



Meta's Edge in Africa: Navigating Subsea Cuts and Planning for the Future

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∞ Meta Infrastructure

A dark blue world map is centered in the background, showing the outlines of continents. The map is slightly faded and serves as a backdrop for the statistics.

20

Origin Datacenter Regions

80+

Edge PoP Markets

7,000+

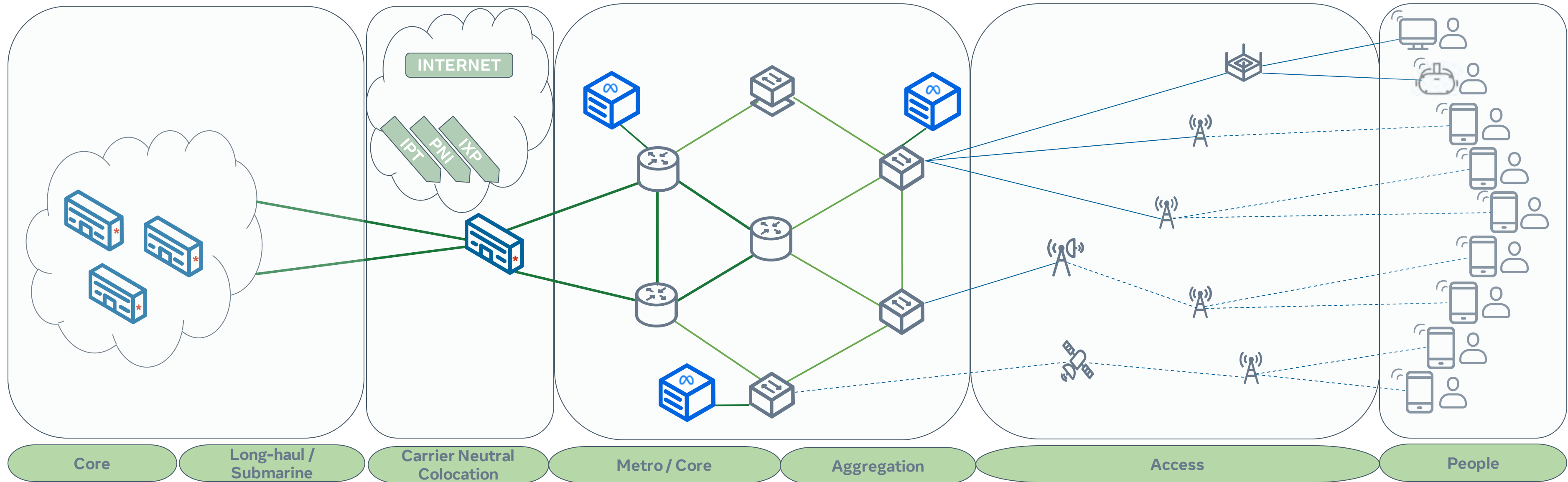
In-network Appliances

3.27B

Family DAP, as of 30 June 24

Content Coverage

Connecting Meta with People



- All sessions terminate on Edge
- MNAs talk to Edge, Edge talks to DCs
- Placement of Edge is a major factor in Quality of Experience



Multiple simultaneous faults



On 14
[Cote](#)

- Slow Internet Speeds in South Africa — Break in Undersea Cables

kontik

East African Internet connectivity again impacted by submarine cable cuts

05/13/2024

African Internet

Two subsea cables damaged in West Africa; repairs may take weeks

WACS and SAT-3 damaged again, CS Léon Thévenin to sail from Kenya around the Horn of Africa for repairs

August 08, 2023 By: Dan Swinhoe [Have your say](#)

ISOC Analysis:

<https://www.internetsociety.org/resources/doc/2024/2024-west-africa-submarine-cable-outage-report/>

Cloudflare Analysis: <https://blog.cloudflare.com/east-african-internet-connectivity-again-impacted-by-submarine-cable-cuts>

Diversity New Paths



Impact to Meta: Multiple and simultaneous outages



Subsea Outage

But...with multiple cuts we had constraints. Turned up additional capacity on alternative systems



Terrestrial Outage

Timing...We also experienced issues on our South Africa terrestrial network



Backbone Constrained

Meta's CDN controller maximised available bandwidth - including additional capacity on alternative systems



Metros Disconnected

Infra became temporarily disconnected, traffic instead being served out of alternative metros - both in and out-of-region

