



Why Research and Education networks are necessary

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Climate
change



Energy



Scarcity
of materials



Population
growth



Food
shortages

“If you want to go fast, go alone; if you want to go far go together”
African Proverb

education in research



Source Financial Times: Education the Multiplier effect
<https://valueofknowledge.ft.com/other/infographic/>

Network Services



Security



Trust & Identity



Cloud



Added value of NRENs

NRENs develop and supply the specialist services needed to support researchers, educators and innovators – at national, continental and international levels.



Connectivity



ICT services



**Community
building**



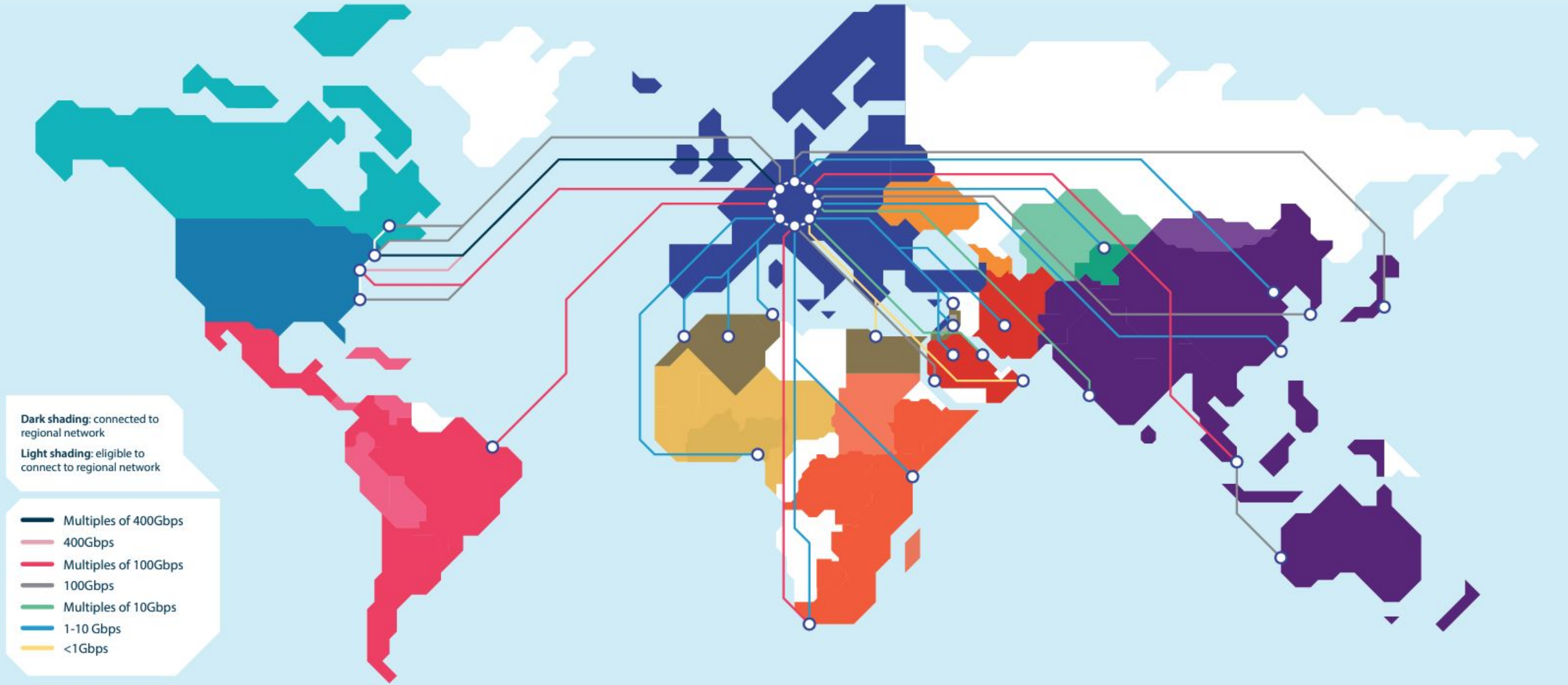
**Dedicated support to
Research Communities**



