

Asi@Connect/TEIN updates

The 9th ATCF, Japan

[September 25, 2025]

Patch Lee

TEIN Cooperation Center



- 1. Asi@Connect project: Status Update**
- 2. Phase 2 updates**
- 3. TEIN Network updates**

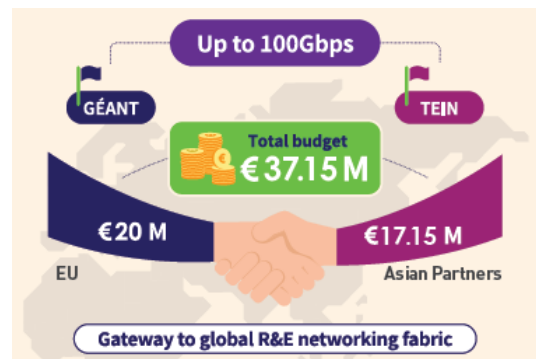
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Asi@Connect Project represents a significant success in enhancing and expanding research & education across Asia, as well as between Asia and Europe, through more effective, faster, and powerful internet connections.

Project Period: September 2016 ~ February 2026 (114 months)

* Expected period for the Next phase: March 2026 ~ February 2031 (5 years)



- To fulfill **Sustainable Development Goals (SDGs)** through improved access to education and research resources
- Direct R&E network connection in **Asia and EU up to 100 Gbps**
- Co-funded by EU and Asian Partners: **Total budget €37.1 M**

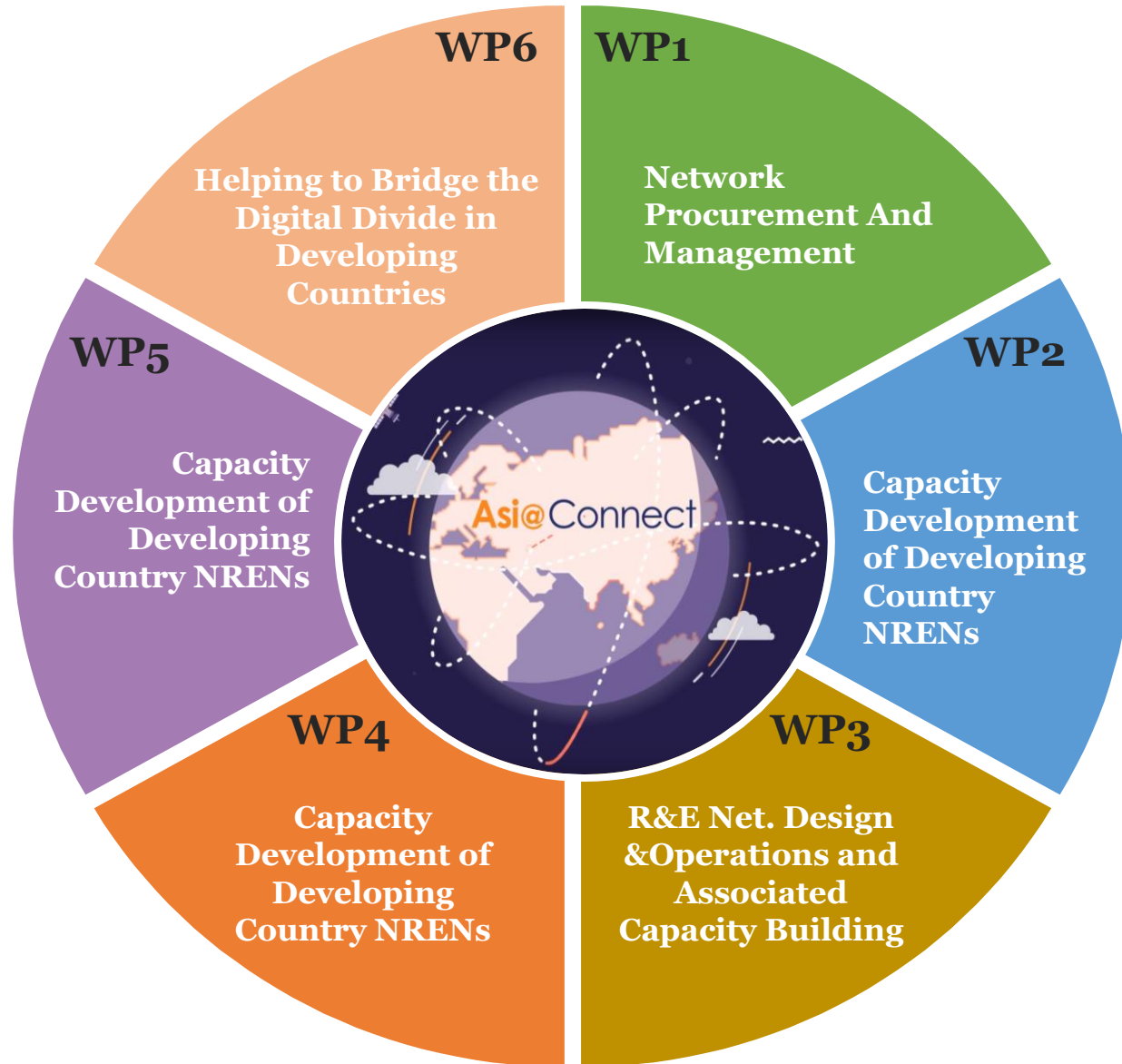
27 NREN*s from 22 countries/economies, 18,338 institutions