How did our Edge Act

Control

CDN controller can very specifically manage traffic under failure scenario, based on closest interconnection point

Targeted

Even under failure this allows Meta to serve the maximum traffic as locally as possible, mitigating the outage impact

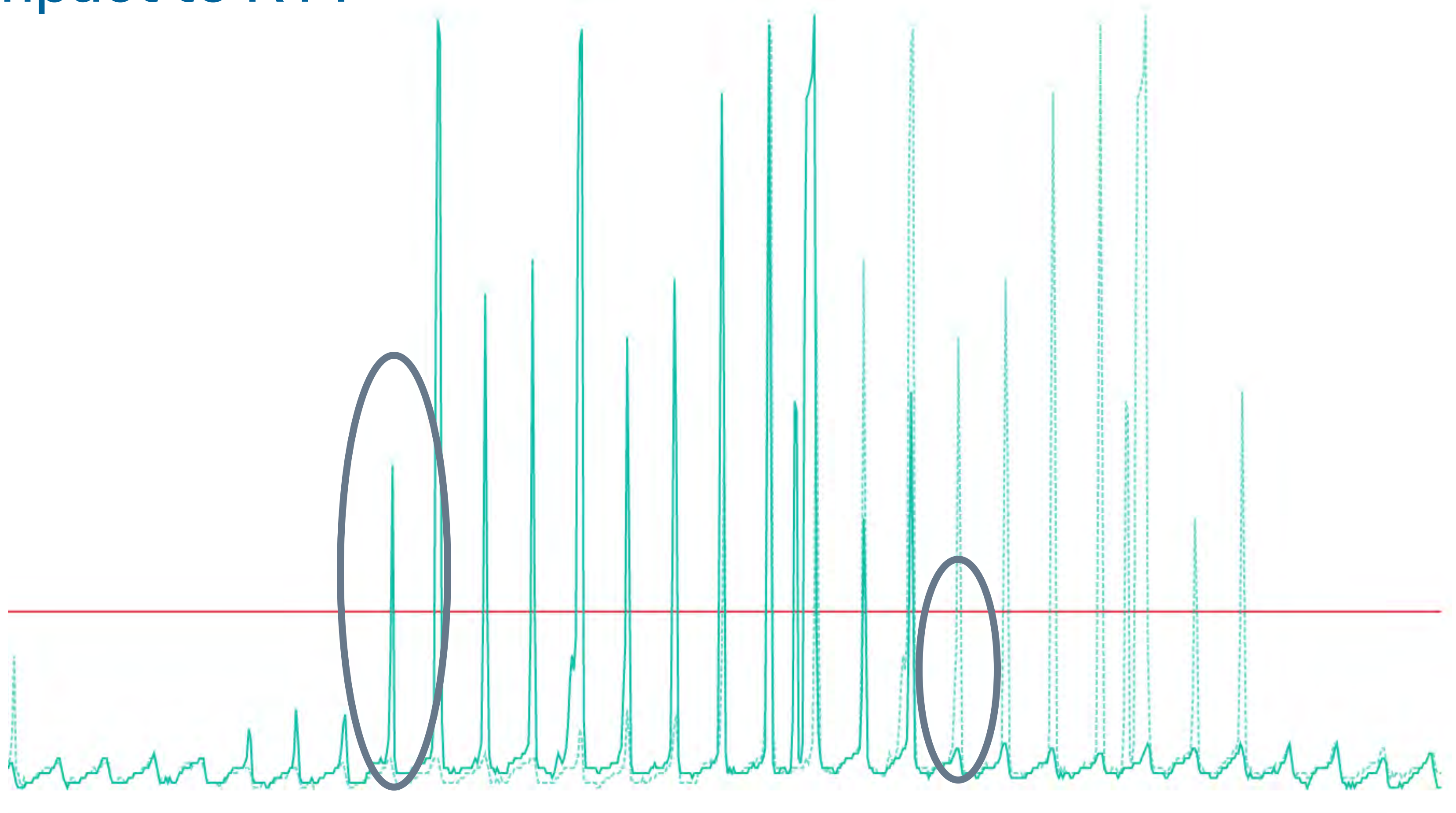
Traffic

In extreme failure scenarios traffic may be served out of country

