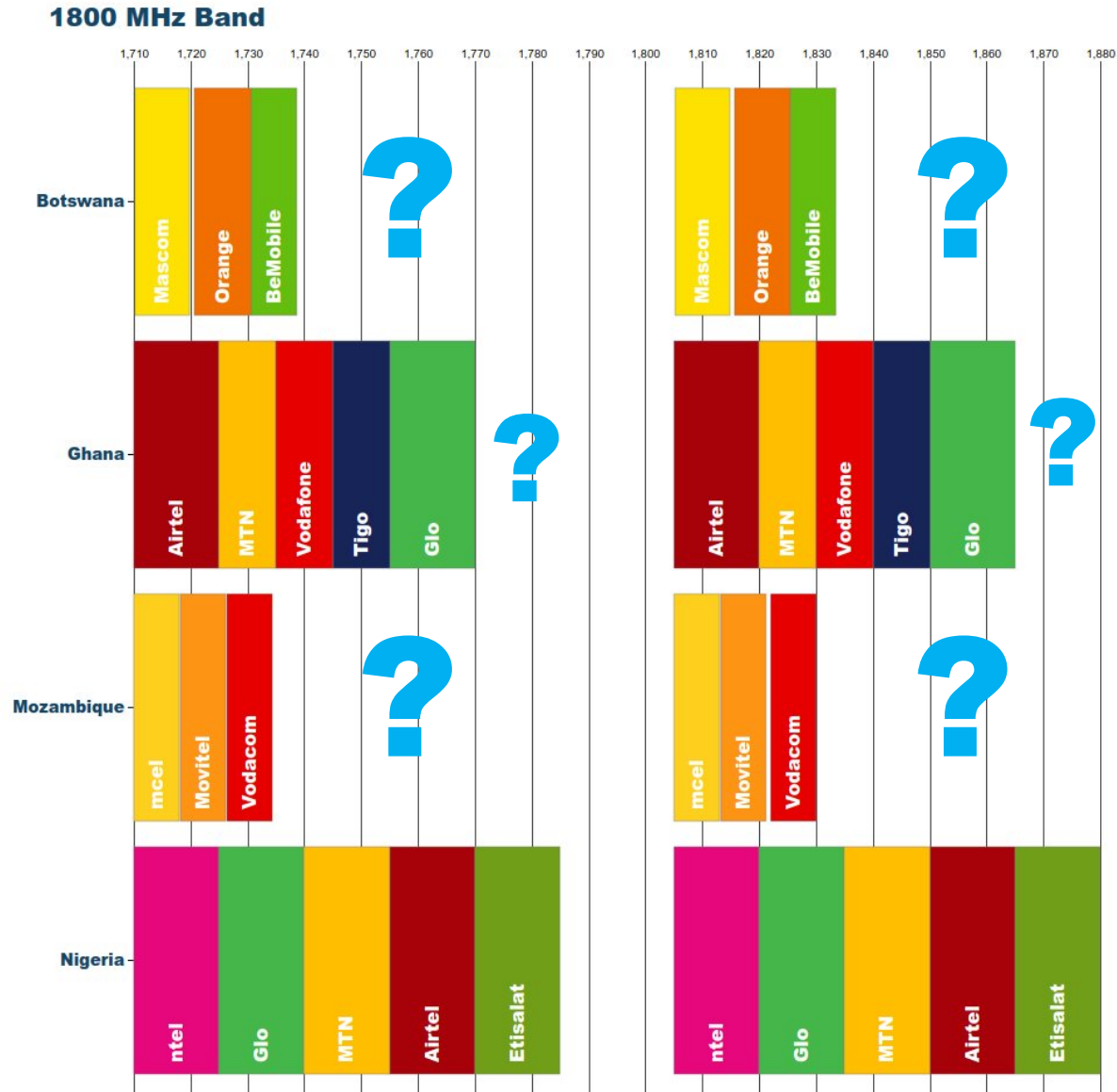
WHAT IS INDIA'S FIRST OPEN NETWORK?