* National Research and Education Network

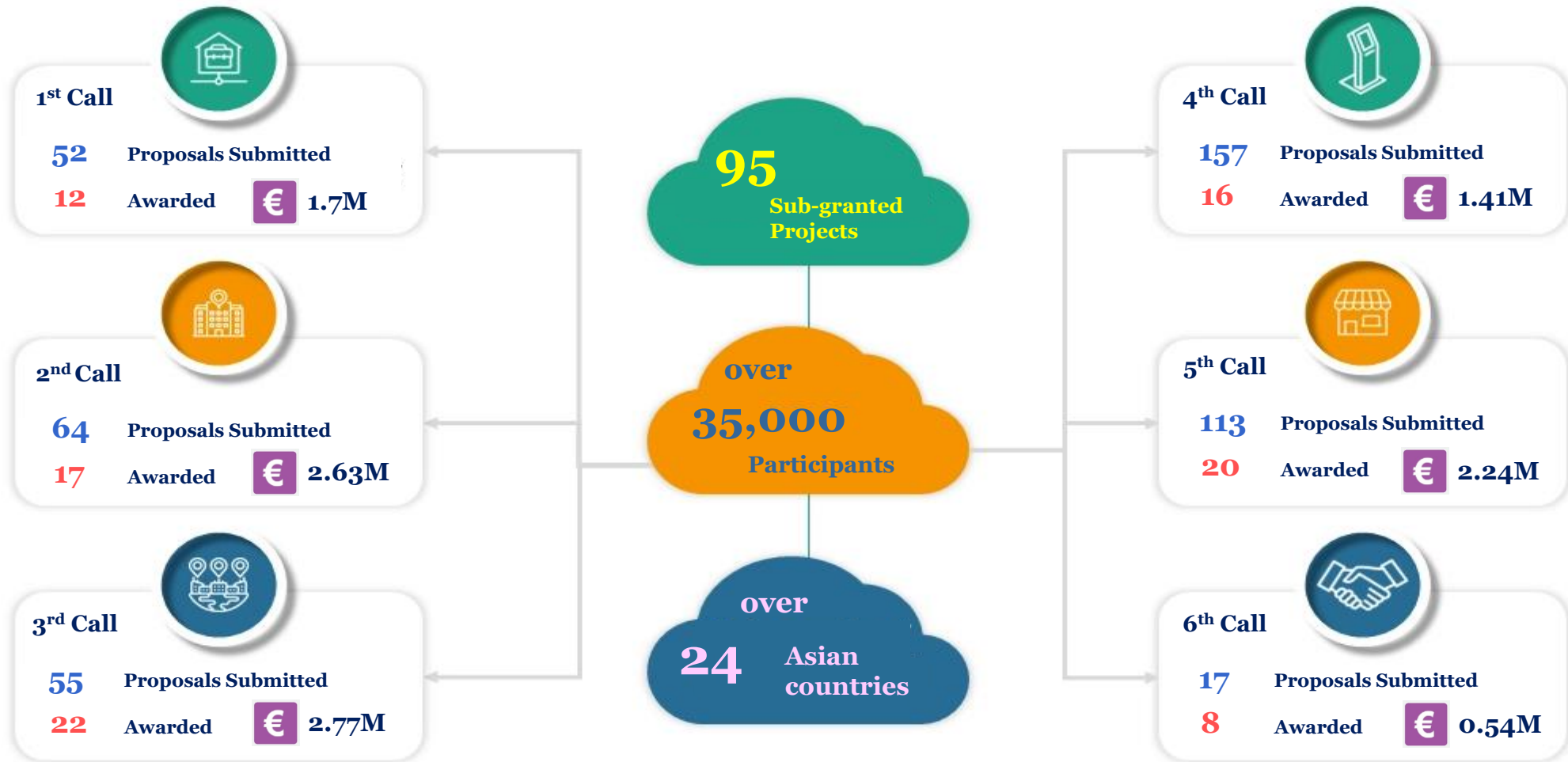


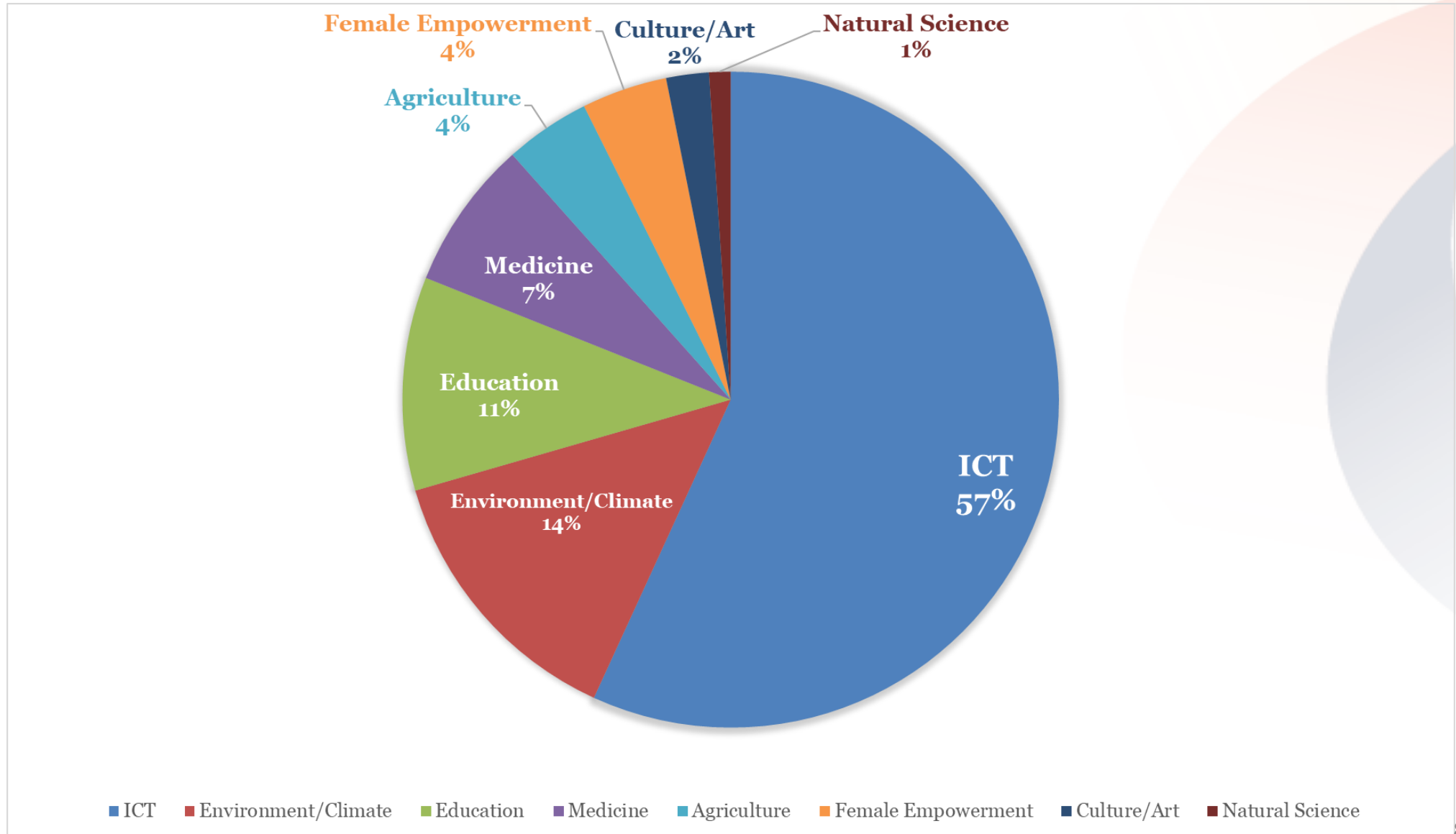
Country /economy	NRNN	Country /economy	NREN
Australia	Australia's Academic and Research Network (AARNet)	Korea	National Information Society Agency (NIA)/Korea advanced REsearch Network (KOREN)
Bangladesh	Bangladesh Research and Education Network (BdREN)		Korea Institute of Science and Technology Information (KISTI)/Korea Research Environment Open NETwork (KREONET)
Bhutan	Druk Research and Education Network (DrukREN)	Laos	Lao Education and Research Network (LERNET)
Cambodia	Cambodia Research and Education Network (CamREN)	Malaysia	Malaysian Research and Education Network (MyREN)
China	China Education and Research Network (CERNET)	Mongolia	Mongolian Research and Education Network (ErdemNet)
	China Science and Technology Network (CSTNET)	Nepal	Nepal Research and Education Network (NREN)
Chinese Taipei	Academia Sinica Grid Computing (ASGC)	New Zealand	Research and Education Advanced Network NZ Ltd. (REANNZ)
Hong Kong	Hong Kong Academic and Research Network (HARNET)	Pakistan	Pakistan Education and Research Network (PERN)
India	National Knowledge Network (NKN)	Philippines	Advanced Science and Technology Institute (ASTI)/Philippine Research, Education and Government Information Network (PREGINet)
Indonesia	Indonesia Research and Education Network (IdREN)	Singapore	Singapore Advanced Research & Education Network (SingAREN)
Japan	Coalition of Interoperable Networks for Japan and International (CINJI) 1) National Institute of Information and Communications(NICT) 2) National Institute of Informatics (NII) 3) Ministry of Agriculture, Forestry and Fisheries Research Network (MAFFIN) 4) WIDE project	Sr Lanka	Lanka Education and Research Network (LEARN)
		Thailand	Thailand Research Education Network Association (ThaiREN)
		Vietnam	National Agency for Science and Technology Information and Statistics (NASTIS)/Vietnamese Research and Education Network (VinaREN)

