

SIERRA LEONE RESEARCH & EDUCATION NETWORK



NRENs AS PROVIDERS OF OPEN INFRASTRUCTURE

LIBSENSE OPEN SCIENCE SYMPOSIUM – SIERRA LEONE
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Thomas Philip Songu (PhD)

ICT Director Njala University / CEO SLREN



SLREN – Connecting Higher Education and Research Communities in Sierra Leone



Presentation Outline

1) BACKGROUND

- Global and Regional NRENS landscape
- The Sierra Leone NREN (SLREN)
 - Purpose
 - Membership

2) THE INFRASTRUCTURE SERVICES

3) BENEFITS /IMPACT

4) FUTURE OUTLOOK

- Ongoing Activities - What we have achieved so far
- Planned Activities - Call for Action

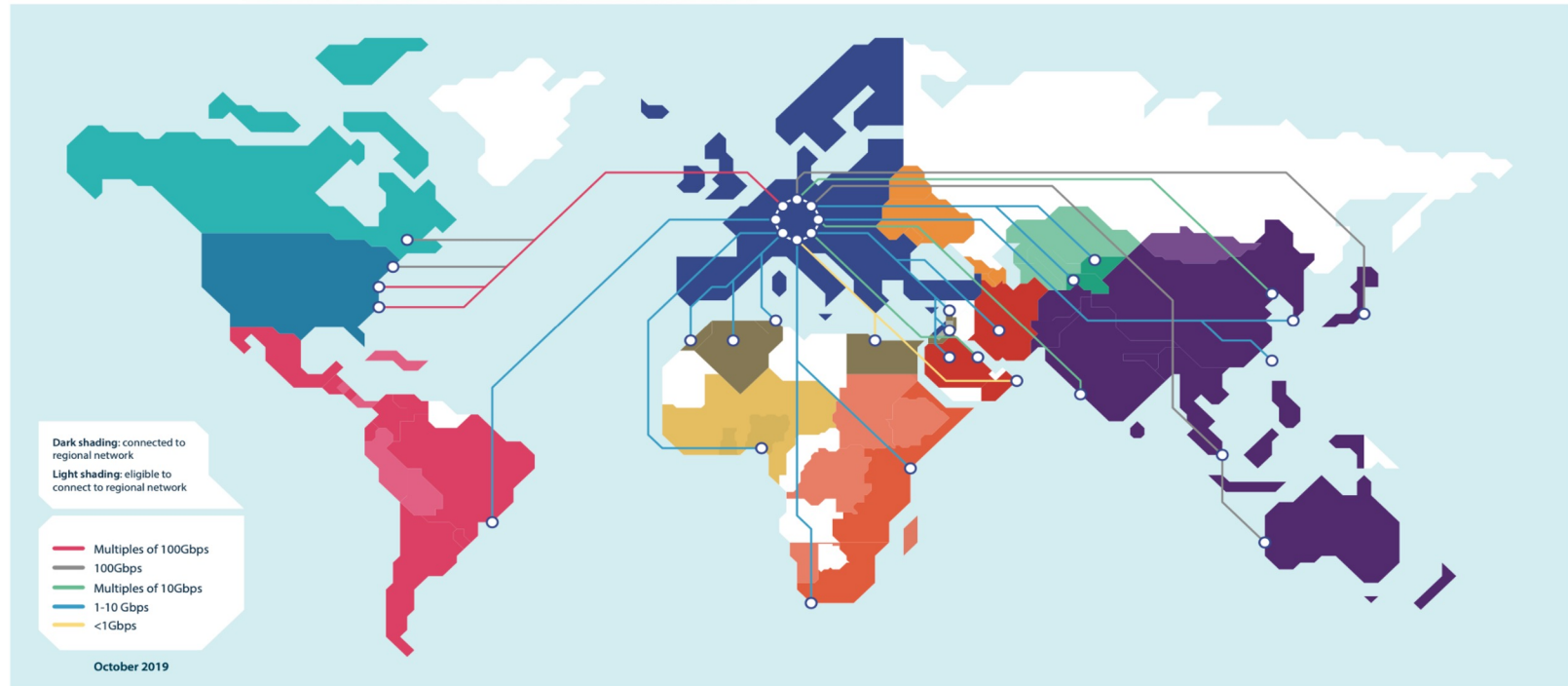
5) BENEFACTORS



What are and why NRENs?

