

# GenAI initiative for NRENs in the Asia Pacific region

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**LEARN**  
Lanka Education And Research Network  
- SINCE 1989 -

**35** YEARS

OF EXCELLENCE

# LEARN

Lanka Education and Research Network

- Lanka Education And Research Network (LEARN), the **NREN (National Research and Education Network)** of Sri Lanka, was established in 1989.
- LEARN pioneered the setup of the first wide area network (WAN) in Sri Lanka, connecting universities and research institutions.
- Since 2009, it has been a Company Limited by Guarantee, owned by the UGC and State Universities.

## Membership

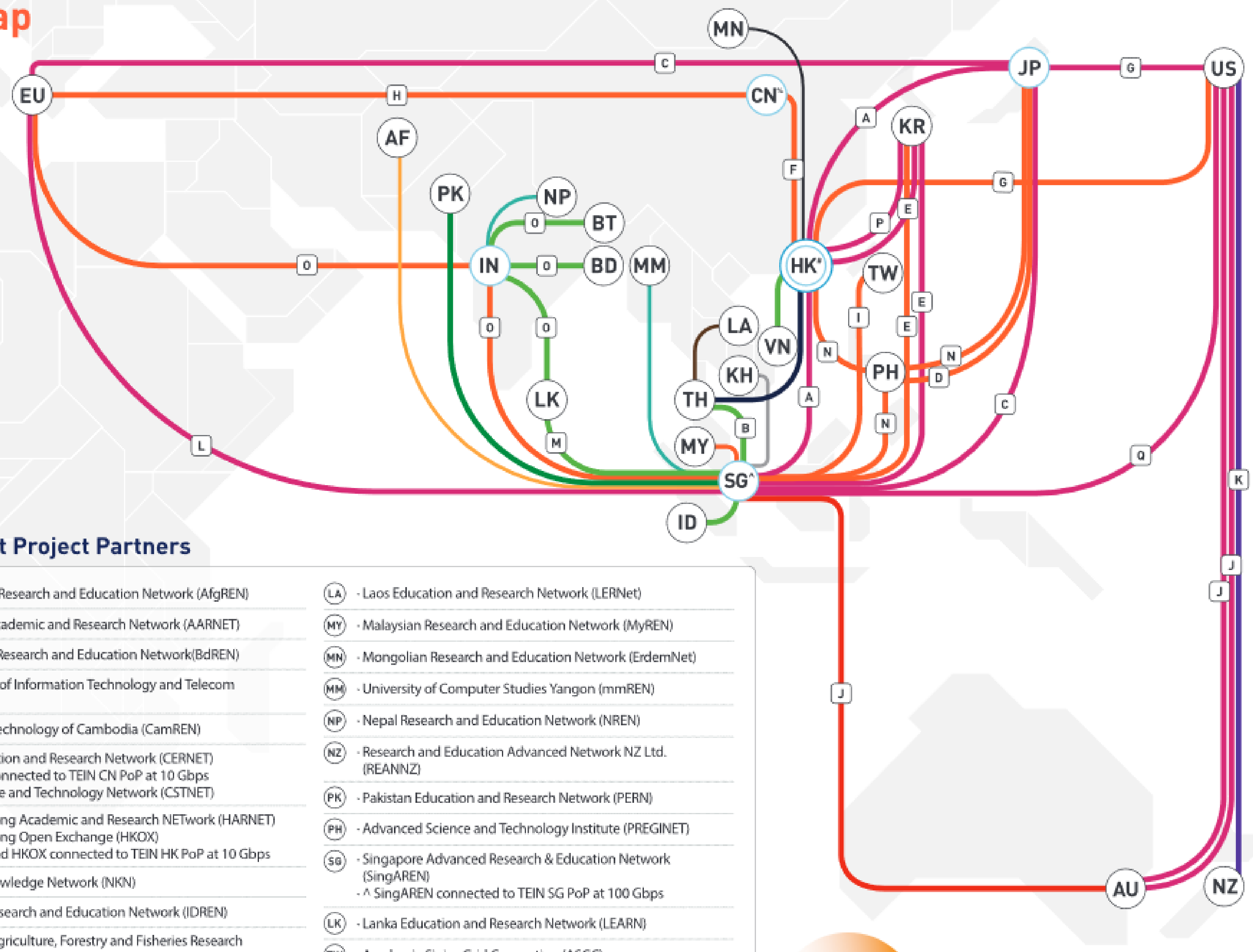
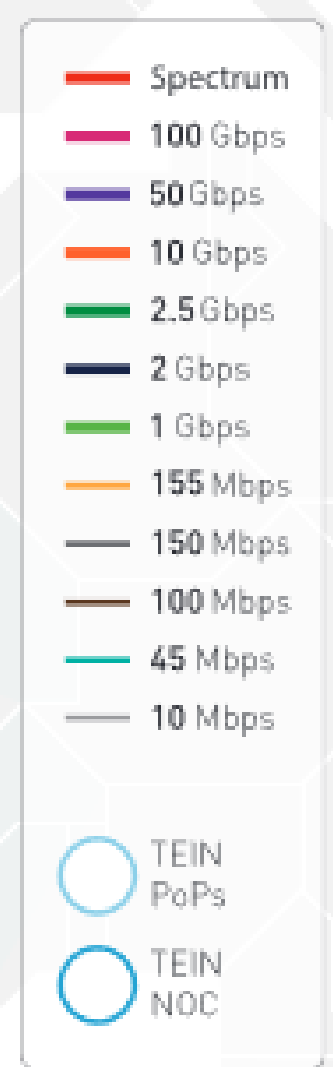
18 Full Members

