ASREN

DCDF2021

منتدى التعاون الرقمي والتنمية

Digital Cooperation and Development Forum

Shaping our digital future | رسم مستقبلنا الرقمي

Date: Tuesday 21 December, 10:00 - 11:15 p.m. Beirut Time

UNITED NATIONS ESCWA | Shared Prosperity Dignified Life | ARAB HIGH-LEVEL FORUM on WSIS and 2030 AGENDA for Sustainable Development | ASREN Arab States Research and Education Network

Digital Research and Education Infrastructure to Support Science and Achieve the UN-SDGs

Yousef Torman, Managing Director, ASREN

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Digital Research and Education Infrastructure to Support Science and Achieve the UN-SDGs [Organized by ASREN]

Moderator

Mr. Yousef Torman
Managing Director, for the Arab States, Research and Education Network, (ASREN)

Speakers

Mr. Fahem Alnuaimi
Chief Executive Officer
Ankabut - UAE

Mr. Mohamed Al Hajri,
Infrastructure Manager,
OMREN, Oman

Mr. Raed Al Zoubi
Library Director, Jordan University of Science & Technology, Jordan

Mr. Yousif Asfour
Chief Innovation and Transformation Officer (CITO), AUB, Lebanon

Ms. Farida Fassi
Professor, Mohammed V University, Morocco

Mr. Eriko Porto
IT Consultant ASREN, Brazil

Key Facts

- Many Arab countries do not have a **National Research and Education Network** (**NREN**). There is a need to establish **NREN** in these countries and should be associated with governance and sustainability plans with actions.

- Existing **NRENs** also need to be supported and to be provided with the required capacities, capabilities, and funding to achieve their objectives.

- At the regional level, the Arab regional Research and Education Network, ASREN, also needs to be supported to complete the pan Arab regional infrastructures and to provide advanced connectivity, applications, services, and collaboration tools.

- All NRENs and RRENs in the Arab region should take the responsibility associated with the new role related “Science Collaboration” through supporting “Open Science,” “Open Access” and collaborating with national, regional, and global initiatives in this

The session will discuss the following:

- What are research and education networks and what do they do and why they are critical to development? Will also go through models and practices in deploying these networks.
- Services provided by research and education networks and examples of successful networks from the region.
- Examples on engagement with scientists, researchers and academics with research and education networks from the region to demonstrate how they can benefit from these networks, infrastructures, and services.
- Challenges and obstacles facing the developments of these networks and associated infrastructures and services.
- The future role of research and education networks under the new global challenges, especially the UN-ADGs

What are Research & Education Networks?

- Research & Education networks are **non-commercial dedicated** networks connecting the Universities, Schools, Research Centers, Hospitals, Museums and any other institution that may have research and education activities.

- National Research and Education Networks **(NRENs)** are established to provide connectivity and communications services for the research and education communities at the **national level**

- Regional Research and Education Networks **(RRENs)** are connecting the NRENs to provide connectivity and services to researchers and educators across the boarders.

- Altogether are considered as the Global Research and Education Network (**GREN**)

Main Drivers for Research Networks

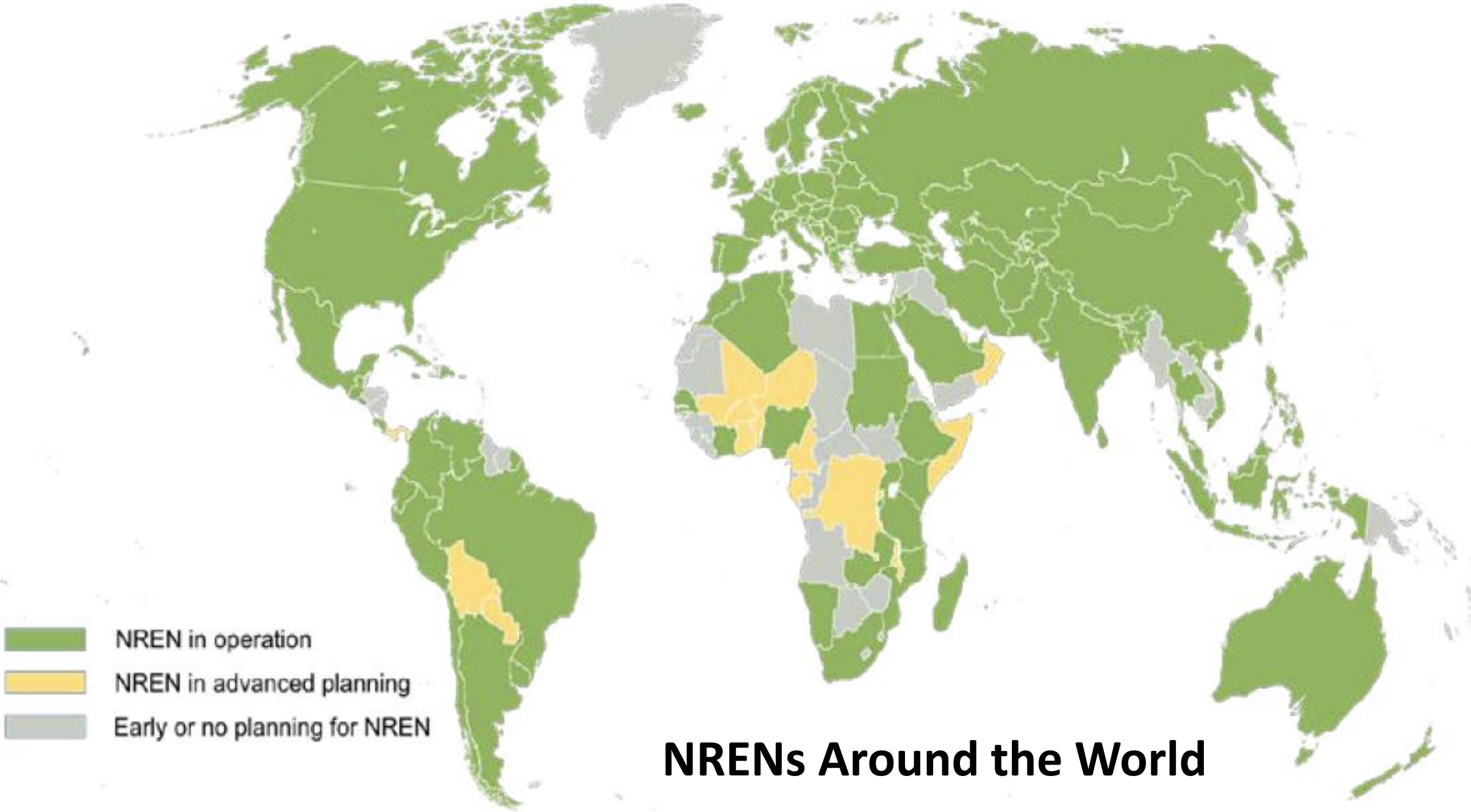
- **Technological:** Satisfy high demand *eScience* initiatives, **Multimedia Collaboration**, Distributed High Performance Computing (**HPC, GRIDs**) for **Earth Sciences, High Energy Physics** (CERN, LHC…), **Bioinformatics**, **Computational Chemistry**, **Radio-astronomy**, **Engineering Planning** (computations, emulations & simulations), ***Cultural*** (archiving, collaborative digital access & processing) …