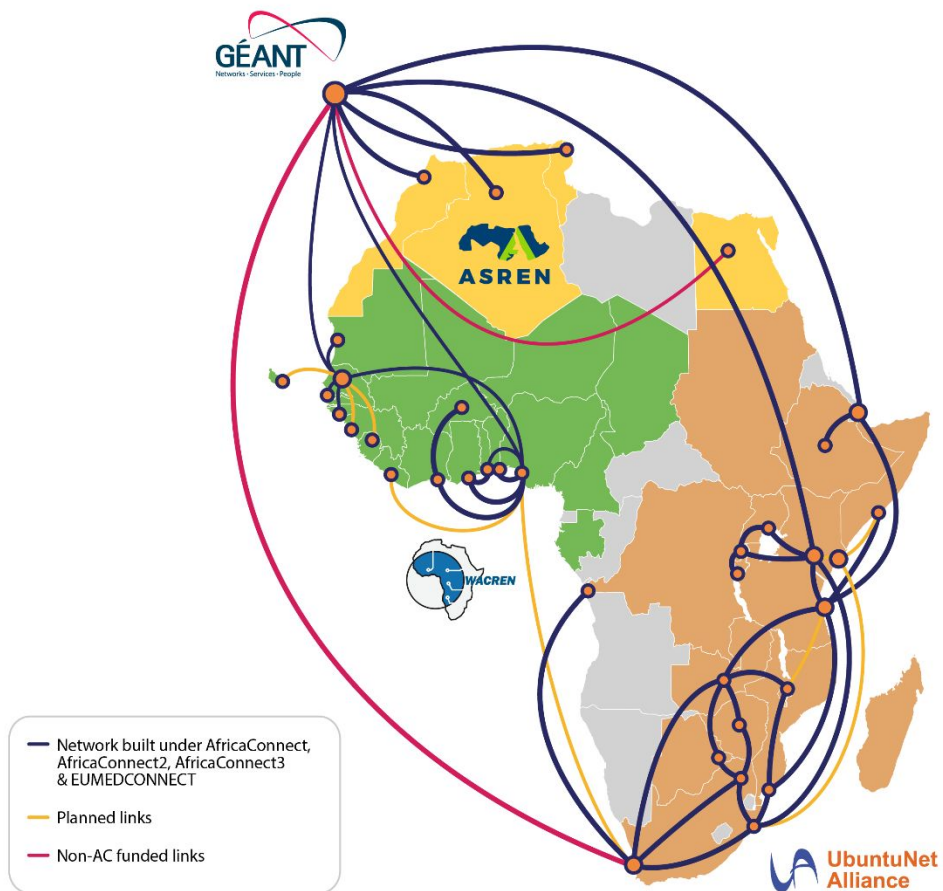
Devices

The background features a stylized globe with a grid of latitude and longitude lines. Overlaid on the globe is a complex network of white lines and dots, representing a global network or data flow. The globe is illuminated with a blue and white glow, and the network lines are also white and glowing. A green rounded rectangle is positioned in the center of the image, containing the text.

Why Global NREN collaboration matters



Canada & USA	Latin America	Europe	North Africa & Eastern Mediterranean	West & Central Africa	Eastern & Southern Africa	Central Asia	Asia-Pacific	Other R&E Networks



September 2024

AfricaConnect3 network map

Affordable Connectivity

NRENs act as a Buying Club – enable lower prices for universities research centres and schools.

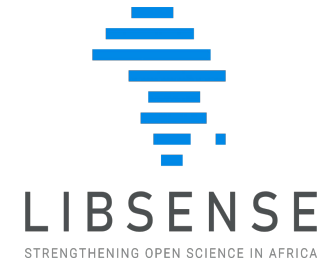
Before and After connecting to NRENs with AfricaConnect

NRENs	Capacity growth	Cost drop (per Mb)
ZAMREN, Zambia 2011 / 2015	X60!	-94%!
RENU, Uganda 2013 / 2017	X19!	-89%!
ARN, Algeria 2003 / 2015	X55!	-97%!
TERNET, Tanzania 2011 / 2017 – 2012 / 2017	X7!	-75%!