Main Activities



Support the Research & Education Communities: EUR 11.3M
Avg. grant: EUR 120K





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- Period: March 2026 ~ February 2031 (5 years)
- Budget: 14M Euros
 - ✓ NRENs: 75%(inc. Korean Gov.), European Commission: 25%

Budget		EUROS
Total / 5 years		14,000,000
1 year		2,800,000
	MSIT, KOREA	750,000
	European Union	700,000
	Beneficiaries (13 countries)	695,005
	Non-beneficiaries (9 countries)	340,000
	NREN Reserve	314,995



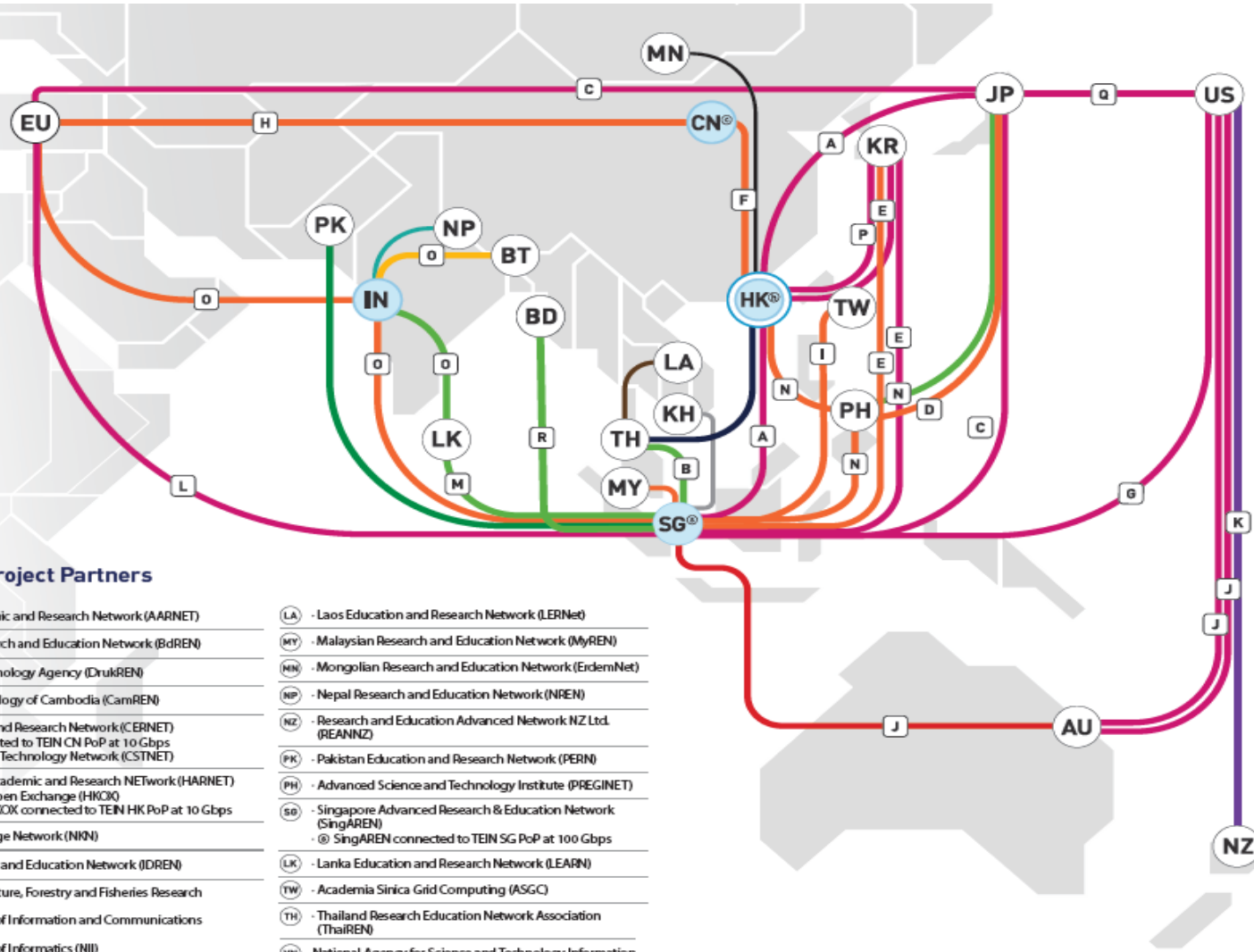
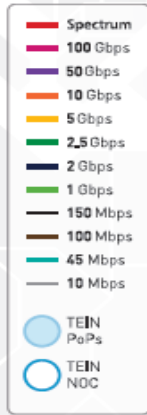
EUROS	Expense
14,000,000	Total / 5 years
2,800,000	1 year
750,000	TEINCC
630,189	Connectivity
342,000	Network Mgt.
210,000	Visibility, consultation, etc.
140,000	GM, etc.
727,811	Research, CfPs, etc.



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TEIN Network Topology (as of Apr 2025)

TEIN Map



Asi@Connect Project Partners

- | | |
|--|---|
| AU - Australia's Academic and Research Network (AARNET) | LA - Laos Education and Research Network (LERNet) |
| BD - Bangladesh Research and Education Network (BdREN) | MY - Malaysian Research and Education Network (MyREN) |
| BT - Government Technology Agency (DrukREN) | MN - Mongolian Research and Education Network (ErdemNet) |