- **Social:** Common culture of R&E community, Virtual Organizations VOs, collaborative research, tele-education, Smoothing the Digital Divides, affordable high bandwidth linkage to the Global R&E community

- **Economic:** Demand aggregators: University & school staff, students, researchers. Consolidation & control of diverse public expenditures. Promotion of Information Society (e-Government, e-Business, e-Health). Stimulation of technological & telecom markets → Competitiveness

Main Objectives for R & E Networks

- Provide scientific research and education institutions with **reliable means of communication** in order to facilitate ease of cooperation and coordination
- Strengthen the notion of **partnership** and encourage joint scientific research among communities.
- **Minimize cost of research** by using diversified academic and technical resources to be made available for use on the network with no need for duplicating investment.
- The fact that students, teaching staff, and researchers use such dedicated networks would eventually **uplift efficiency and productivity** and would boost the concept of creativity and innovation.



NRENs Around the World

Challenges

- Inadequate funding for NRENs activities
- Unfavorable local and regional policy environment
- Perceived as competitors to ISPs
- Monopoly of telecommunication operators
- Insufficient government support in many cases
- High cost of connectivity

ASREN

Arab States Research and Education Netweork (ASREN), is a legal non for profit organization with Arab NRENs as shareholders for promoting world-class Pan-Arab e-Infrastructures and E-services for the R&E communities to boost Scientific Research and regional Cooperation

- **Vision**: Pan-Arab collaborative research and education projects and activities, contribute to boost the scientific research, innovation and education levels in the Arab countries by uplifting efficiency and productivity of research and education communities.

- **Mission**: To implement, manage and extend sustainable Pan-Arab e-Infrastructures dedicated for the Research and Education communities and to boost scientific research and cooperation in member countries through the provision of world-class e-Infrastructures and e-services.

ASREN Objectives

- **Build, maintain and consolidate regional e-Infrastructures dedicated to e-Science and education across the Arab countries:**
  - Developing, managing and operating a regional network that interconnects the NRENs of the Arab countries.
  - Promoting harmonization of policies and standards in relevant areas at a regional level.
  - Advocating/lobbying at the regional level amongst decision makers and stakeholders
- **Contribute to creating and sustaining NRENS:**
  - Supporting NRENs to implement leading-edge technological solutions while pursuing cost-effectiveness
  - Favouring exchange of expertise and best practices amongst NRENs' personnel in the region
- **Facilitate collaboration and cooperation among researchers and academics:**
  - Increasing availability and accessibility to knowledge resources
  - Promoting development of scientific and cultural content in Arabic
  - Facilitating knowledge exchange and transfer processes across the region and worldwide
  - Promoting the adoption and usage of e-Infrastructures and services among the scientific community
  - Strengthening regional partnerships and encouraging joint scientific research

Areas of Intervention

- Dedicated Research and Education Networks at national, regional and global levels
  →Network Management and Monitoring, Network Security, PerfSonar, MANRS. …
- Research and Education Services
  →Educational roaming → eduroam, Federated Access through eduGAIN
- Science Cooperation
  →UN-SDGs through science, Open Science, Open Access, OER, Open Science Platforms, Science Diplomacy
- Community Engagement
  →Science Communities and Communities of Practice, R&E Communities, Technical Communities
- Scientific Computing
  →HPC, Clouds, GRIDs
- Internet Access, Security and Governance
- ….

