UCC's role in strengthening affordable and resilient international Connectivity

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Presentation Outline ...

Overview of the Uganda's digital economy.

Current state of ICC in Uganda

Key UCC's initiatives to strengthen connectivity

Challenges

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Overview of Uganda's Digital Economy

ABOUT

- Uganda is a landlocked country in East Africa whose diverse landscape encompasses the snow-capped Rwenzori Mountains and immense Lake Victoria. Its abundant wildlife includes chimpanzees as well as rare birds. Remote Bwindi Impenetrable National Park is a renowned mountain gorilla sanctuary. Murchison Falls National Park in the northwest is known for its 43m-tall waterfall and wildlife
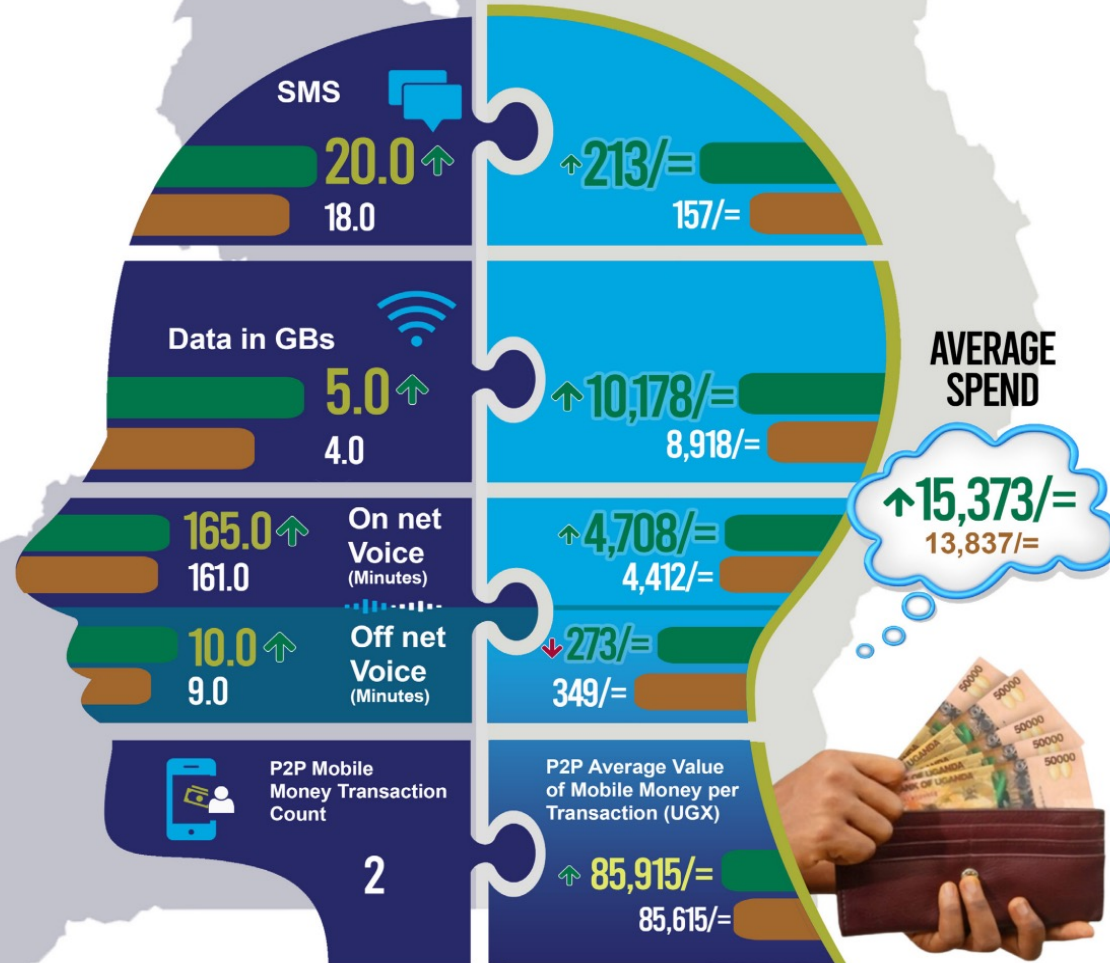
December 2024 Average User Profile

