OPTIC FIBRE COMMUNICATIONS BUSINESS

07th October 2025

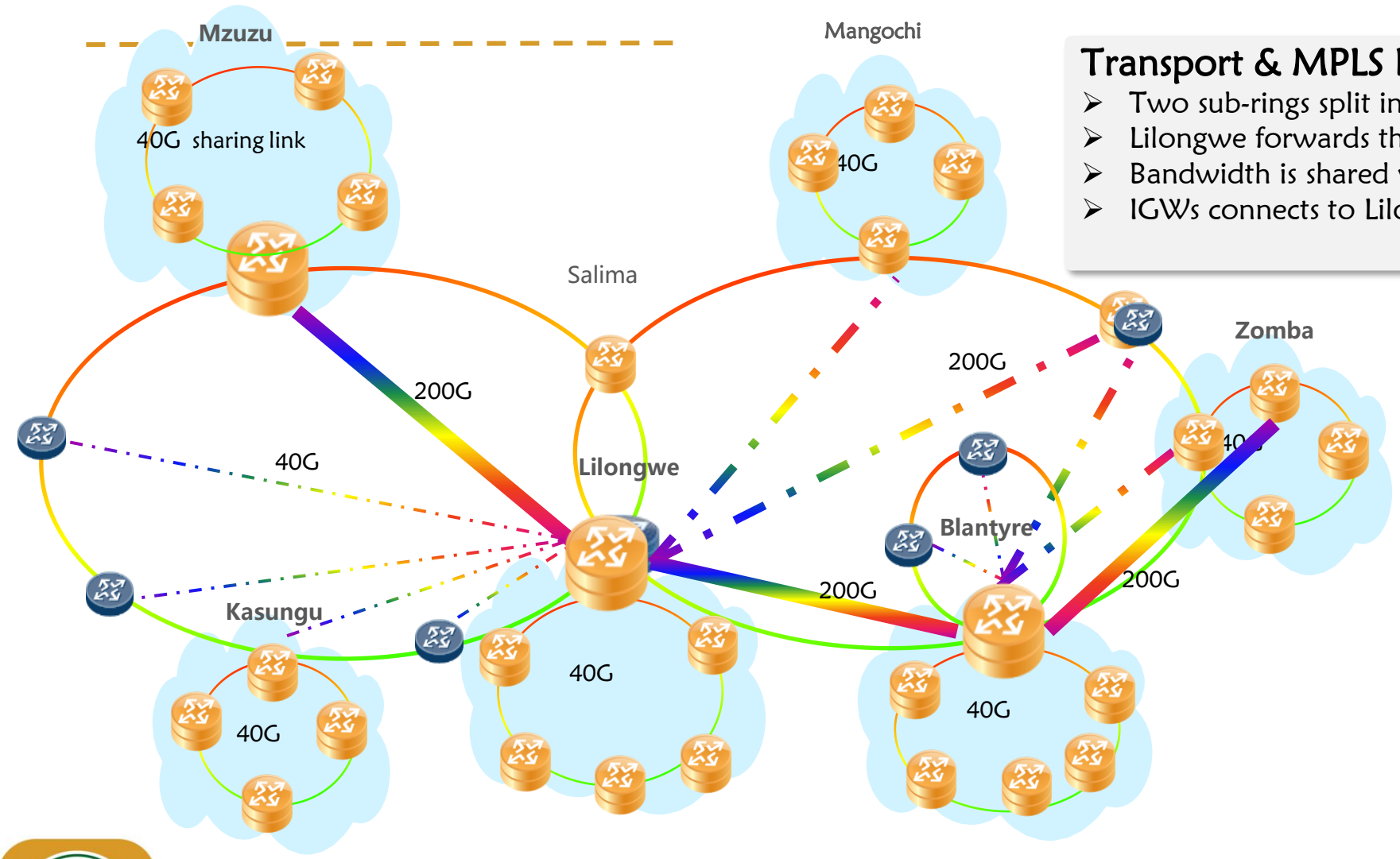
Presentation Outline

1. Brief Introduction
2. ESCOM Infrastructure
3. Services
4. Data Center
5. Conclusion

1.0. Brief Introduction

- A Telecommunication Arm in ESCOM housing both passive and active Telecommunication infrastructure.
- ESCOM has had fibre on its network since 2004 for both earthing of its electricity network poles and Supervisory Control and Data Acquisition (SCADA) as well as tele-protection usage.
- In 2009, A resolution was passed to commercialize the spare fibre strands, as such a department was established to manage the commercial side of optic fibre.