16 Associate Members

25 Affiliate Members

- Managed by the LEARN Board of Directors, one member each from the full member institutions (17 State Universities of Sri Lanka + UGC).
- Provide many services on top of Internet Connectivity

# TEIN Map



The following links are fully financed/co-financed by the link owners whose support is gratefully acknowledged

	National Institute of Information and Communications Technology
<b>A</b>	National Supercomputing Centre
	Singapore Advanced Research & Education Network
<b>B</b>	National Institute of Information and Communications Technology
	Thailand Research and Education Network
<b>C</b>	NII (National Institute of Informatics)
<b>D</b>	MAFFIN (Ministry of Agriculture, Forestry and Fisheries Research Network)
<b>E</b>	NIA (National Information Society Agency)
<b>F</b>	China Education and Research Network
	TEIN Cooperation Center
<b>G</b>	TransPAC/Pacific Wave
<b>H</b>	Co-funded by China and EU
<b>I</b>	Academia Sinica Grid Computing
<b>J</b>	AARNET (Australia's Academic and Research Network)
<b>K</b>	REANZ (Research and Education Advanced Network New Zealand)
<b>L</b>	AARNET, GÉANT, NORDUnet, SingAREN, SURFNET, TEIN
<b>M</b>	LEARN (Lanka Education and Research Network)
<b>N</b>	Advanced Science and Technology Institute
<b>O</b>	NKN (National Knowledge Network)
<b>P</b>	KREONET (Korea Research Environment Open NETWORK)
<b>Q</b>	National Supercomputing Centre, Internet2, SingAREN