Average Monthly Service Usage (Volumes)

| Monthly Service Usage Spend (UGX)

SMS
- 20.0 ↑
- 18.0

↑ 213/=
157/=

Data in GBs
- 5.0 ↑
- 4.0

↑ 10,178/=
8,918/=

AVERAGE SPEND
↑ 15,373/=
13,837/=

On net Voice (Minutes)
- 165.0 ↑
- 161.0

↑ 4,708/=
4,412/=

Off net Voice (Minutes)
- 10.0 ↑
- 9.0

↓ 273/=
349/=

P2P Mobile Money Transaction Count
2

P2P Average Value of Mobile Money per Transaction (UGX)
↑ 85,915/=
85,615/=

● Q4 2024   ● Q3 2024

Mobile Registered Subscriptions
51.0 Million
45.6 MILLION

Mobile Subscriptions (Active 90 Day)
41.6M
40.0 MILLION

Mobile Internet Subscriptions (Active 90 Day)
19.5M
17.2 MILLION

On-Net Traffic (Minutes)
19.6B
19.1 BILLION

Off-Net Traffic (Minutes)
1.2B
1.0 BILLION

Internet Traffic (GBs)
226.5M
218.1 MILLION

ONA Incoming Traffic (Minutes)
221.8M
284.7 MILLION

ONA Outgoing Traffic (Minutes)
34.2M
27.8 MILLION

International Incoming Traffic (Minutes)
13.5M
15.8 MILLION

International Outgoing Traffic (Minutes)
7.4M
7.6 MILLION

Mobile Money Registered Subscriptions
50.5
45.6 MILLION
*Statistics from BOU

Mobile Money Active Subscriptions (90 Day)
32.1M
30.4 MILLION
*Statistics from BOU