- Hooked on electricity poles, further investment happened in 2017 and 2021 where coverage was extended to all districts in Malawi including Likoma Island.
- Both the Transport system and the MPLS backbone operate in 2 big rings and thus offering resilience.
- Enabled with 3 licenses namely: Carrier, international and ISP licenses, ESCOM has been offering Infrastructure as a service to MNOs and ISPs until 2024.

2.0. ESCOM Infrastructure



Transport & MPLS IP Design:

- Two sub-rings split in Lilongwe
- Lilongwe forwards the traffic between the 2 rings.
- Bandwidth is shared within each sub-ring
- IGWs connects to Lilongwe or Blantyre with 100G

OSN9800 M24

OSN1800

IGW OSN1800

Fiber

40GE Logic Link

100GE Logic Link

4*100GE Logic Link

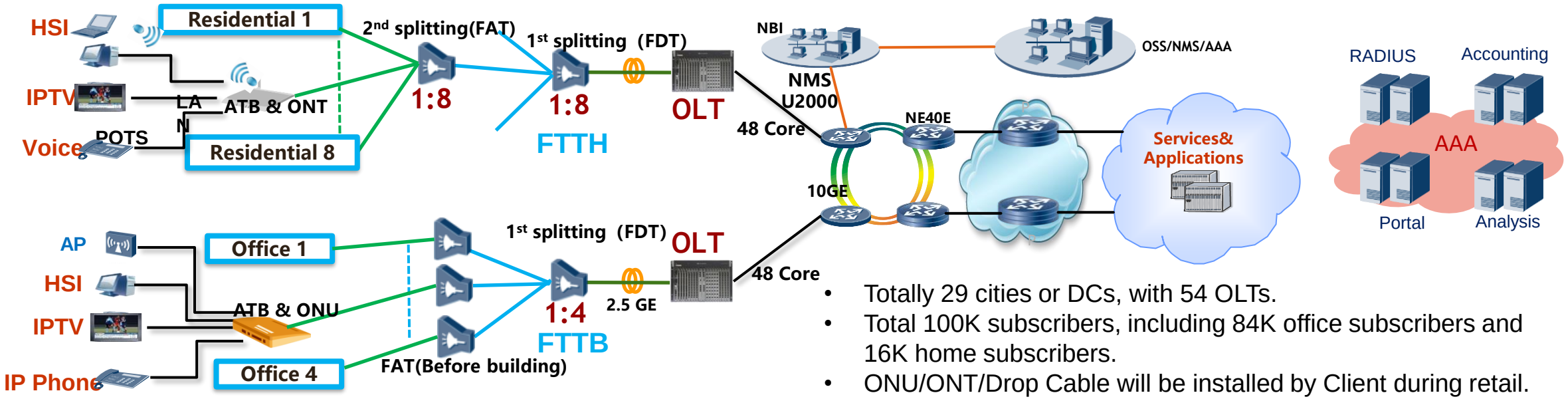
2.1. Backbone (DWDM & MPLS)