| KH - Institute of Technology of Cambodia (CamREN) | NP - Nepal Research and Education Network (NREN) |
| CN - China Education and Research Network (CERNET)
Ⓞ CERNET connected to TEIN CN PoP at 10 Gbps
Ⓞ China Science and Technology Network (CSTNET) | NZ - Research and Education Advanced Network NZ Ltd. (REANNZ) |
| HK - 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 | PK - Pakistan Education and Research Network (PERN) |
| IN - National Knowledge Network (NKN) | PH - Advanced Science and Technology Institute (PREGINET) |
| ID - Indonesia Research and Education Network (IDREN) | SG - Singapore Advanced Research & Education Network (SingAREN)
Ⓞ SingAREN connected to TEIN SG PoP at 100 Gbps |
| JP - Ministry of Agriculture, Forestry and Fisheries Research Network (MAFFIN)
- National Institute of Information and Communications Technology (NICT)
- National Institute of Informatics (NII) | LK - Lanka Education and Research Network (LEARN) |
| KR - National Information Society Agency (KOREN)
- Korea Institute of Science and Technology Information (KREONET) | TW - Academia Sinica Grid Computing (ASGC) |
| | TH - Thailand Research Education Network Association (ThaIREN) |
| | VN - National Agency for Science and Technology Information (VinaREN) |