Mobile Money Transaction Counts
2.15B
1.96 BILLION
*Statistics from BOU

Smartphones
18.2M
17.3 MILLION

Towers
5,204
5,158

Fibre (Kilometres)
47,771
44,910

Gross Telecom Revenue (UGX)
1.70 TRILLION
1.65 TRILLION

Domestic Mails
309,651
303,412

East Africa Inbound Packages
17,399
17,289

East Africa Outbound Packages
8,931
5,050

Express Mail Inbound (EMS)
2,923
2,596

Express Mail Outbound (EMS)
2,303
2,047

Rest of Africa Incoming Packages
6,287
5,287

Rest of Africa Outgoing Packages
2,090
1,838

Q4 2024
Q3 2024

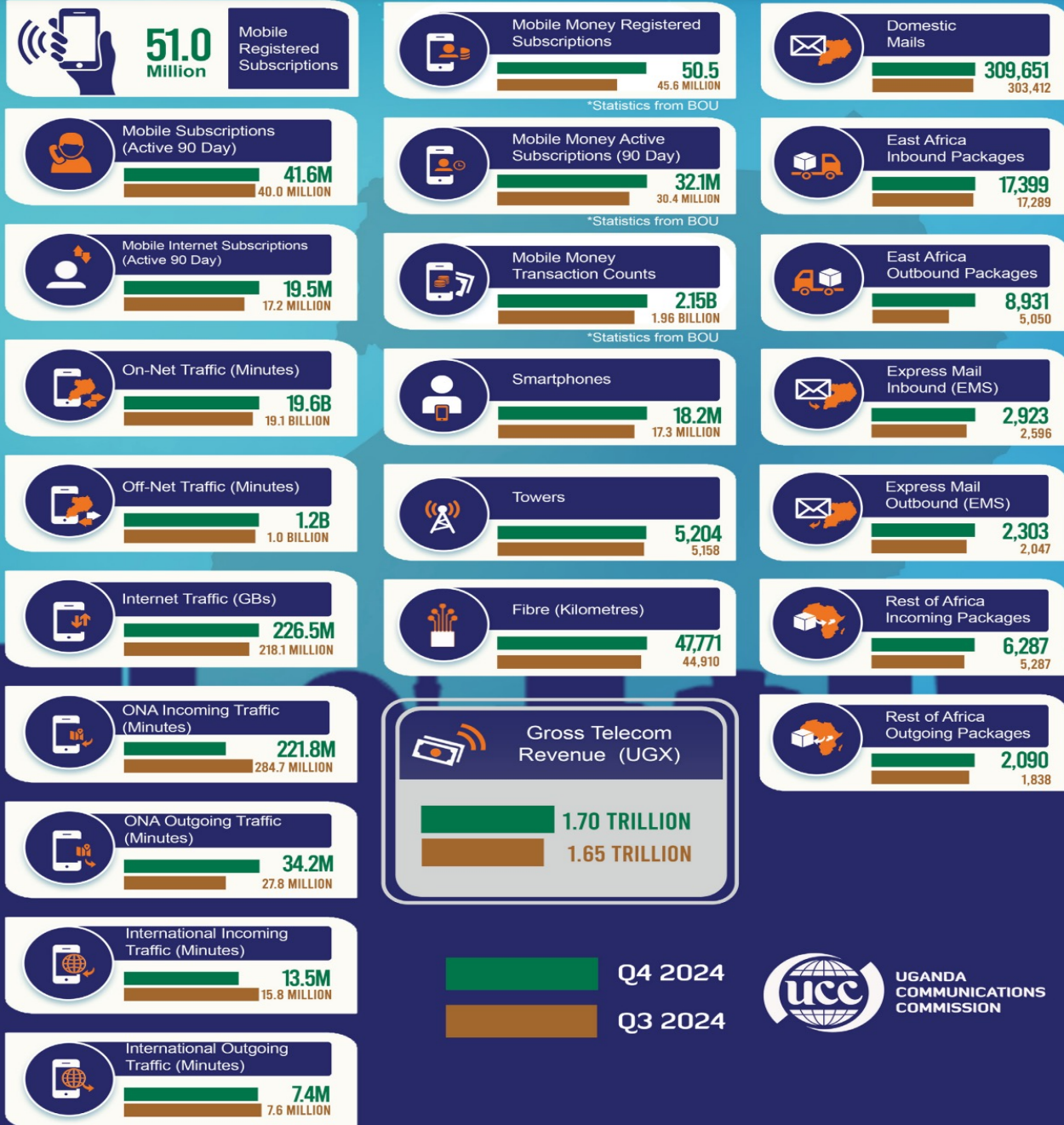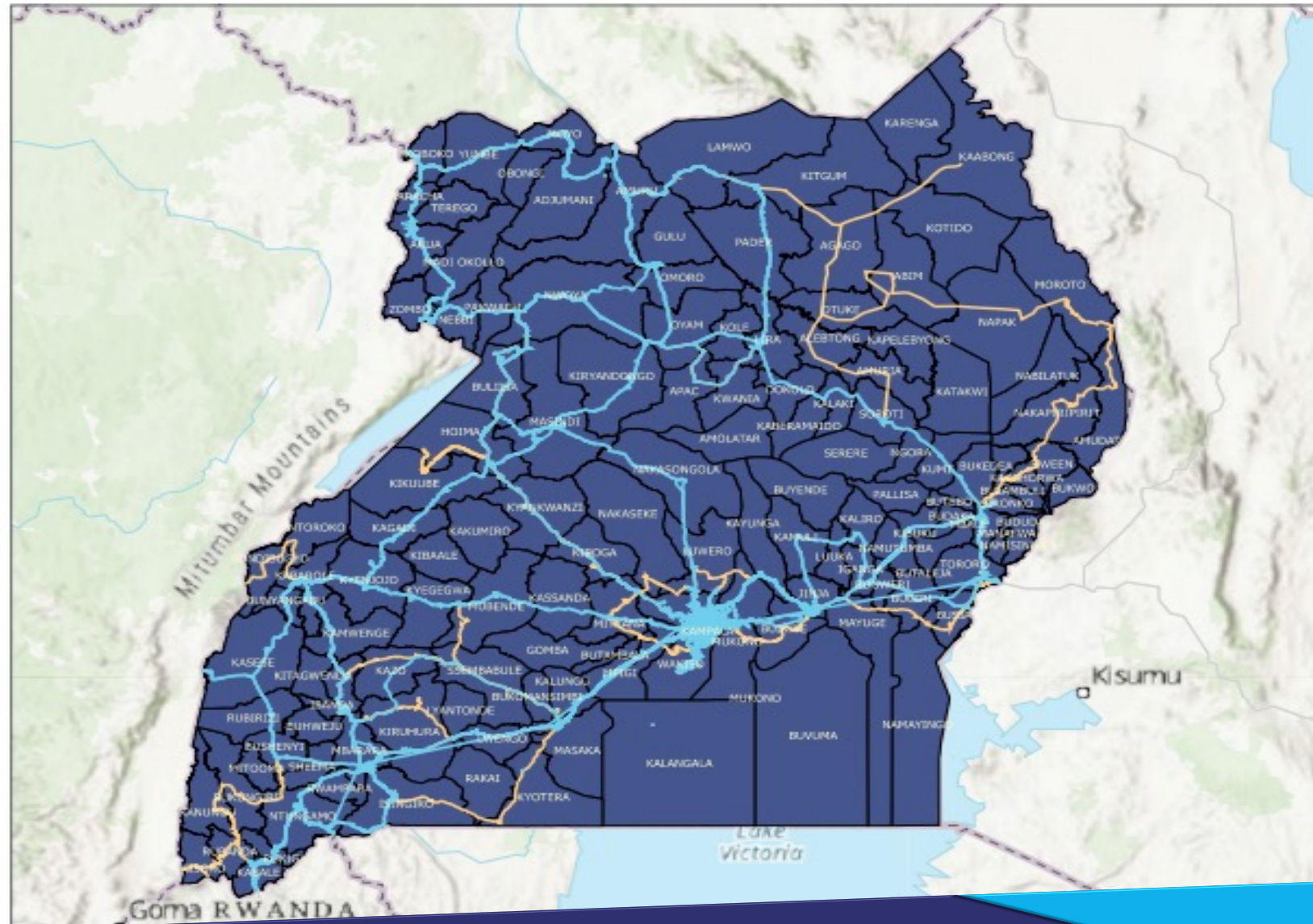UCC UGANDA COMMUNICATIONS COMMISSION