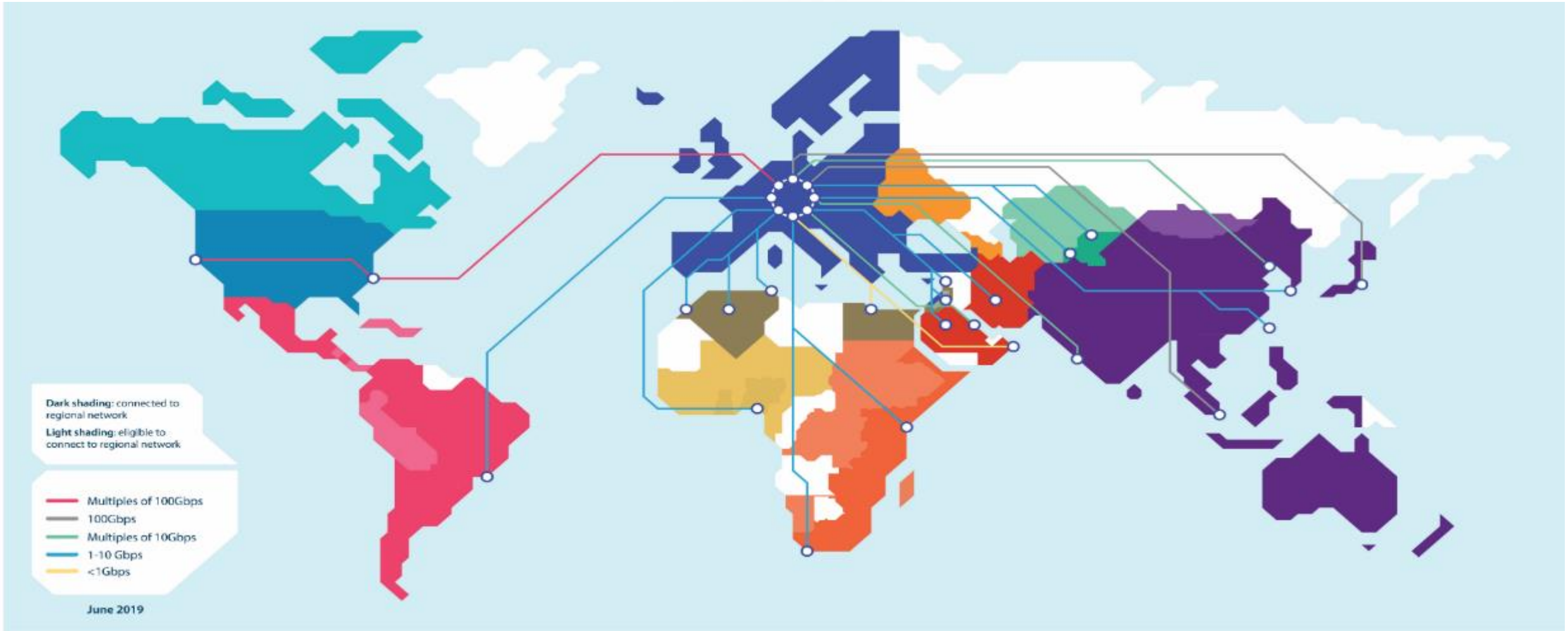
ASREN's Region is Evolving

TechCARE

Partnering with the World

اتحاد الجامعات العربية

GÉANT At the Heart of Global Research and Education Networking



Canada & USA: canarie, ESnet, INTERNET2

Latin America: RedCLARA

Europe: GÉANT, EaPConnect

North Africa & Eastern Mediterranean: ASREN

West & Central Africa

Eastern & Southern Africa: UbuntuNet Alliance

Central Asia: CAREN

Asia-Pacific: TEIN

Other R&E Networks

Observations, Global Trends, Priorities ……
Climate Actions… Health Care … Internet Governance…

- UN SDGs → Science, Research, Education, Community Engagement
- Science and Science Diplomacy
- Open Science, Open Access, Open Data….
- Science Communities and Communities of Practice
- Scientific Computing
- Science Collaboration Platforms
- **Internet** Access, Security and **Governance**
- ….

Achieving UN SDGs through Science and R&E

- Promote and raise awareness of the importance of SDGs to policy makers, students, researchers and academics
- Explore means and tools towards achieving them
- Share/exchange knowledge and activities by NRENs in other countries/regions towards towards these goals including policies and actions
- Promote Science as an instrument for the development of communities to progress towards the achievement of the UN SDGs

Open Science, Open Access, OER….

- Take the lead to promote and disseminate UNESCO's recommendations on Open Science in coordination with relevant stakeholders
- Consolidate efforts to promote Open Science through conferences, fora, knowledge hubs, workshops, brainstorming sessions and concept debates.
- Initiate/host/operate services and applications
- Coordinate with similar efforts and activities by other NRENs/RRENs around.
- Disseminate science, open science and collaborative research towards achieving the SDGs and addressing the common needs of the country/region.

Open Science Platforms, Clouds, Tools…

- Follow national and regional initiatives on adopting Open Science Platforms such as the EOSC Europe.
- Establishing a community of librarians and data specialists across the region following the LIBSENSE project
- Organizing dedicated workshops on open access and open data to promote the culture of “Open Science” at the institutional and technical levels
- Deploying national/regional Open Science Harvesting Platform to integrate national/ institutional repositories

Science Communities and Communities of Practice

- Identify research communities and promote the creation of research communities and communities of practice at national and regional levels
- Encourage Science Dialogue with researchers and communities of practice.
- Provide these communities with collaboration tools and access to resources around the region and beyond
- Provide mobility services like eduroam, eduGAIN and eduVPN
- Provide capacity building/training to facilitate and optimize the use of ASREN's and NRENS' service offering.
- Encourage the use of open source, open educational resources and MOOCs and build on existing efforts especially those provided by regional and national initiatives.