Collaborative Global or Regional NREN services



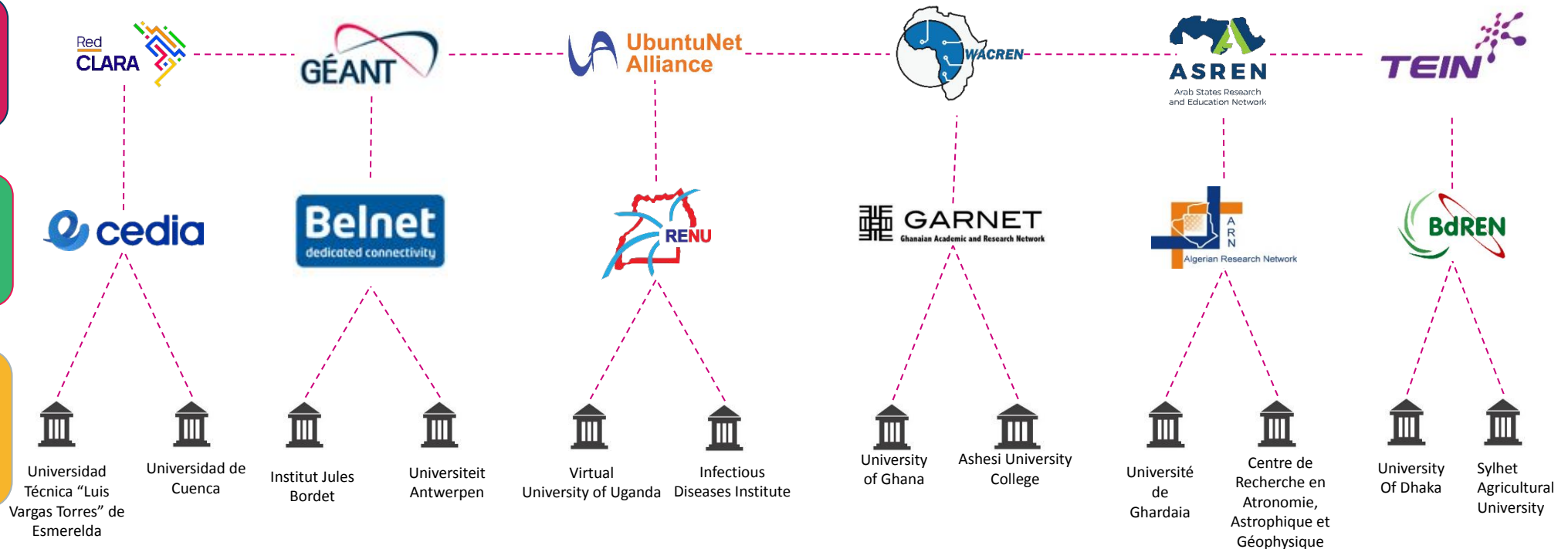
ICT services



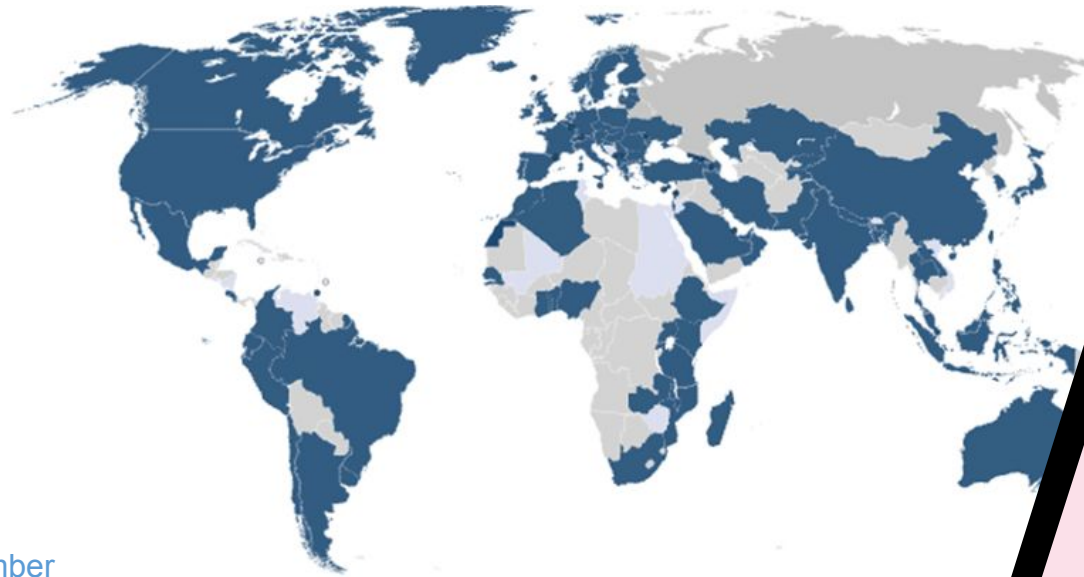
Trusted framework



Connectivity



Euroam Service uptake: National Roaming Operators (NROs)