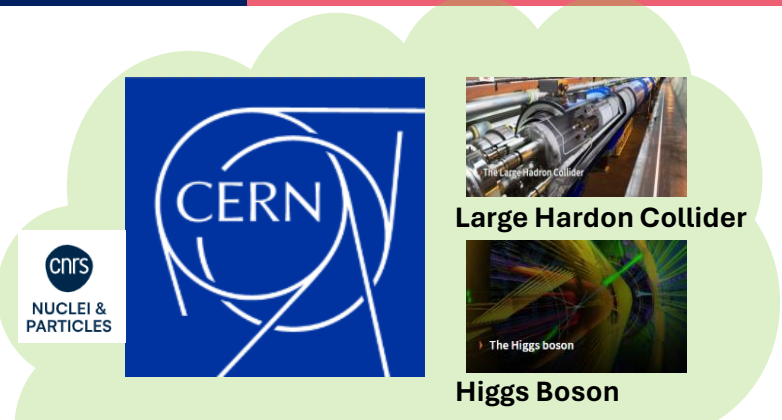
The following links are fully financed/co-financed by the link owners whose support is gratefully acknowledged

- | | |
|----------|---|
| A | National Institute of Information and Communications Technology
National Supercomputing Centre
Singapore Advanced Research & Education Network
The Hong Kong Academic and Research NETWORK |
| B | National Institute of Information and Communications Technology
Thailand Research and Education Network |
| C | National Institute of Informatics |
| D | Ministry of Agriculture, Forestry and Fisheries Research Network |
| E | National Information Society Agency |
| F | China Education and Research Network
TEIN Cooperation Center |
| G | Internet2
ARENA-PAC
TransPAC/Pacific Wave
Australia's Academic and Research Network |
| H | Co-funded by China and EU |
| I | Academia Sinica Grid Computing |
| J | Australia's Academic and Research Network |
| K | Research and Education Advanced Network New Zealand |
| L | |
| M | Lanka Education and Research Network |
| N | Advanced Science and Technology Institute |
| O | National Knowledge Network |
| P | Korea Research Environment Open NETWORK |
| Q | National Supercomputing Centre
Singapore Advanced Research & Education Network |
| R | Bangladesh Research and Education Network |

* As of 30 April 2025.

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

- **Backbone**
 - ✓ 10Gbps -> 100Gbps (SG-HK, SG-EU)
- **Access**
 - ✓ 10Mbps-10Gbps -> 10Mbps – 100Gbps
 - ✓ Network divide has been increasing!
- **Link termination**
 - ✓ AF, MM(EU's policy), ID, VN(financial constraints)