Understand

We understand the impact this has to our network partners

Impact to RTT



Different experiences have different **latency** requirements

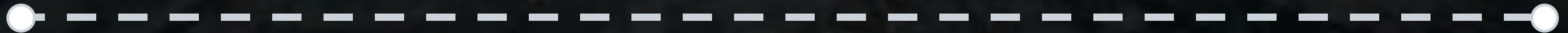


~150ms

~70ms

~50ms

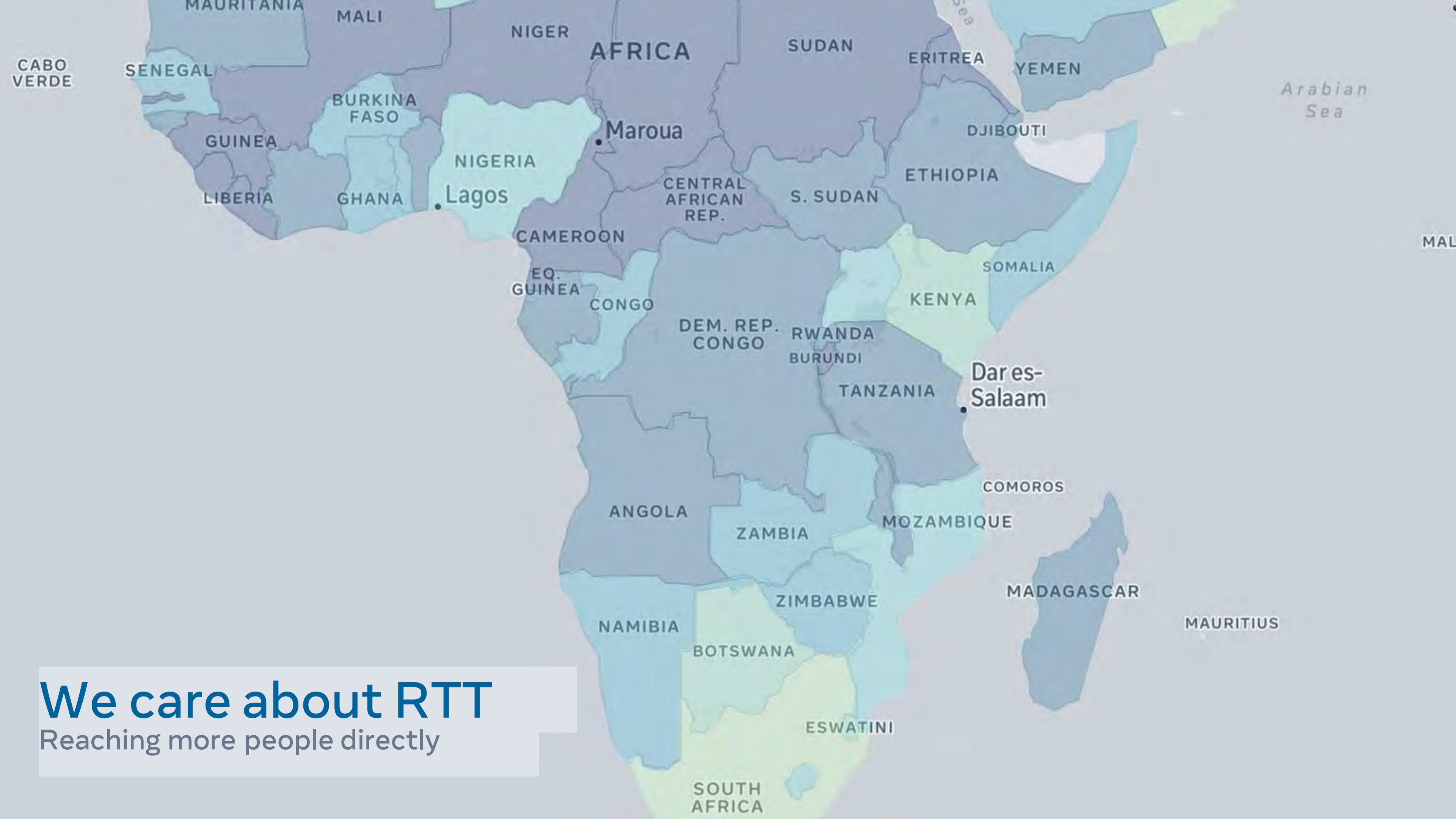
~25ms



Highest

Network RTT

Lowest



AFRICA

Maroua

Lagos

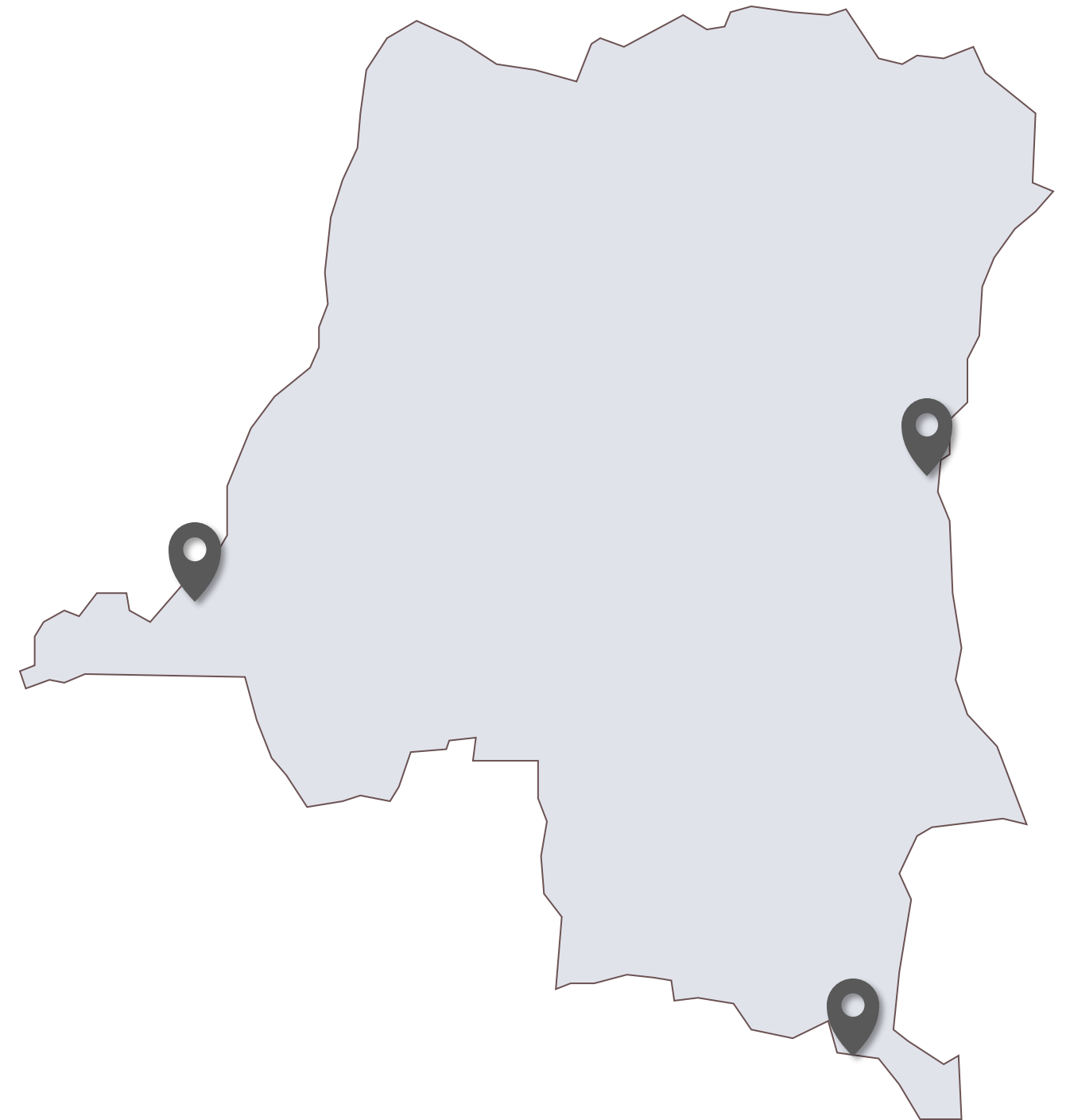
Dar es-Salaam

We care about RTT