- Member
- Pilot
- Possible new regions to 'euroam-ise'



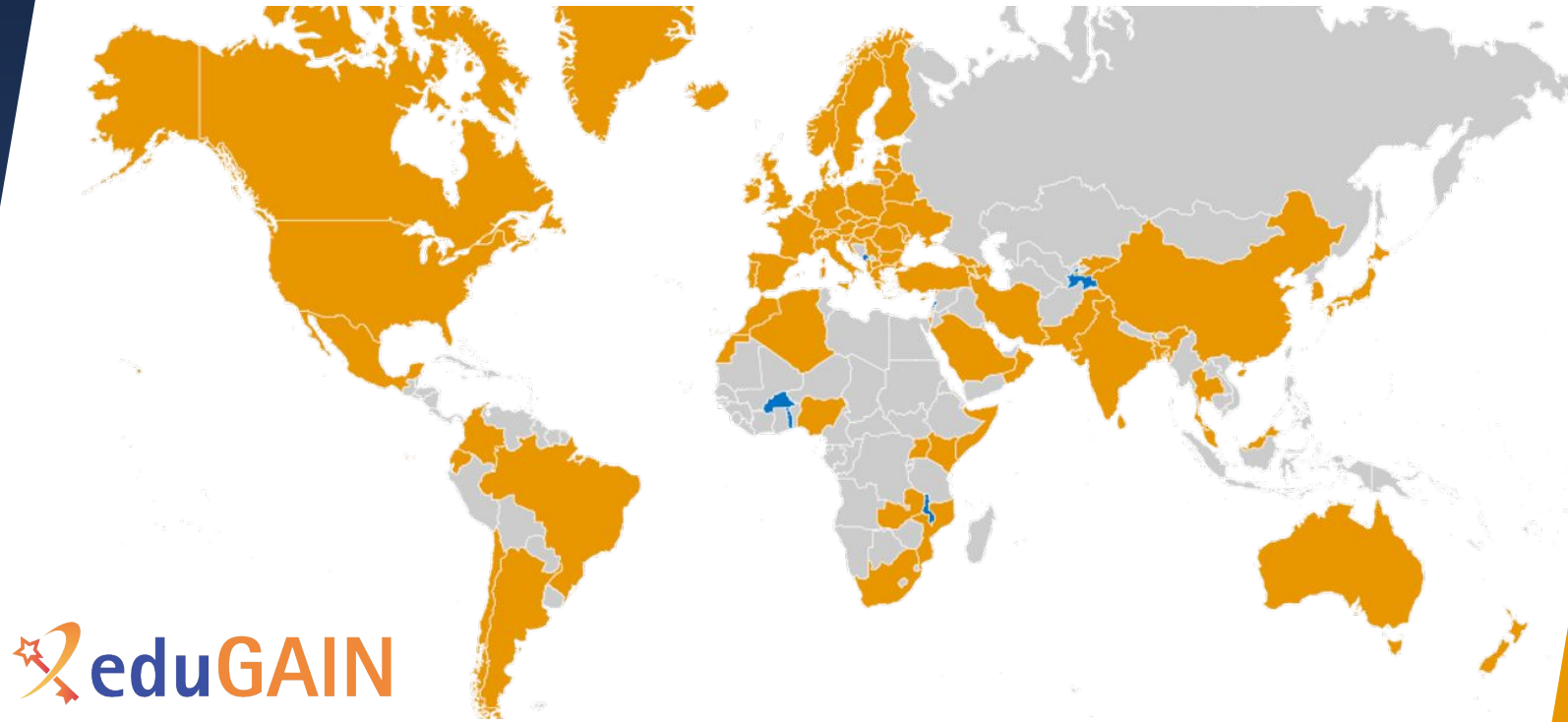
>104

Countries
18 in Africa

10,000+
Institutions

38,400+
Service
Locations

The growth of eduGAIN federations



79

Countries
10 in Africa

5,600+
Institutions

3,000+
Service
Locations

edugain.org

Global NREN Community



**Community
Conferences**