Figure 5 — Fiber Network Layout 2023

Cross boarder interconnection: Importance

Cross-border connectivity is important for both landlocked and coastal countries for several reasons:

In order to avoid using satellite connections, landlocked countries must access submarine cable landing stations via their neighbors.

Even for coastal countries, geographically diverse routing is important for ensuring high availability of international capacity and competition between submarine cables

Coastal countries can generate revenue by carrying regional or international traffic for neighbors.

Cross-border connectivity is critical for building strong regional hubs (e.g. regional IXPs)
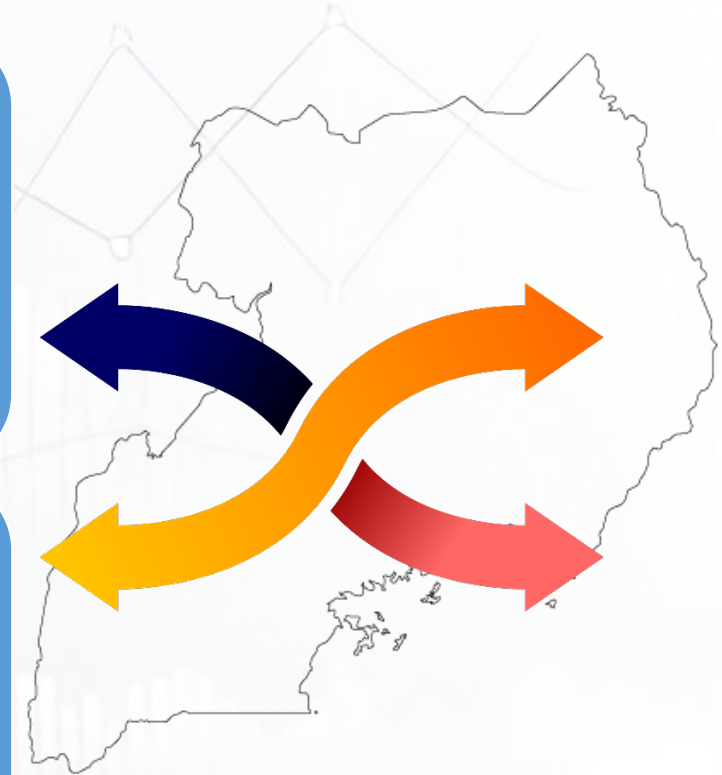
Uganda's international internet connectivity landscape