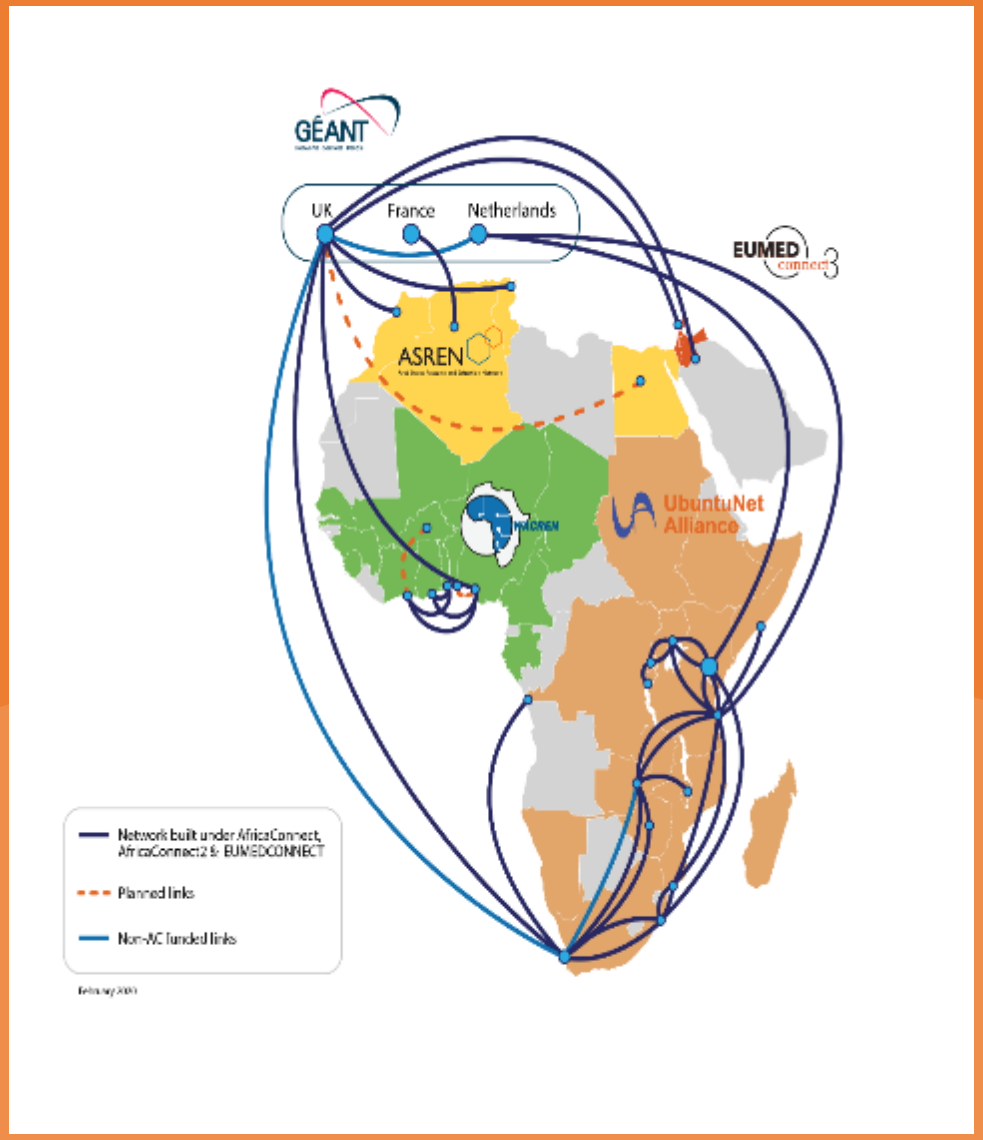
EUMED connect 3

Connecting the Eastern Mediterranean research and education communities

This project is funded by the European Union

GÉANT
Networks · Services · People

ASREN
Arab States Research and Education Network
المنظمة العربية لشبكات البحث والتعليم



- **Start date: 16 November 2019**
- **Duration: 48 months**
- **Funds: European Union Grant Contract**
  Budget: 37.5M EUR (80% EU co-funding)
- **Funding for connectivity, equipment and cloud**

ASREN

WACREN

UbuntuNet Alliance

AfricaConnect3 Enables Science Cooperation

1. Providing connectivity between research and education communities
2. Providing mobility services, namely: eduroam, eduGAIN, eduVPN ….
3. Providing clouds infrastructures and services
4. Supporting Open Science through the LIBSENSE project
5. Engagement with research and education communities
   - AfriGEO → African Group on Earth Observation
   - GMES and Africa → Global Monitoring and Environment Security
   - AERAP → African European Radio Astronomy Partnership
   - DEA → Digital Earth Africa
   - ASFAP → African Strategy for Fundamental and Applied Physics
   - Identifying Climate R&E Communities
   - African Synchrotron Community → SESAME

How AfricaConnect3 Does that?

- Conferences and workshops
- Capacity Building
- Study and identify the needs of the communities in terms of connectivity, access, data dissemination and other services
- Coordinate with national and regional RENs to connect to the national R&E networks
- Support R&E institutions and communities to deploy eduroam and eduGAIN
- Promote the deployment of services and access mechanisms
- Promote Open Science and Open Science Platforms
- Support Women and empowering them to be more engaged in STEM.