2.2. Metro

- Available in Blantyre, Lilongwe, Mzuzu, Zomba, Mangochi, Salima, Dedza, Kasungu, Karonga and Thyolo districts.
- Network in Blantyre, Lilongwe Mzuzu and Zomba is fully protected with a ring
- Network is IP based with 200G bandwidth capacity
- Active sites include:-
  - Blantyre 7 Sites
  - Lilongwe 6 sites
  - Mzuzu 3 sites
  - All other districts 1 site each

2.3. Access

- Available in Blantyre, Zomba, Lilongwe and Mzuzu cities with a capacity to connect 100,000 connections.
- The network is fully protected with a 40G ring expandable to 100G
- Available sites include:-
  - Blantyre 7 sites
  - Lilongwe 6 sites
  - Mzuzu 3 sites
  - Zomba 2 Sites

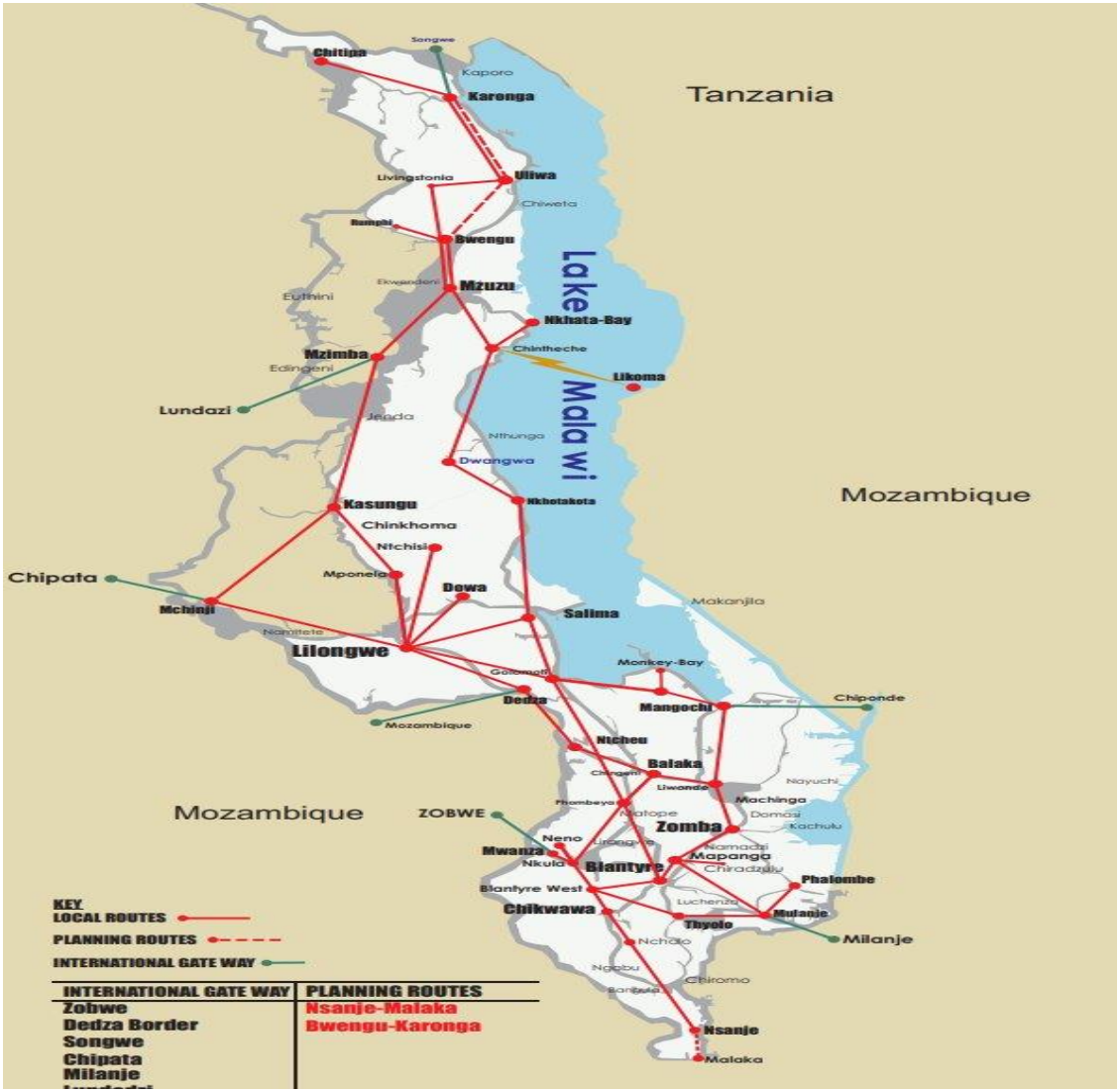


- Totally 29 cities or DCs, with 54 OLTs.
- Total 100K subscribers, including 84K office subscribers and 16K home subscribers.
- ONU/ONT/Drop Cable will be installed by Client during retail.

City	Total User Qty.	OLT For high density Office	OLT For low density Office	OLT For Home	ONU-Terminal for Office (First Batch)	ONT-Terminal for Home (First Batch)	Fiber Cable (KM, ADSS)	Drop Cable (KM) (First Batch)
Lilongwe	25191	2	8	3	130	420	371	240
Blantyre	21914	2	6	3	100	420	331	180
Mzuzu	9012	2	0	1	60	200	126	100
Zomba	5940	1	0	1	60	200	84	100
Mangochi	2048	1	0	0	15		18	6
Kasungu	2048	1	0	0	15		18	6
Salima	2048	1	0	0	10		18	6
Karonga and other 22 towns	1024/512	0	22	0	210		198	88
Total :	100096	10	36	8	600	1240	1193	726

2.4.Infrastructure -Network Coverage

- **National Fibre Backbone Network**
  - 7000 km
  - All districts including Likoma island
  - 4* International gateways
- **Metropolitan and Access Network**
  - All cities
  - 10 major towns
  - 100,000 possible broadband end connections
- **Data Centre**
  - Tier 3 Data Centre
  - Cloud computing
- Video Conferencing System
- 12 Video Conferencing Units
- 500 IP phones



3.0. Business Offering

Carrier of carriers