## Asi@Connect Project Partners

<b>AF</b> - Afghanistan Research and Education Network (AfgREN)	<b>LA</b> - Laos Education and Research Network (LERNet)
<b>AU</b> - Australia's Academic and Research Network (AARNET)	<b>MY</b> - Malaysian Research and Education Network (MyREN)
<b>BD</b> - Bangladesh Research and Education Network (BdREN)	<b>MN</b> - Mongolian Research and Education Network (ErdemNet)
<b>BT</b> - Department of Information Technology and Telecom (DrukREN)	<b>MM</b> - University of Computer Studies Yangon (mmREN)
<b>KH</b> - Institute of Technology of Cambodia (CamREN)	<b>NP</b> - Nepal Research and Education Network (NREN)
<b>CN</b> - China Education and Research Network (CERNET) - % CERNET connected to TEIN CN PoP at 10 Gbps - China Science and Technology Network (CSTNET)	<b>NZ</b> - Research and Education Advanced Network NZ Ltd. (REANZ)
<b>HK</b> - The Hong Kong Academic and Research NETWORK (HARNET) - The Hong Kong Open Exchange (HKOX) - # HARNET and HKOX connected to TEIN HK PoP at 10 Gbps	<b>PK</b> - Pakistan Education and Research Network (PERN)
<b>IN</b> - National Knowledge Network (NKN)	<b>PH</b> - Advanced Science and Technology Institute (PREGINET)
<b>ID</b> - Indonesia Research and Education Network (IDREN)	<b>SG</b> - Singapore Advanced Research & Education Network (SingAREN) - ^ SingAREN connected to TEIN SG PoP at 100 Gbps
<b>JP</b> - Ministry of Agriculture, Forestry and Fisheries Research Network (MAFFIN) - National Institute of Information and Communications Technology (NICT) - National Institute of Informatics (NII)	<b>LK</b> - Lanka Education and Research Network (LEARN)
<b>KR</b> - National Information Society Agency (KOREN) - Korea Institute of Science and Technology Information (KREONET)	<b>TW</b> - Academia Sinica Grid Computing (ASGC)
	<b>TH</b> - Thailand Research Education Network Association (ThaiREN)
	<b>VN</b> - National Agency for Science and Technology Information (VinaREN)



A grid of eight icons representing different research and education fields:

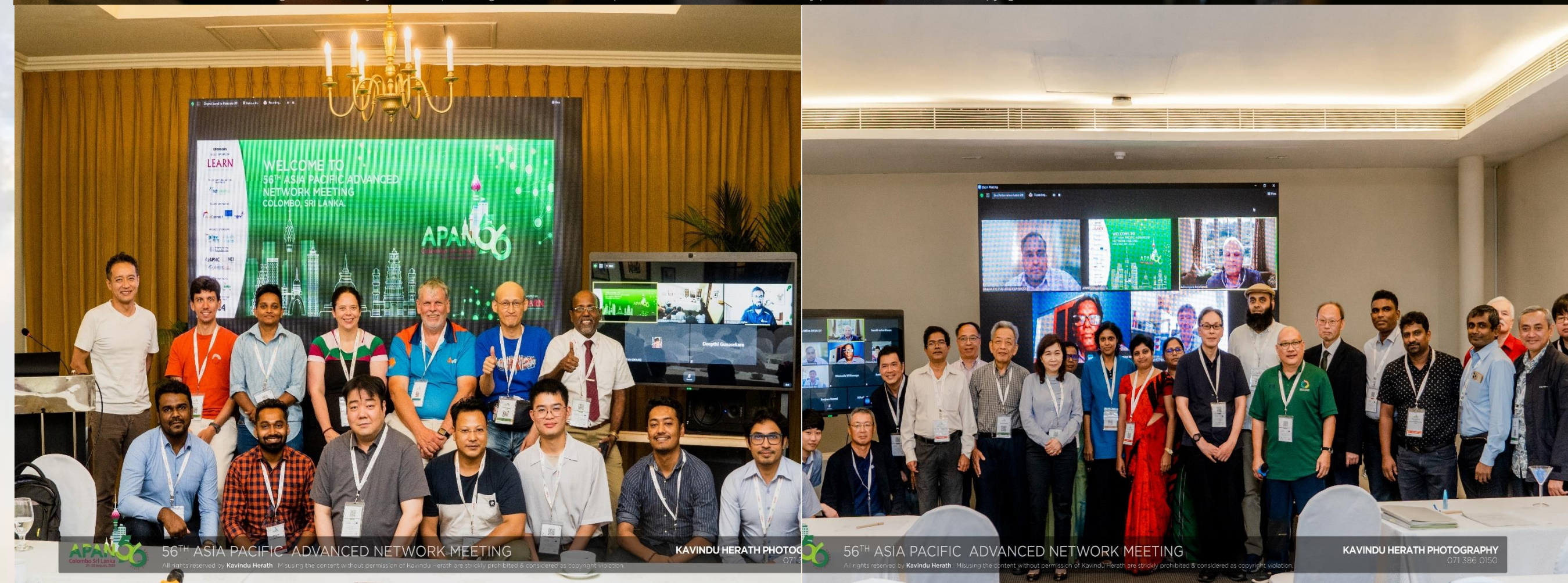
- Telemedicine**: Icon showing a person at a computer with a live feed.
- Earth Observation**: Icon showing a globe with a magnifying glass over a specific region.
- Food Security**: Icon showing a person with a plant and a data chart.
- e-Science**: Icon showing a network of nodes and a central atom-like structure.
- e-learning**: Icon showing a person at a computer screen.
- e-Culture**: Icon showing a person at a computer screen with a globe.
- Advanced ICT Technology**: Icon showing a person at a computer screen with a network diagram.
- Capacity Building Programs**: Icon showing a person at a whiteboard with a group of people.