Specific SDGs

ASREN

4 QUALITY EDUCATION	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
7 AFFORDABLE AND CLEAN ENERGY	Ensure access to affordable, reliable, sustainable, and modern energy for all.
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	Build resilient infrastructure, promote sustainable industrialization, and foster innovation.
13 CLIMATE ACTION	Take urgent action to combat climate change and its impacts.
14 LIFE BELOW WATER	Conserve and sustainably use the oceans, seas, and marine resources.
15 LIFE ON LAND	Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiver
17 PARTNERSHIPS FOR THE GOALS	Revitalize the global partnership for sustainable development.

SUSTAINABLE DEVELOPMENT GOALS

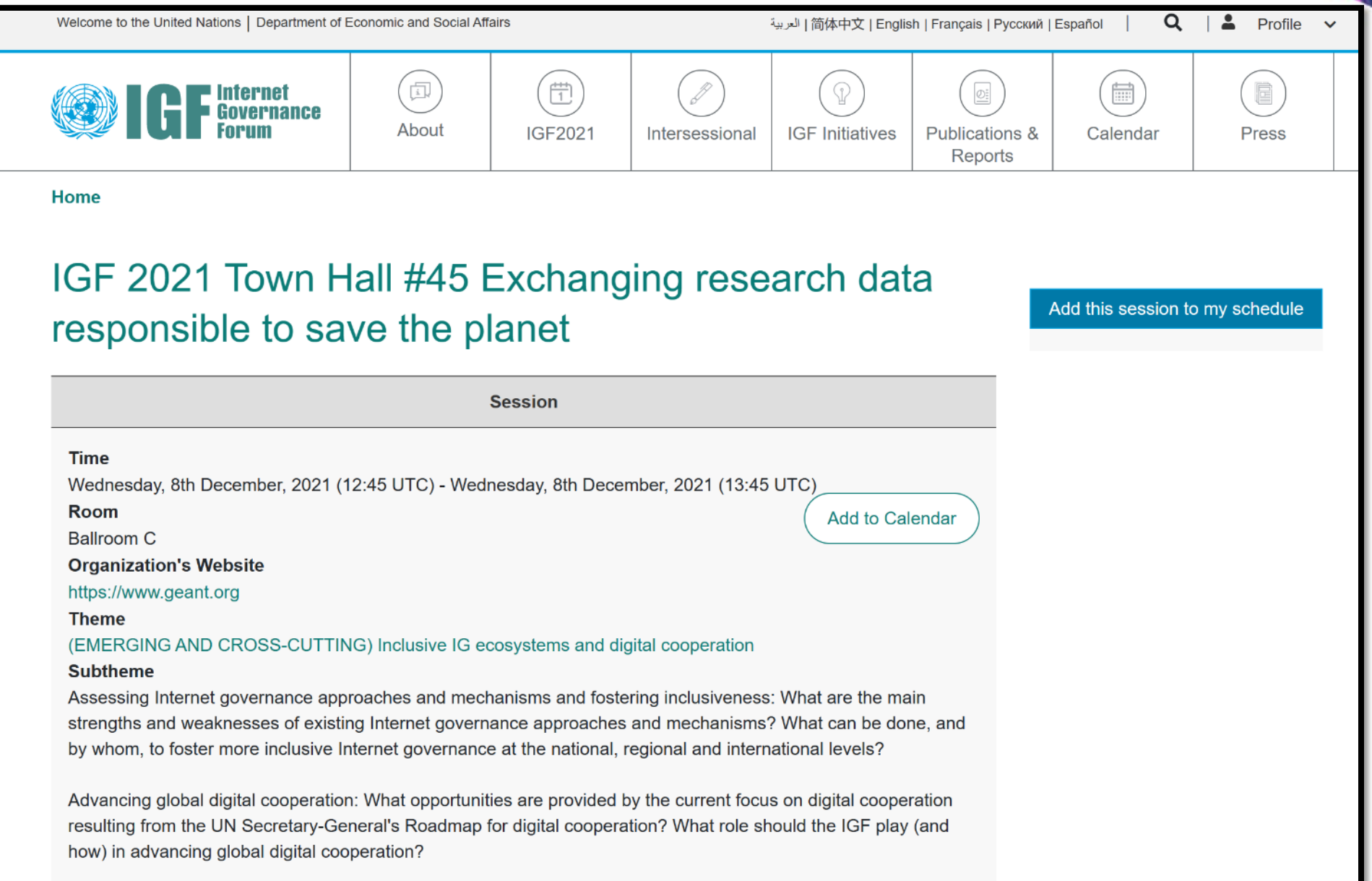
RESEARCH AND EDUCATION NETWORKS IN THE SERVICE OF CLIMATE ACTION
Euroclima+
Financiado por la Unión Europea
EUROCLIMA+
EN COP26
06/11/21 - 11.45 CET
ASREN
GÉANT
Red CLARA
Live in 4 days
November 6, 1:45 PM
Set reminder

ASREN to feature at Science Summit @UNGA76

ASREN

23 September 2021
10:00 - 12:00 CEST

Science Summit at UNGA76



IGF 2021 Town Hall #45 Exchanging research data responsible to save the planet

Add this session to my schedule

Session

Time
Wednesday, 8th December, 2021 (12:45 UTC) - Wednesday, 8th December, 2021 (13:45 UTC)
Add to Calendar
Room
Ballroom C
Organization's Website
https://www.geant.org
Theme
(EMERGING AND CROSS-CUTTING) Inclusive IG ecosystems and digital cooperation
Subtheme
Assessing Internet governance approaches and mechanisms and fostering inclusiveness: What are the main strengths and weaknesses of existing Internet governance approaches and mechanisms? What can be done, and by whom, to foster more inclusive Internet governance at the national, regional and international levels?