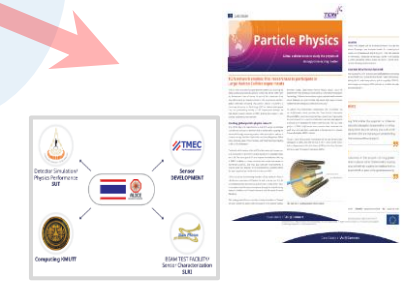
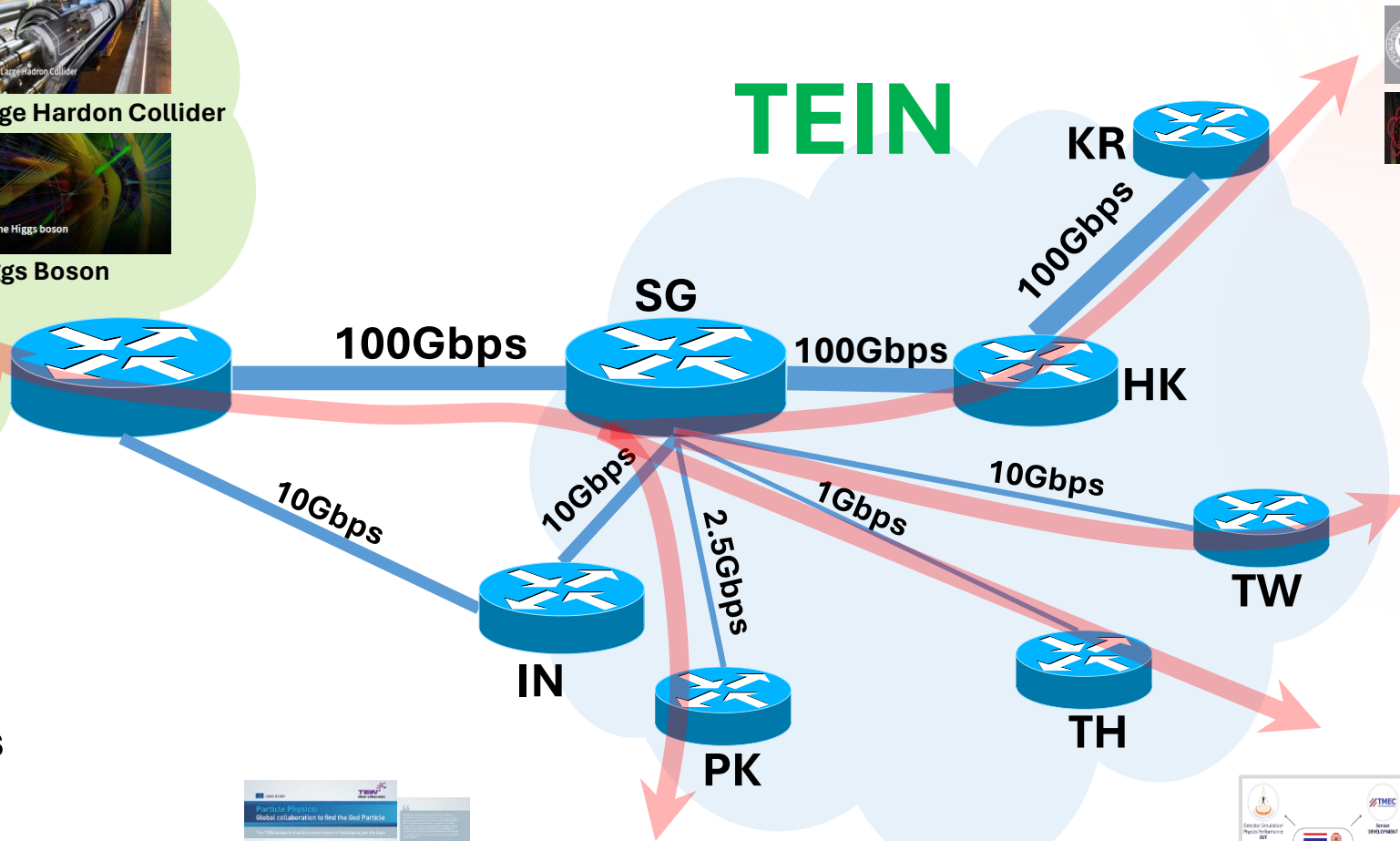


CNRS
NUCLEI & PARTICLES

GÉANT

“Helps to uncover what the universe is made of and how it works”

TEIN



- **Implementation Complete**

- ✓ TEIN backbone (including link to Europe GÉANT)
- ✓ BJ-CN, 10Gbps
- ✓ HK-TH, 2X1Gbps
- ✓ HK-CINJI, 100Gbps
- ✓ HK-KREONET, 100Gbps
- ✓ SG-TH, 1Gbps
- ✓ SG-KREONET, 100Gbps
- ✓ SG-CINJI, 100Gbps

- **Candidates**

- ✓ BdREN, Bangladesh
- ✓ MyREN, Malaysia
- ✓ PERN, Pakistan

Thank you