- **NREN**: National Research and Education Network
- The goal is to build networking capacity dedicated to research and education independent of the commercial internet
- The pattern around the world is to build regional, national, and larger Research and Education Networks (RENs)
- NRENs are not for profit-making but user oriented focused on community building, providing a public and secured service
- Various organisational and funding models: resources from members only, from government only or hybrid funding models
- The interconnection of the regional RENs forms the global REN – platform for collaboration at global level

The Global NREN Landscape



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SLREN – Connecting Higher Education and Research Communities in Sierra Leone



The African NREN ecosystem

- **UbuntuNet Alliance** - Incorporated in 2005

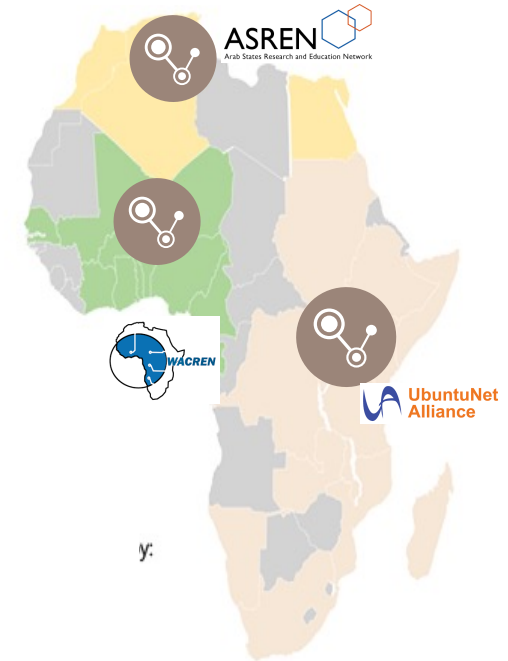
- Regional REN for Eastern and Southern Africa
- 16 Members

- **ASREN** – Incorporated in 2010

- Arab States Research and Education Network
- 6 shareholders,

- **WACREN** – Incorporated in 2010

- Regional REN for West and Central Africa
- 16 Members



ABOUT SLREN

SLREN was incorporated as Not-For-Profit Company Limited by Guarantee in 2017 without shares

PURPOSE OF SLREN

To connect higher education and research institutions to state of art network infrastructures and digital services leading to quality teaching, learning and research in Sierra Leone



ACTIVITIES

- Support in **building strong and viable** campus/institutional **networks**.
- Building network infrastructure to **inter-connect all campus/institutional networks**.
- Providing **Direct technical support** services to member institutions.
- Acting as “Buyers Club” to **negotiate for better pricing** by aggregating the requirements of its members.
- Having **one voice on National Policies on Open Science** and ICT.

MEMBERSHIP

SLREN is owned by its members

Membership to SLREN is formulated based on Open Access.

All accredited Tertiary Education and Research Institutions in Sierra Leone are free to join as members.

CURRENT MEMBERSHIP

1. Njala University (NU)
2. University of Sierra Leone
3. Milton Margai Technical University
4. Ernest Bai Koroma University of Science & Technology
5. Eastern Technical University
6. Freetown Polytechnic
7. Sierra Leone Agricultural Research Institute
8. University of Makeni (UNIMAK)
9. Central University
10. University of Management and Technology

Total Membership **10**

Seven (7) Public

Three (3) Private

REGIONAL MEMBERSHIP

SLREN belongs to the West and Central Africa Research and Education Network (WACREN)



WACREN MEMBERS :

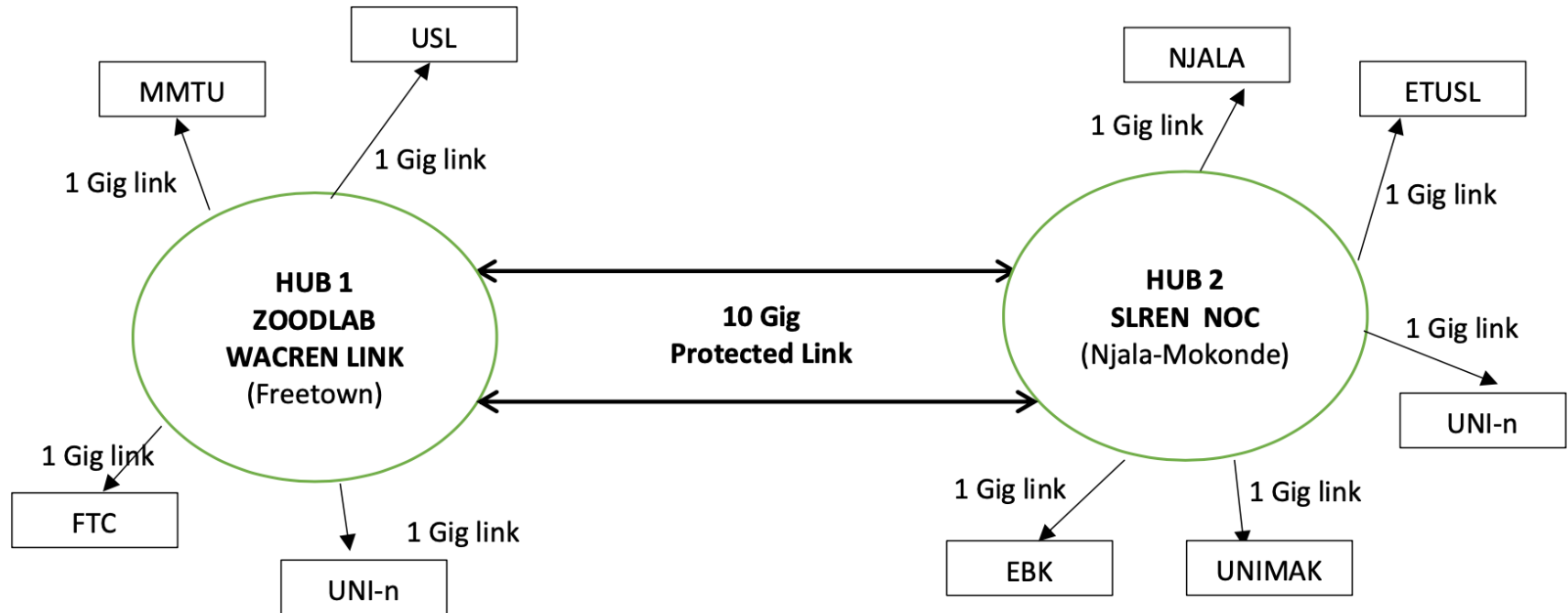
1. RerBénin – Bénin
2. RBER - Bénin
3. FasoREN - Burkina Faso
4. RIC - Cameroon
5. TchadREN - Tchad
6. RITER - Côte d'Ivoire
7. GARNET - Ghana
8. GhREN - Ghana
9. Gn-REN - Guinea
10. LRREN - Liberia
11. MaliREN - Mali
12. NgREN - Nigeria
13. NigerREN - Niger
14. **SLREN - Sierra Leone**
15. TogoRER - Togo