Advancing global digital cooperation: What opportunities are provided by the current focus on digital cooperation resulting from the UN Secretary-General's Roadmap for digital cooperation? What role should the IGF play (and how) in advancing global digital cooperation?

ASREN

WACREN
1,056 Tweets

Following

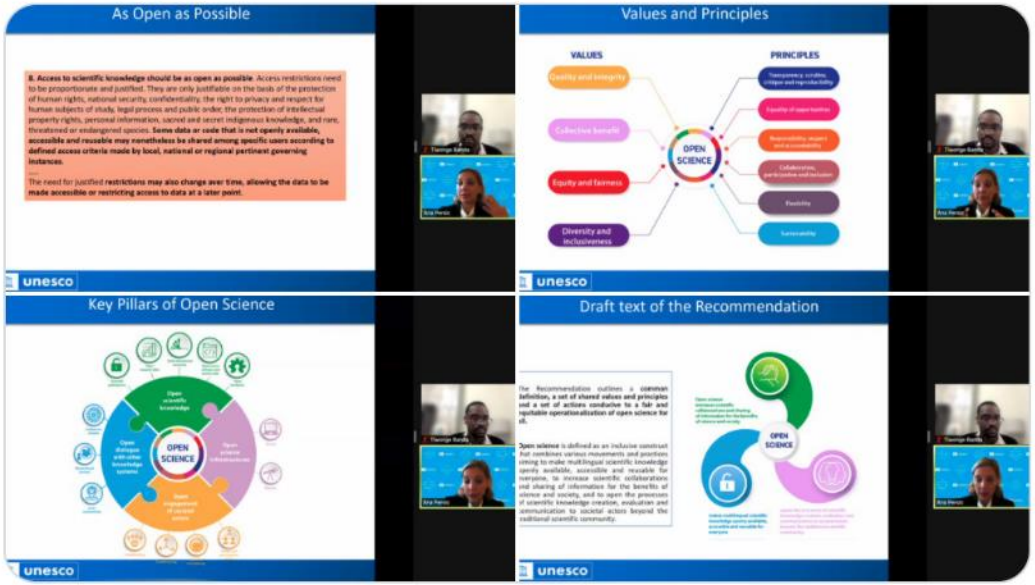
On #openscience in #Africa, Prof @Baryamureeba - Chairperson of Uganda Technology and Management University says, we need to open up "quality, not just anything". Speaking at the @LIBSENSE #OpenScience Policy Development Workshop as part of the @UbuntuNet Connect 2021

GÉANT NEWS and 4 others

12 16

AfricaConnect3 @AC3_News · Nov 8

Dr Ana Persic, says, the @UNESCO believes #openscience recommendations are intended to enhances "openness among scientists and openness with the society". @LIBSENSE #OpenScience Policy Workshop. ✅✅