Submarine cables are responsible for connecting Africa to the rest of the World using high speed fibre optic infrastructure.
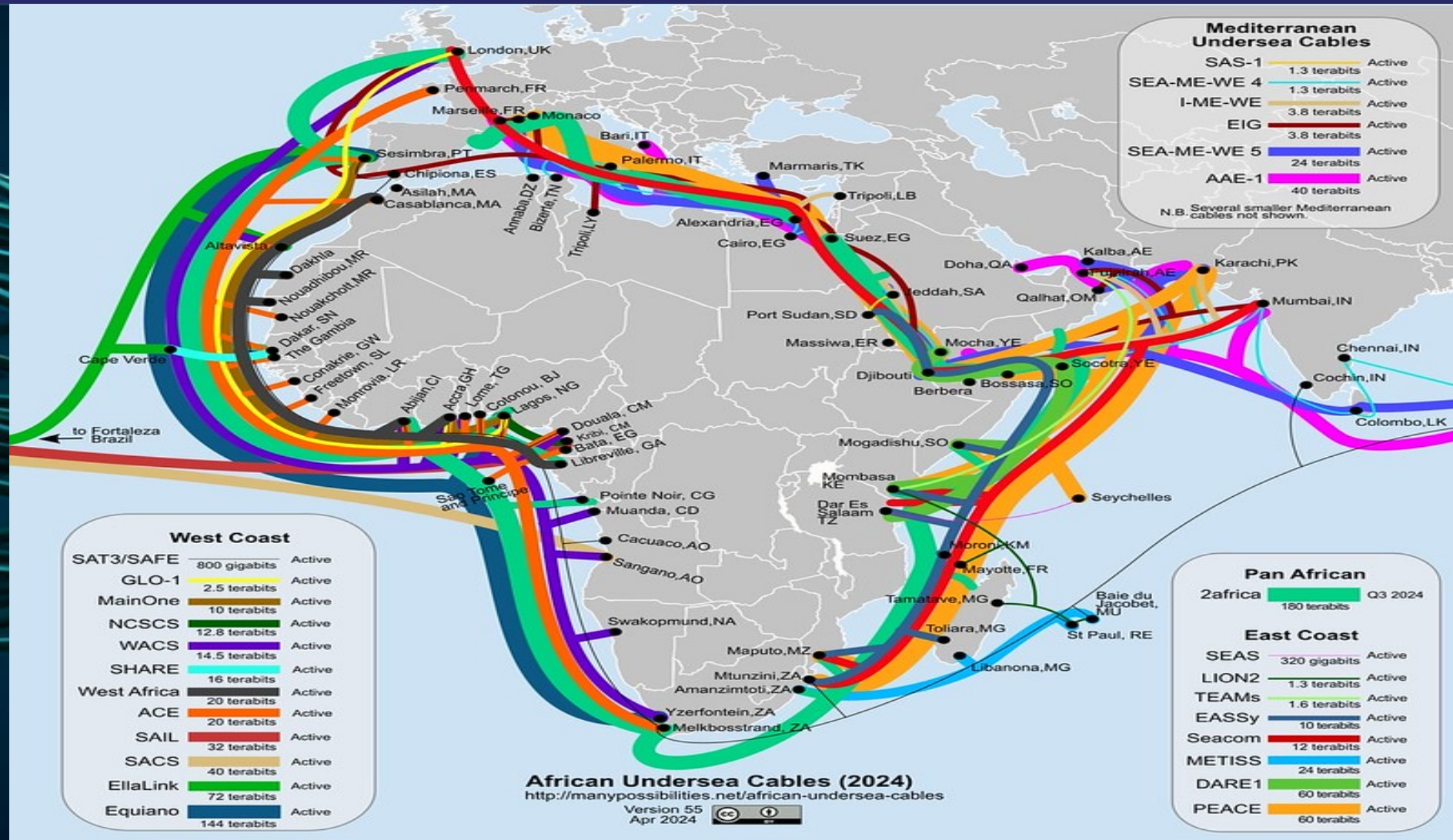
Uganda connects through Mombasa in Kenya and Dar es Salaam in Tanzania