\* As of December 2020.  
 \*\* Other regions (Central Asia, Africa and Latin America) can be connected via global R&E networks such as EU[GÉANT] and US[Internet2]



# 56th Asia Pacific Advanced Network Meeting [APAN56] August 2023

- From 21st - 25th August 2023 in Colombo
- Total participants 390  
= 282 (Foreign) + 108 (Local)
- Total physical participants 199  
= 123 (Foreign) + 76 (Local)
- Conducted 80 sessions
- Initiated APAN Conference on AI/HPC



# APAN WG on HPC/AI

- We (LEARN) submitted a proposal to set up a “**BoF on HPC/AI**”, which was accepted
- Initial meeting **@APAN57** in Bangkok, Thailand in February 2024
  - **Chair:** Dr. Asitha Bandaranayake (CTO/LEARN)
- 2<sup>nd</sup> meeting **@APAN58** in Islamabad, Pakistan, in August 2024
- Confirmed as a Working Group **APAN59** onwards



An aerial view of a city skyline at dusk or dawn, with a river in the foreground. The sky is a mix of light blue and orange, and the city lights are visible. The text is overlaid on the lower half of the image.

# **GenAI initiative for NRENs in the Asia Pacific region**

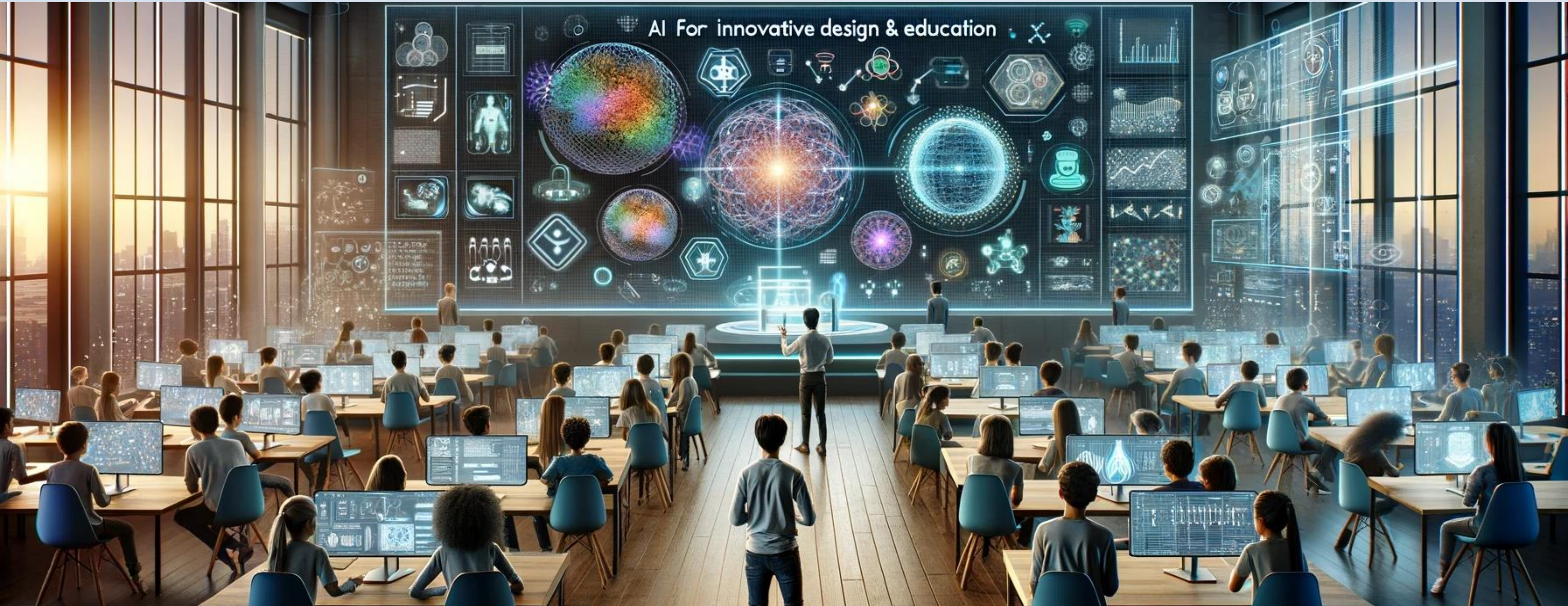
# AP-GAINED

## Asia Pacific – Generative AI for NREN Empowerment and Development

- LEARN won an **APNIC ISIF Asia Impact Grant** for USD 150,000
- A tailored capacity development program focused on empowering NREN staff across the Asia Pacific Region to use GenAI effectively in their work.
  - Building upon the **AIDE workshop** experience (quick recap next)
- Will prioritize the needs of Least Developed Countries (LDCs) and Lower-Middle Income Countries (LMICs) while offering a model applicable to NRENs globally.

# AI for Innovative Design & Education (AIDE)

## Workshop & Conference



**A P U**  
ASIA PACIFIC UNIVERSITY  
OF TECHNOLOGY & INNOVATION

**March 11<sup>th</sup> – 15<sup>th</sup>, 2024, in Kandy, Sri Lanka**



Lanka Education and Research Network

## Modules and Learning Outcomes: AI TEACH

The **AI TEACH** module aims to provide educators with practical tools for academic course design and holistic teaching methods at *elementary* and *secondary level schools*.

## Modules and Learning Outcomes: AI LD (Learning Design)

**AI LD** focuses on innovative learning designs incorporating Gen-AI to foster compelling and imaginative educational experiences in *higher educational environments*.



## Modules and Learning Outcomes: AI RE (Research)

AI RE is intended to assist educators and researchers in harnessing Gen-AI for research activities, enhancing the quality and efficiency of academic inquiry.