THE SLREN INFRASTRUCTURE AND SERVICES



PROPOSED NETWORK



SLREN SERVICES

SLREN services includes but not limited to the following:

- National gigabit backbone that connects campus networks to each other and to other RENs regionally and globally
- Network Improvement through **Direct Engineering Assistance (DEA)**
- National Learning Management System (**Moodle or Canvas**)
- National Institutional Repository (**DSPACE**)
- **Eduroam** (Educational roaming for Academics and Researchers)
- **Cheaper Zoom** Conferencing package for R&E Community
- Skills Development Through **Technical Training** Workshops.

POTENTIAL IMPACT

IMPACT

- **Improved access** to internet for students, faculty and researchers
 - Access to Wi-fi in student hostels, computer labs, and Libraries
 - Access to online resources – e-books, e-journals & e-articles
 - Access to research and educational content and HPC Services
- **Increased availability** of bandwidth (10G by 2025)

FUTURE OUTLOOK

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What we have done so far

- SLREN registered as non-profit making organisation and a member of WACREN
- Secretariat established at Njala University with support from the Administration
- Strong membership base established – All tertiary and research institutions
- Fibre optic last mile (with STM-4 bandwidth capacity) established in 10+ higher education institutions through funding from GoSL and Work Bank
- Partnership with Research4Life for free online resources
- **Engagement with key stakeholders:** Researchers, Librarians, Faculty, Students
- **Collaboration** with LIBSENSE and other stakeholders to promote Open Science



NEXT STEPS - 1

- Collaborate with MTHE and MCTI to secure **AfricaConnect3** counterpart funding to connect Sierra Leone to the regional research network (WACREN) and **build or strengthen campus networks.**,
- Work with partners to develop **open Infrastructure** – national shared platforms, open access journals, repositories for publications, research data management, and open discovery services.
- **Promote** the use of **Trust Federated identities and single sign-on** to access academic and research services - National Identity Federation (**eduID.sl**), National Wi-Fi Roaming Federation (**eduroam.sl**)

NEXT STEPS - 2

- Embark on skills development to grow SLREN human capacity through **Training Workshops.**
- Keeping the momentum - public sensitisation / awareness about SLREN across higher education and the research community in Sierra Leone.
Encourage **more institutions to join** the SLREN

SLREN Benefactors

- Ministry of Technical & Higher Education (MTHE)
- Ministry of Communication, Technology & Innovation (MCTI)
- Directorate of Science, Technology & Innovation (DSTI)
- Ministry of Basic and Senior Secondary Schools (MBSSS)
- Tertiary Education Commission (TEC)
- Conference of Vice Chancellors and Principals (CVCP)
- WACREN
- Ministries, Departments and Agencies
- Telecommunications Providers
- World Bank
- European Union
- UNDP
- Network Startups Resources Centre
- Hospitals
- Non Governmental Agencies

SIERRA LEONE RESEARCH & EDUCATION NETWORK

Connecting Higher Education & Research Communities in Sierra Leone

THANK YOU

e-mail: tsongu@njala.edu.sl thomas.songu@slren.edu.sl

webmail: <https://www.slren.edu.sl>