In 2015, Project Leap took the first brave step in building a truly transparent network. It is now

Spectrum Assignments



Spectrum Assignments



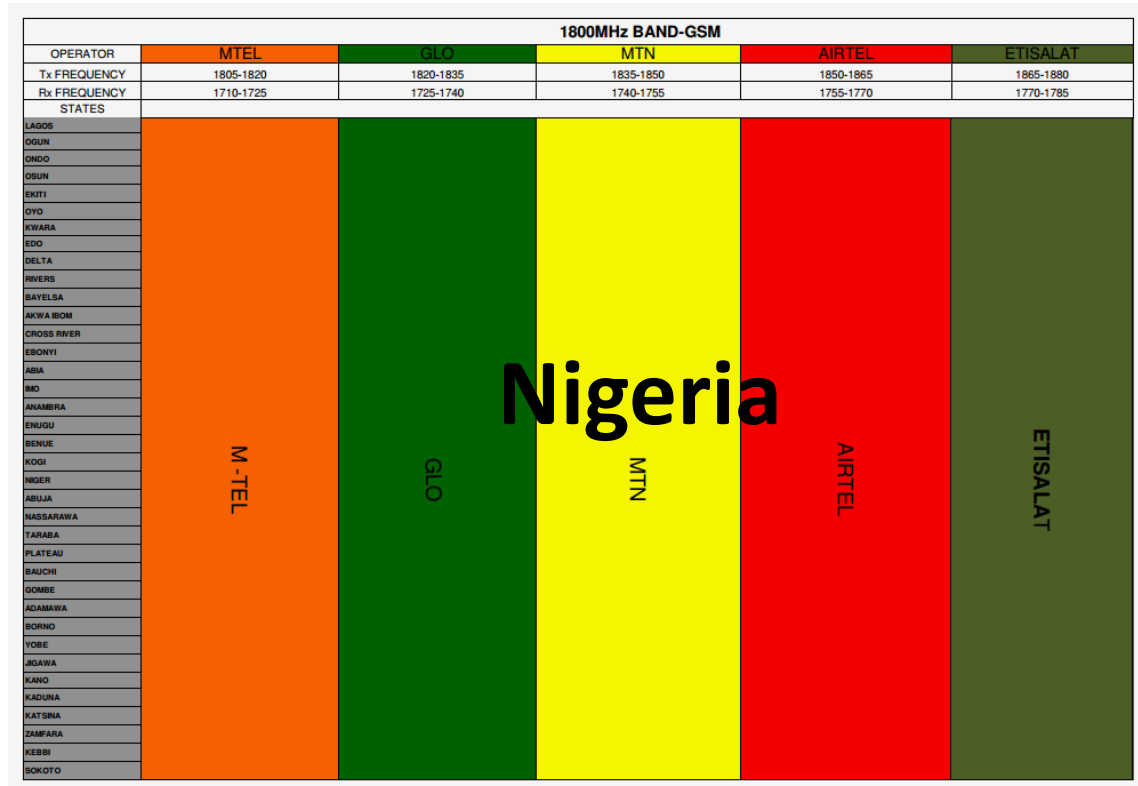
Good Practice

LIST OF ACCESS FREQUENCIES ASSIGNED TO OPERATORS

A. MOBILE WIRELESS ACCESS

| Frequency Band | Amount of Spectrum | Assigned Operator |
|----------------|--------------------|----------------------------------------------------------------|
| 800 MHz | 5MHz paired | Telkom Kenya Limited P.O. Box 30301-00100 NAIROBI |
| 900 MHz | 10MHz paired | Safaricom Limited P.O. Box 46350-00100 NAIROBI |
| 900 MHz | 10MHz paired | Celtel Kenya Limited P.O. Box 73146-00200 NAIROBI |
| 900MHz | 7.5MHz paired | Telkom Kenya Limited P.O. Box 30301-00100 NAIROBI |
| 900MHz | 7.5MHz paired | Essar Telecom Kenya Limited P.O. Box 45742-00100 NAIROBI |
| 1800MHz | 10MHz paired | Safaricom Limited P.O. Box 46350-00100 NAIROBI |
| 1800MHz | 10MHz paired | Celtel Kenya Limited P.O. Box 73146-00200 NAIROBI |
| 1800MHz | 10MHz paired | Telkom Kenya Limited P.O. Box 30301-00100 NAIROBI |
| 1800MHz | 10MHz paired | Essar Telecom Kenya Limited P.O. Box 45742-00100 NAIROBI |
| 2100MHz | 10MHz paired | Safaricom Limited P.O. Box 46350-00100 NAIROBI |
| 2100MHz | 10MHz paired | Celtel Kenya Limited P.O. Box 73146-00200 NAIROBI |
| 2100MHz | 10MHz paired | Telkom Kenya Limited P.O. Box 30301-00100 NAIROBI |