## Modules and Learning Outcomes: AI AW (Academic Writing)

AI AW is dedicated to leveraging Gen-AI for academic writing, enabling educators to produce high-quality scholarly works more efficiently.



## Modules and Learning Outcomes: AI HP (Health Professional)

This module is specifically tailored for *health professionals*, integrating Gen-AI to improve *clinical education* and *patient care*.

## Modules and Learning Outcomes: AI LEAP

AI LEAP (Leveraging Efficiency in Administrative Proficiency) addresses using Gen-AI in administrative tasks to *enhance operational efficiency* within educational institutions.



# AP-GAINED

- **Objectives**

- Addressing challenges in NRENs of LDCs and LMICs in the Asia-Pacific region in developing their capacity due to
  - limited funding,
  - difficulty in attracting qualified staff,
  - maximize the potential of their existing workforce and
  - lack the resources and expertise to integrate GenAI (& other latest innovations) into their operations effectively.
- Address the Digital Divide, Gender Equality, & Social Inclusiveness

# AP-GAINED

## • Key Outcomes

- 1. Tailored GenAI Curriculum and Training Material:** A modular curriculum offering foundational AI and GenAI knowledge for all NREN staff, as well as *specialized modules* for technical and non-technical roles.
- 2. Improve NREN Staff AI Capacity:** Develop a comprehensive GenAI capacity development program tailored to the unique needs of NRENs, prioritizing the challenges faced by those in LDCs and LMICs.
- 3. Practical Skills Development:** Hands-on training and projects allowing NREN staff to apply GenAI tools to core NREN functions, in both technical and non-technical areas

# AP-GAINED

- **Key Outcomes**

4. **Open Educational Resource (OER):** Create a repository of NREN-specific GenAI use cases, best practices, and resources, promoting the ongoing adoption and innovation surrounding GenAI technology.
5. **Stronger NRENs:** Empower NRENs, particularly in LDCs and LMICs, to use GenAI for automating tasks, gaining data insights, and delivering innovative services, to drive educational advancement, research breakthroughs, and digital transformation in their countries.