GÉANT NEWS and 9 others

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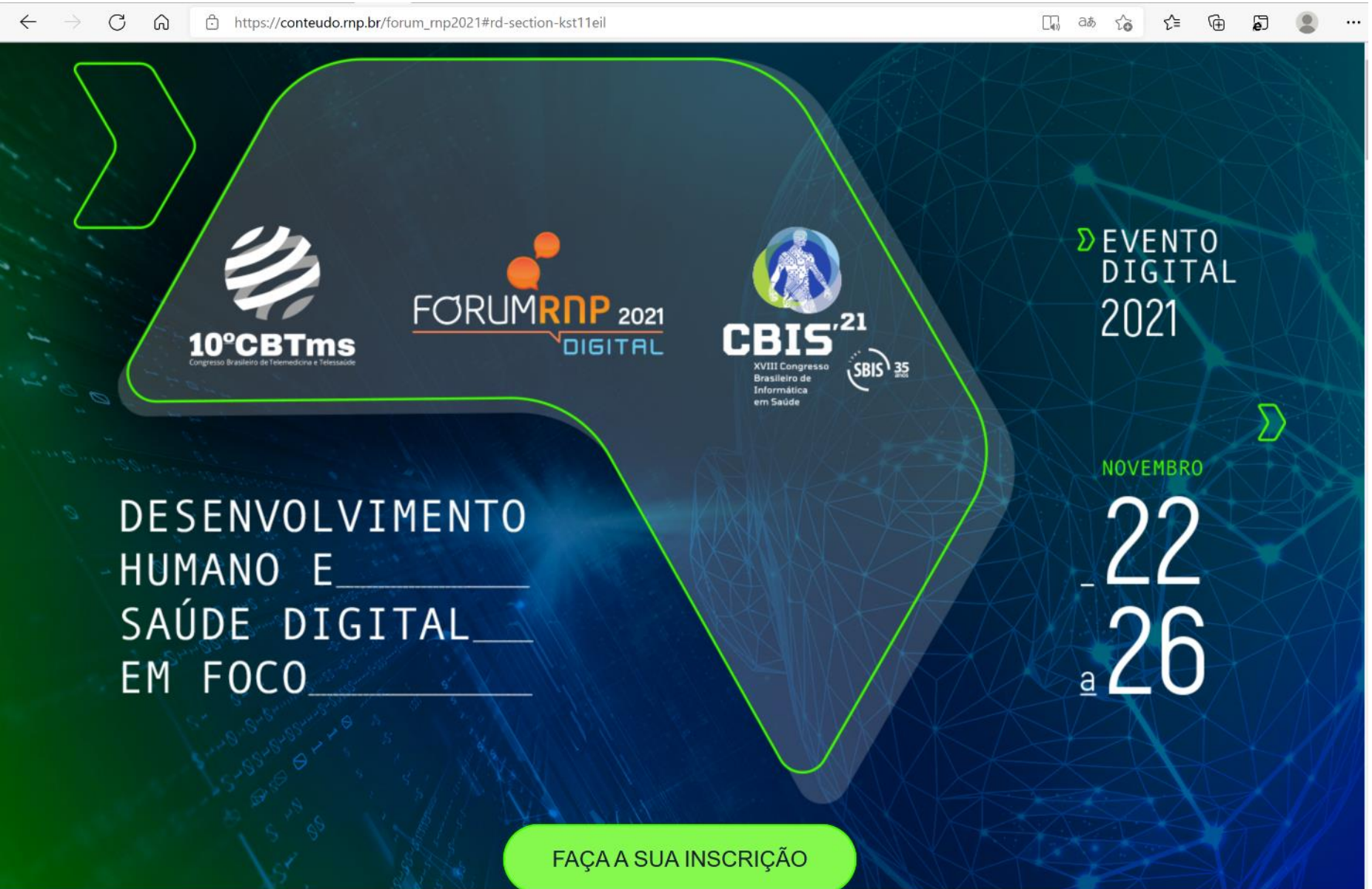
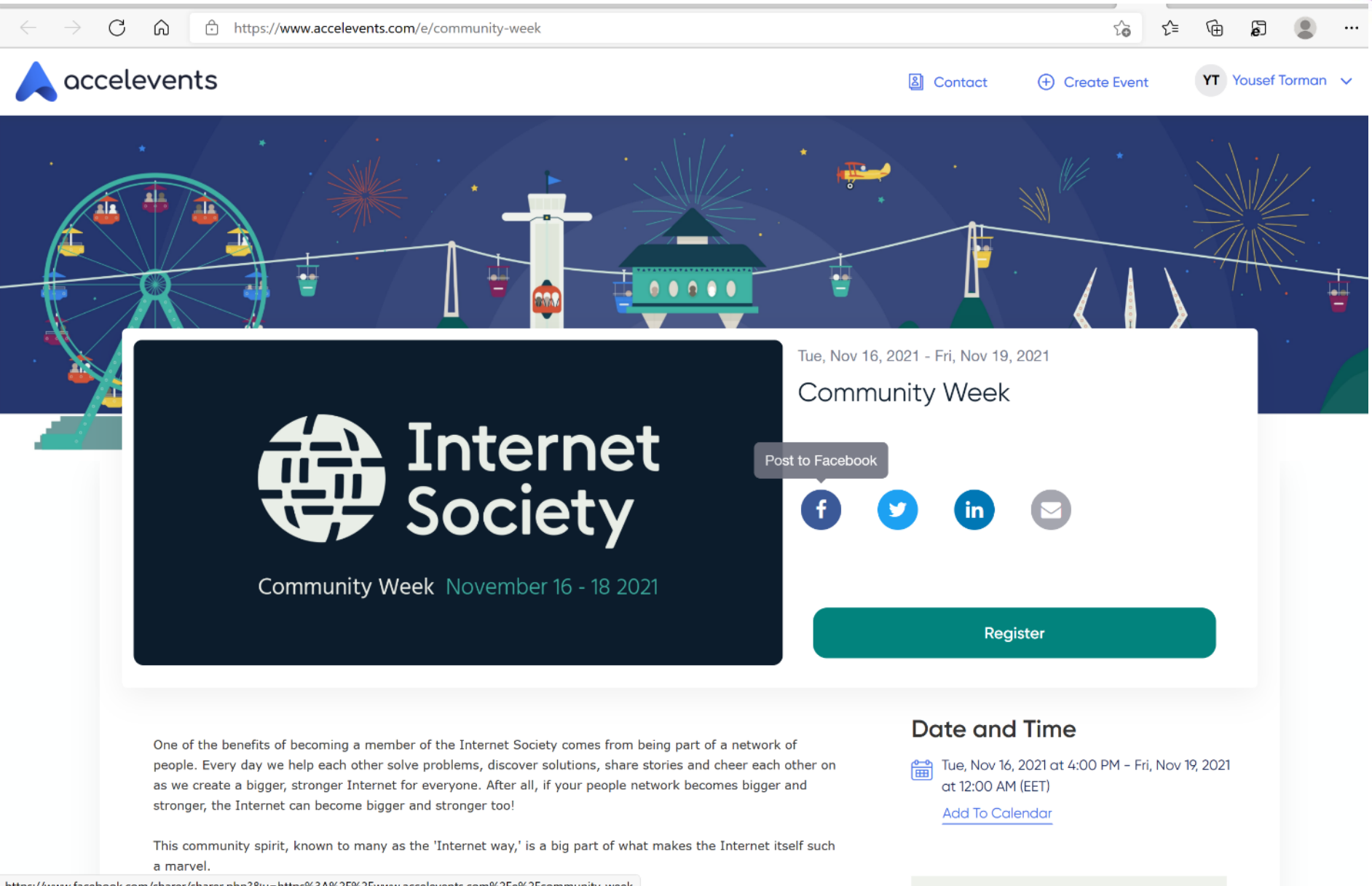