Seacom and Eassy are the primary submarine cables used by Uganda to access the global internet

Major submarine cables at the East African Coast include:
SEACOM
EASSy
TEAMS
DARE1
PEACE Cable

Uganda

Kenya

Tanzania

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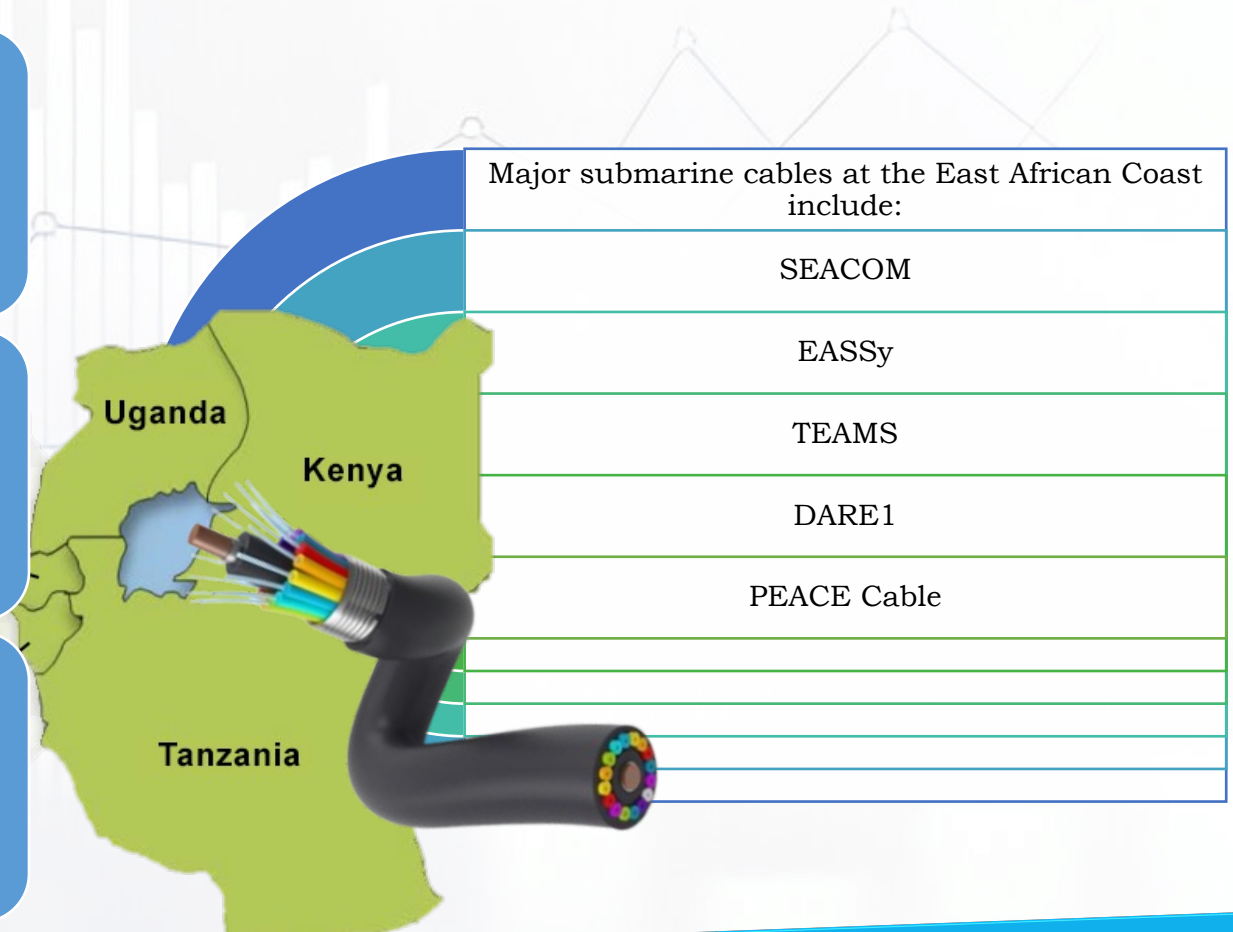
Snapshot of Submarine Cables landing in Africa