**Special Interest Groups
and Task Forces**

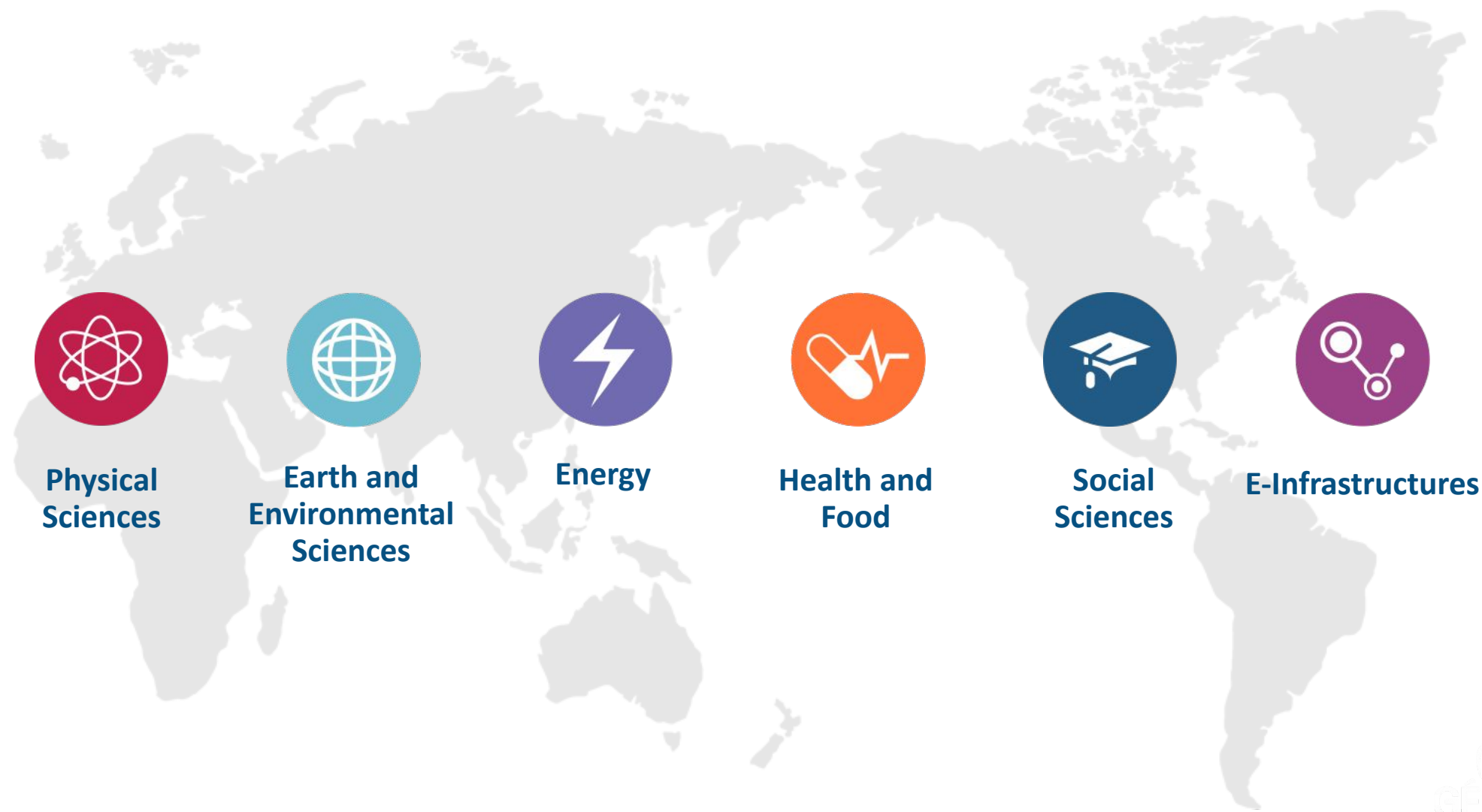


**Women empowerment
Capacity building**



**Innovation program
Twinning project**

Users We Work With



A digital globe with a network overlay of glowing blue and white nodes and lines, symbolizing global connectivity and technology. The globe is set against a dark blue background with a grid pattern.