https://conteudo.rnp.br/forum_rnp2021#rd-section-kst11eil
10ºCBTms
Congresso Brasileiro de Telemedicina e Telessaúde
FORUMRNP 2021
DIGITAL
CBIS'21
XVIII Congresso Brasileiro de Informática em Saúde
SBIS 35 anos
EVENTO DIGITAL 2021
DESENVOLVIMENTO HUMANO E SAÚDE DIGITAL EM FOCO
NOVEMBRO
22 a 26
FAÇA A SUA INSCRIÇÃO


https://www.accelevents.com/e/community-week
accelevents
Contact
Create Event
YT
Yousef Torman
Internet Society
Community Week November 16 - 18 2021
Tue, Nov 16, 2021 - Fri, Nov 19, 2021
Community Week
Post to Facebook
Register
One of the benefits of becoming a member of the Internet Society comes from being part of a network of people. Every day we help each other solve problems, discover solutions, share stories and cheer each other on as we create a bigger, stronger Internet for everyone. After all, if your people network becomes bigger and stronger, the Internet can become bigger and stronger too!
This community spirit, known to many as the 'Internet way,' is a big part of what makes the Internet itself such a marvel.
Date and Time
Tue, Nov 16, 2021 at 4:00 PM – Fri, Nov 19, 2021 at 12:00 AM (EET)
Add To Calendar

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Professor, Mohammed V University, Morocco

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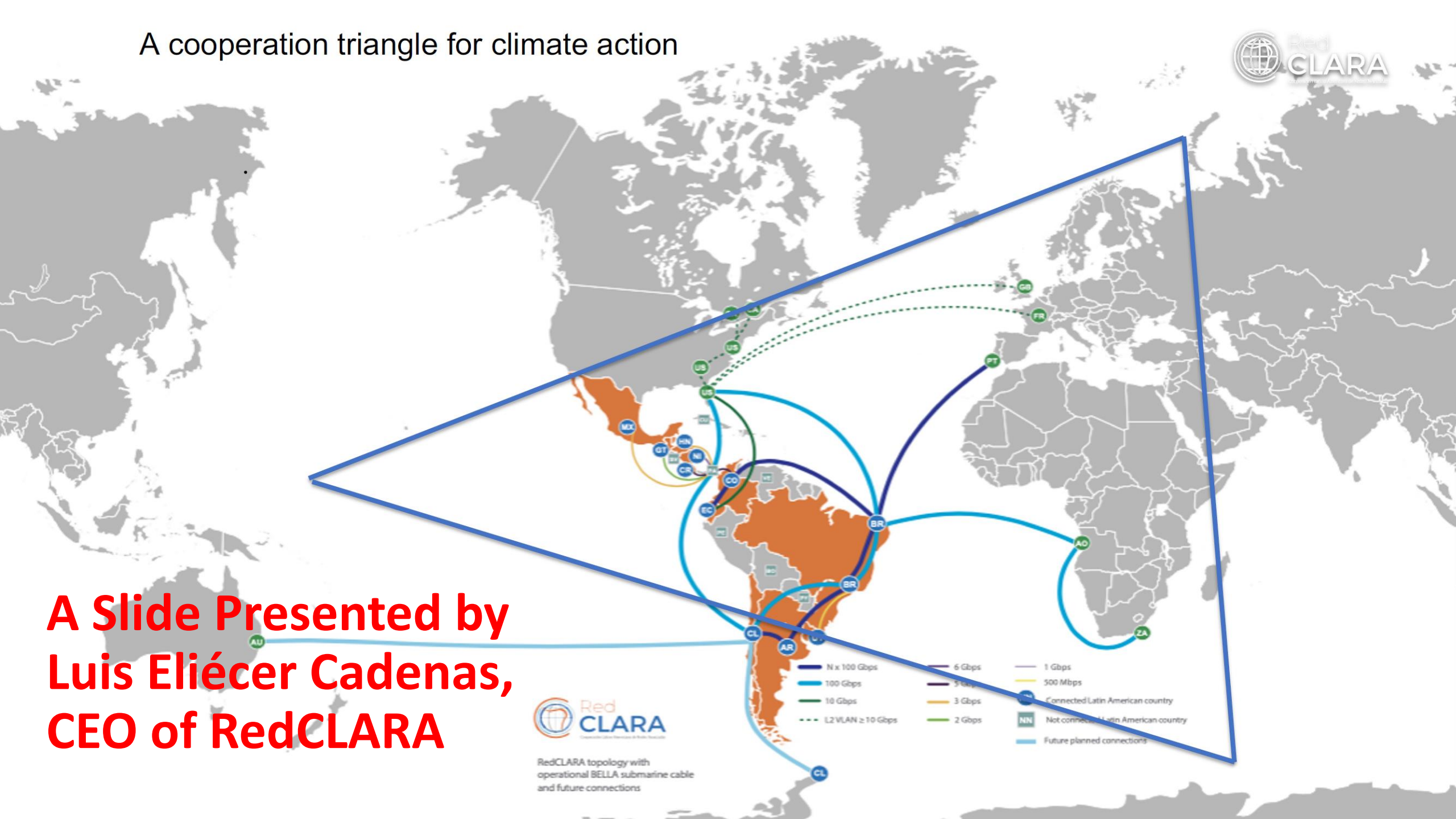
Brazil

A cooperation triangle for climate action



A Slide Presented by Luis Eliécer Cadenas, CEO of RedCLARA

Thank you

Any questions?

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