Regional Cross-border Interruptions

- Cable fault for EASSy and Seacom occurred on 12th May 2024- Cables cut off the east Coast of South Africa. EA was disconnected from South Africa.

- AAE-1, EIG and Seacom cable damages on 24th Feb 2024 caused by ongoing political challenges around the Red Sea

- ACE, MainOne, SAT-3 and WACS on 14th March 2024 cable faults caused by undersea landslide.

- On 25th April 2025, SAFE cable fault was caused by abnormal electrical condition affecting branch units between South Africa and Mauritius.

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Main Providers of International Bandwidth in Uganda

Seacom
A major telecommunications provider in Uganda.
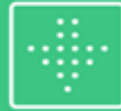
C Squared
Offers high-speed internet and connectivity solutions.

Liquid Intelligent Technologies
Provides digital infrastructure and services.

MTN Uganda
A leading mobile network operator in Uganda.

Airtel Uganda
Offers mobile and broadband services in Uganda.

Roke Telkom
Provides internet and telecommunication services.
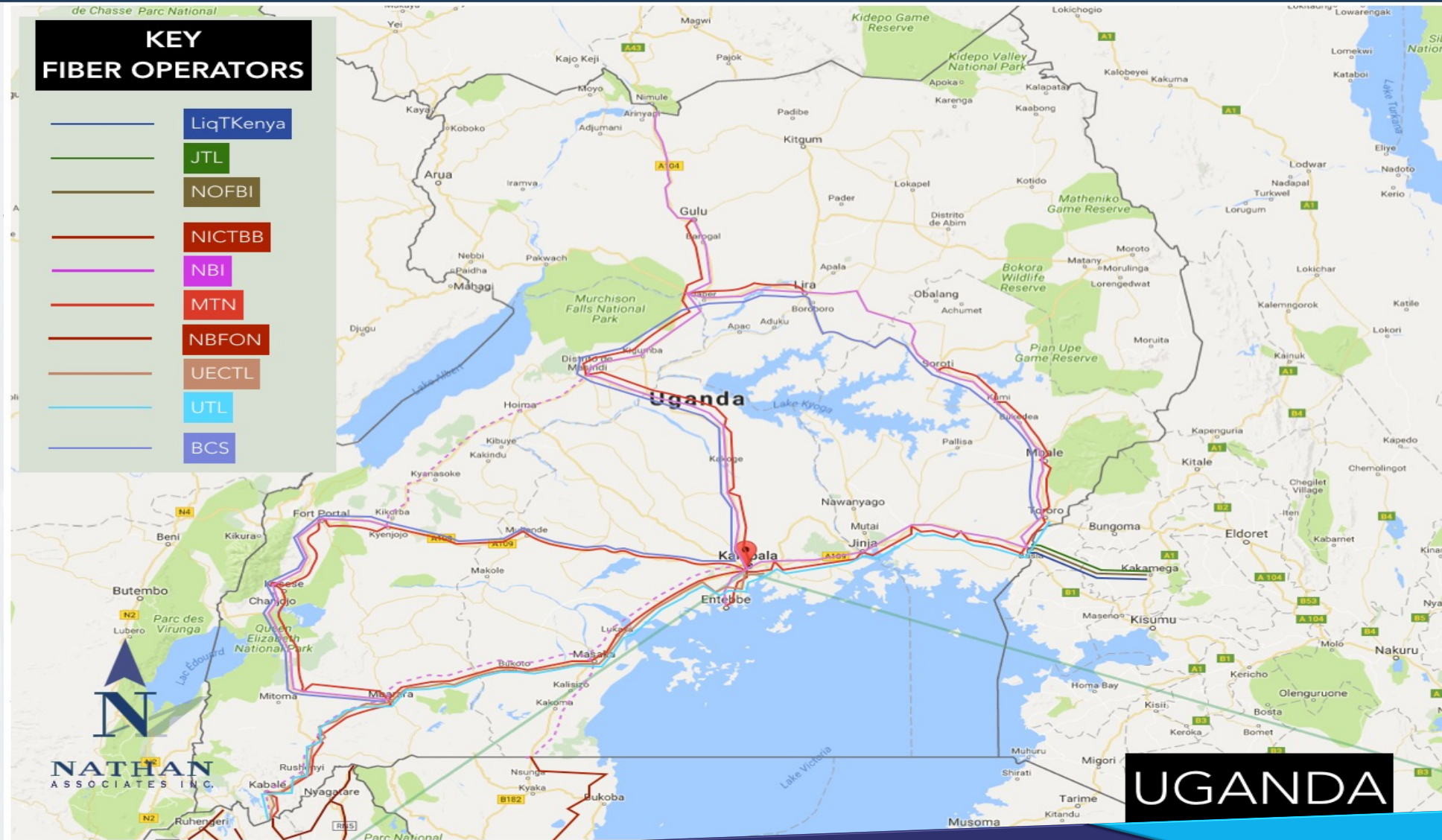
Bandwidth & Cloud Services
Offers cloud solutions and bandwidth services.