**Create the NRENs in Africa
you need – connect
your communities**

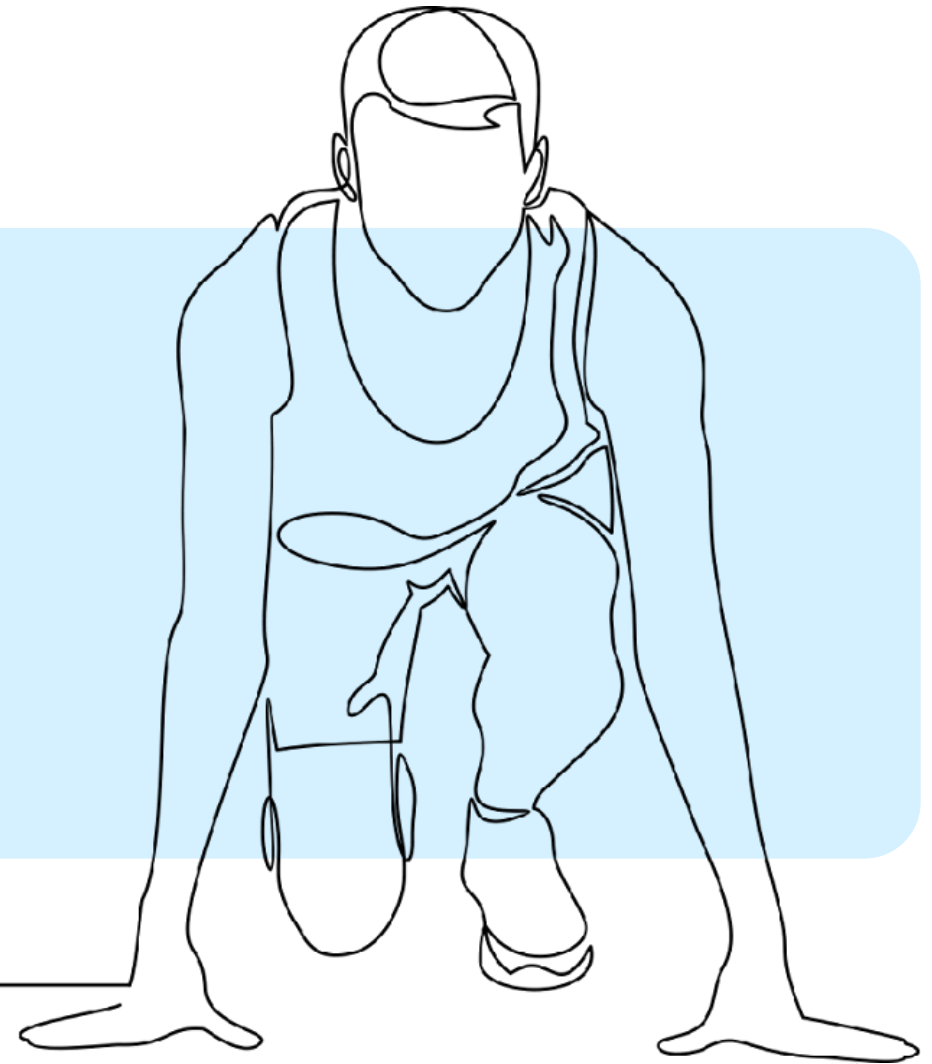


African NREN challenges

Internet affordability

Increasing youth population

Low capillarity



What can NRENs do?

- Connect schools
- Provide educational services
- Support special needs students
- Connect tech hubs
- Connect rural areas
- Connect refugee camps



Let's connect rural areas and schools in refugee camps!



Let's continue to innovate and re-imagine NREN connectivity

e.g. Solar Powered WiFi (eduroam) Nodes operate in harsh environments.





EDUCATION
is the most
POWERFUL
weapon you can
use to change the
WORLD

- Nelson Mandela -



Thank You

Any questions?

www.geant.org



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