# AP-GAINED

## Key Activities



# AP-GAINED

- **Activity 0: Preparatory Workshop**
  - Conducted at APAN58 in Islamabad as part of “BoF on HPC/AI”
  - Conducted three sessions
    - **Session I:** Participant Survey [Needs Analysis]
    - **Session II:** Introduction to AI and GenAI
    - **Session III:** Prompt Engineering

# AP-GAINED

- **Activity 1: Curriculum Development Workshop**
  - Conducted at APU in Kuala Lumpur, Malaysia in September 2024
  - Objectives:
    - **Train the Trainers:** Established the initial core of trainers, who will be a key driving force in spreading GenAI knowledge throughout the region.
    - **Tailored Curriculum:** Identify and address NREN-specific use cases, forming the curriculum and subsequent development of innovative services.

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# AP-GAINED

- **Activity 2: Local Training Pilot Projects and Curriculum Revision**

- Conducted in Sri Lanka and Bangladesh in January and February 2025

- **Objectives:**

- **Practical Relevance:** test the curriculum in a real-world NREN environment
- **Practical Skills Development:** Hands-on training in real NREN environments ensures staff can directly apply GenAI to their daily tasks
- **Iterative Improvement:** Feedback drives curriculum refinement
- **Knowledge Dissemination:** a broader pool of GenAI-trained NREN staff

# AP-GAINED

- **Activity 3: Two Regional Training Workshops**

- **At**

- APAN59 in Yokohama, Japan in March 2025
- APAN60 in Hongkong in July 2025

- **Objectives:**

- **Regional Impact:** training representatives from diverse NRENs across the Asia Pacific
- **Knowledge Exchange:** Promotes collaboration and cross-pollination of ideas
- **Community Building:** Creates a broader network of NREN staff skilled in GenAI, fostering an ongoing support network and knowledge-sharing community.
- **Showcase of Success:** Provides a platform for NRENs to demonstrate their GenAI-enabled solutions, inspiring replication and further development.

# AP-GAINED

- **Activity 4: Open Educational Resources**
  - Most probably at APNIC Academy
  - Objectives:
    - Sustainable Knowledge Transfer
    - Collaboration Hub
    - Tailored Resources
    - Continuous Learning
    - Ever-evolving repository of Best Practices

# AP-GAINED

- **Activity 5: Publications**
  - Taking the results and success stories to a broader community beyond the Asia-Pacific region
  - Inspire and innovate

# AI in Education: There's more!

- **Education AI Readiness Evaluation (e-AIRE)**
  - Identify the AI and Digital Transformation (Dx) Readiness in the Sri Lankan Educational Sector across institutions and regions based on
    - culture,
    - workforce, and
    - technology.

# AI in Education: In the Pipeline

- **AI-REACH: GenAI in Education Bootcamp for Academics, Researchers, Health Professionals, and Administrators**
  - Objectives of this initiative are:
    - **Upskill 10,000 individuals:** Conduct the AIDE workshops and subsequent sector-specific programs to reach this target within the year.
    - **Develop a sustainable workforce:** Establish a scalable TTT model to facilitate a chain reaction within each sector.
    - **Create tailored content:** Adapt and localize AIDE content for Sri Lankan audiences, including multiple languages and cultural sensitivities
    - **Foster collaborative partnerships:** Strengthen existing relationships and build new ones between LEARN, APU, NIE, Ministries, and other s.
    - **Promote ethical AI:** Integrate ethical considerations throughout training, ensuring responsible application.

An aerial view of a city at dusk, with a wide river in the foreground. The city lights are visible, and the sky is a mix of blue and orange. The text "Thank You!" is overlaid in the center.

# Thank You!