- Backbone Capacity
- Metro Capacity
- Metro dark fibre
- VPN

Data Centre :

- Cloud services
- Physical Data Centre Hosting
- Virtualization services
- Connectivity and cross connecting

Teleconference services

- Video Conferencing in the major cities

Internet Services

- Wholesale Internet (IPT)
- Dedicated literal internet
- Shared Internet (FTTx)

4.0. ESCOM Data Centre

4.1. ESCOM Data Centre

A 3 Tier Data Centre with 2 Modules of 21 Racks – 42U, 6kw/rack
With Memory of 20.209TB CPU of 6964 Cores, Storage of 595TB and uptime of 99.98%

The facility offer the following services

- **1.1. Cloud Computing:** Providing access to computing resources such as virtual machines, storage and applications delivered over the internet.

- **1.2. Physical Data Centre Hosting**: Renting physical space, Rack Hosting and Bare Metal Server Hosting.

- **1.3. Virtualization services**: Enables the creation of virtual servers, storage and networks to optimize resource utilization. Key Features include server virtualization, network virtualization, storage virtualization.

5.0. Conclusion

- Our objective is to improve connectivity and meet the increasing demands of the digital landscape by offering services that are based on cutting-edge technology and robust infrastructure.
- Committed to service delivery with uptime of 99.5% on connectivity and 99.97% on Data Centre services.
- As OFC we are committed in ensuring that our clients experience minimal disruptions and that businesses can rely on our services for their operations.
- By leveraging cutting-edge technology and robust infrastructure, we aim to enhance connectivity and support the growing demands of the digital landscape
- Metro fibre network installed in 10 districts
- Access Network installed in 4 major cities and will bring fibre to the business and home
- National Data Centre in Blantyre is open both government and private

THANK YOU