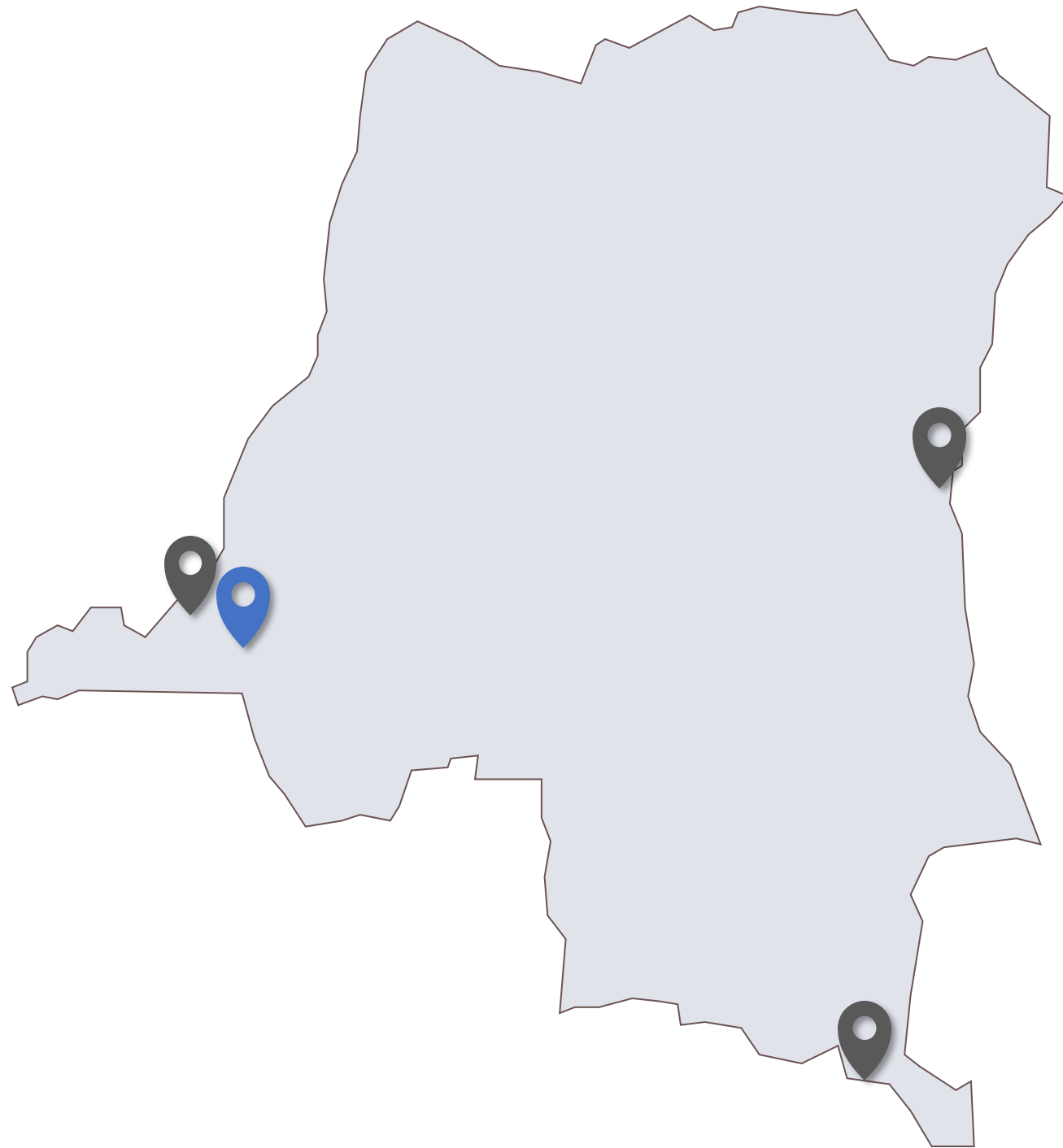
Reaching more people directly

Existing DRC Edge

- We have been collaborating with the ISPA for over **5 years**
- mpMNAs (IX connected Appliance) have been deployed **at all three IXPs: KINIX, LUBIX, and GOMIX**
- This enables us to **deliver pictures and video content**, as well as relay calls
- **All within the country**
- Requesting peering is a **easy process** (as63293)



Future Plans!



- We plan to build a backbone connected PoP (as32934) in **2026**
- Will enable us to deliver the **full product family** in country
- **2Africa** landing in the DRC enables this for us
- Supporting fiber investments for both metro and terrestrial

Questions?

Engineering Blog

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