KEY FIBER OPERATORS

- LiqTKenya
- JTL
- NOFBI
- NICTBB
- NBI
- MTN
- NBFON
- UECTL
- UTL
- BCS

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Uganda: Cross border Infrastructure Ctd...

Cross-border Interconnection	Border Points	Parties on Interconnection	Capacity	Usage
Uganda - Rwanda	Sofia Town - Kagitumba	currently no operators in Uganda - NBFON	0	0
	Katuna - Katuna	UECTL, MTN, UTL, NBI - NBFON	several 10 Gb (n x STM-16)	> STM-16 (2016)
	Goma - Cyanika	currently no operators in Uganda - NBFON	0	0
Uganda- DRC	Uvira - Gatumba	No partner now - BBS	10 Gb (1 STM-16)	To be implemented
Tanzania - Uganda	Mutukula - Mutukula	NBI in Uganda - NICTBB	several 10 Gb (n x STM-16)	> STM-16 (2016)
Uganda - Kenya	Busia - Busia	Liquid Telecom Uganda - Liquid Telecom Kenya	several 10 Gb (n x STM-16)	> STM-16 (2016)
	Busia - Busia	UTL, MTN, NBI (Uganda) - NOFBI, KPLC Power Line	several 10 Gb (n x STM-16)	> STM-16 (2016)
	Malaba - Malaba	UTL, MTN, NBI (Uganda) - Liquid Telecom Kenya, JTL, KETRACO	several 10 Gb (n x STM-16)	> STM-16 (2016)
	Malaba - Malaba	Halotel - Lumitel	10 Gb (1 STM-16)	>1 STM-4 (2016)
Burundi - Rwanda	Haut - Aranyaru	NBFON - BBS	10 Gb (1 STM-16)	1 STM-1 (2014) estimated
	Nemba - Gashenyi	NBFON - BBS	10 Gb (1 STM-16)	1 STM-1 (2014) estimated
	Inyubaku - Ruhwa	NBFON - BBS	10 Gb (1 STM-16)	not implemented yet

Regulatory bottlenecks

- Disruptions at the landing points in the neighboring countries.

- Taxation-

- Supply restrains to fiber links through neighboring countries.

- Exclusivity (Limited Options for operators in Uganda.

- High cost of smart device uptake in the country