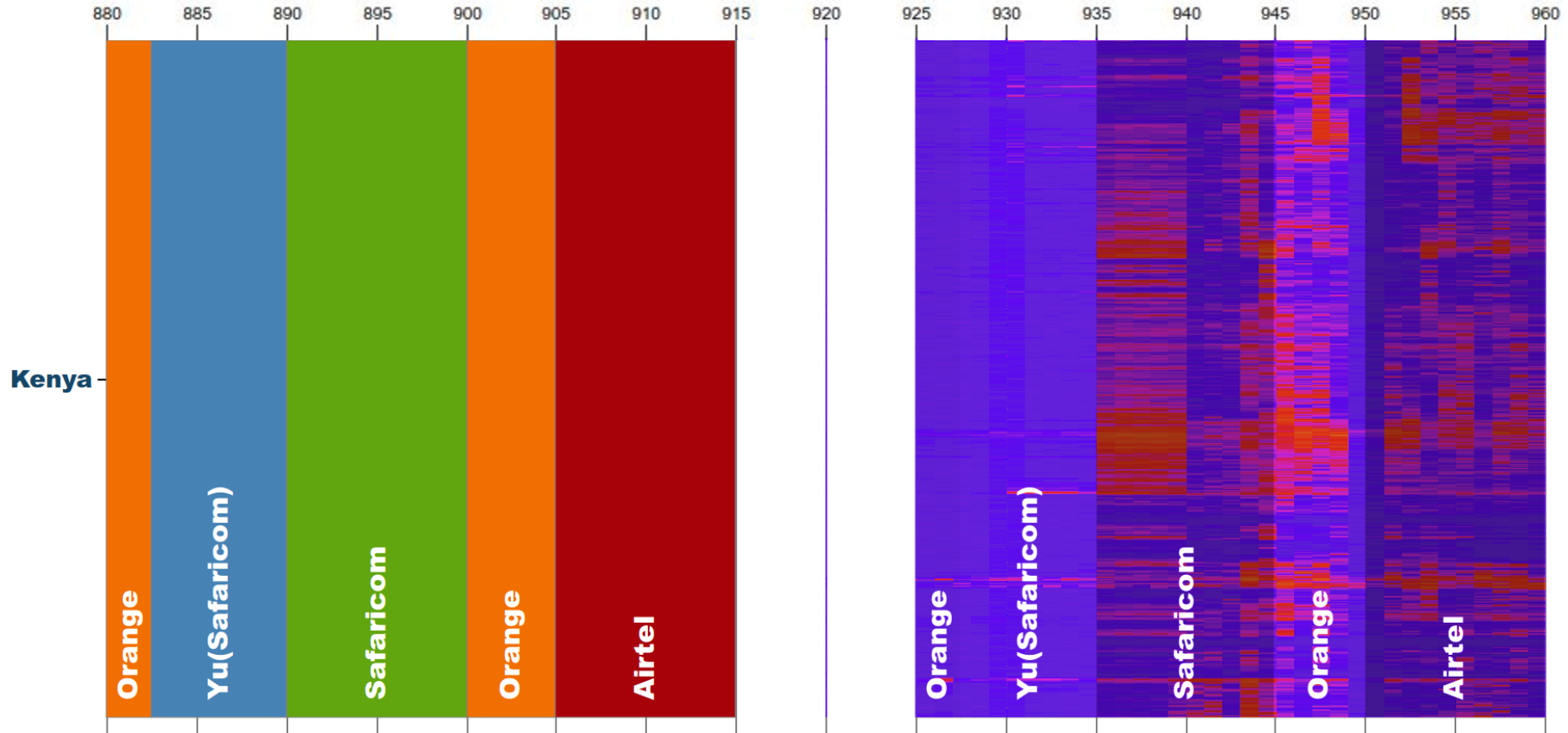
Kenya



Nigeria

Monitoring Spectrum Use

900 MHz Band



Thank you!



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moz://a