

**National Knowledge Network
At
4th Asi@Connect Project Meeting**



National Knowledge Network
Connecting Knowledge Institutions

About NKN

- unified high speed network backbone connecting all the major institutions including all major Indian mission critical agencies and e-Governance.
- Secure and reliable connectivity to education facilities, R&D institutions and government deployments.
- connecting all the state capitals and districts in India.
- NKN has been designed to be a dynamic and scalable network and is planned for up-gradation to 100G as per requirement.



NKN is the primary backbone for the implementation of Digital India by supporting and providing connectivity to various endeavours of Govt. of India in the field of Digital education, security, Library, Space, Weather, Atomic, safeguard e-Health and so forth.

1658
Institute
Connected to
NKN

490+
District
Links

700 Gbps
Traffic moving
across NKN
Network

Up to 20
Gbps
of
Bandwidth to
multiple Institutes

31
Point of
Presence in
State Capital

More than 5
Petabytes of
data flows
across NKN
daily

Peering
With
7
International
Education and
Research Network

28 State Data
Centre &
26 SWAN
Connected to
NKN

3
International
Point of
Presence

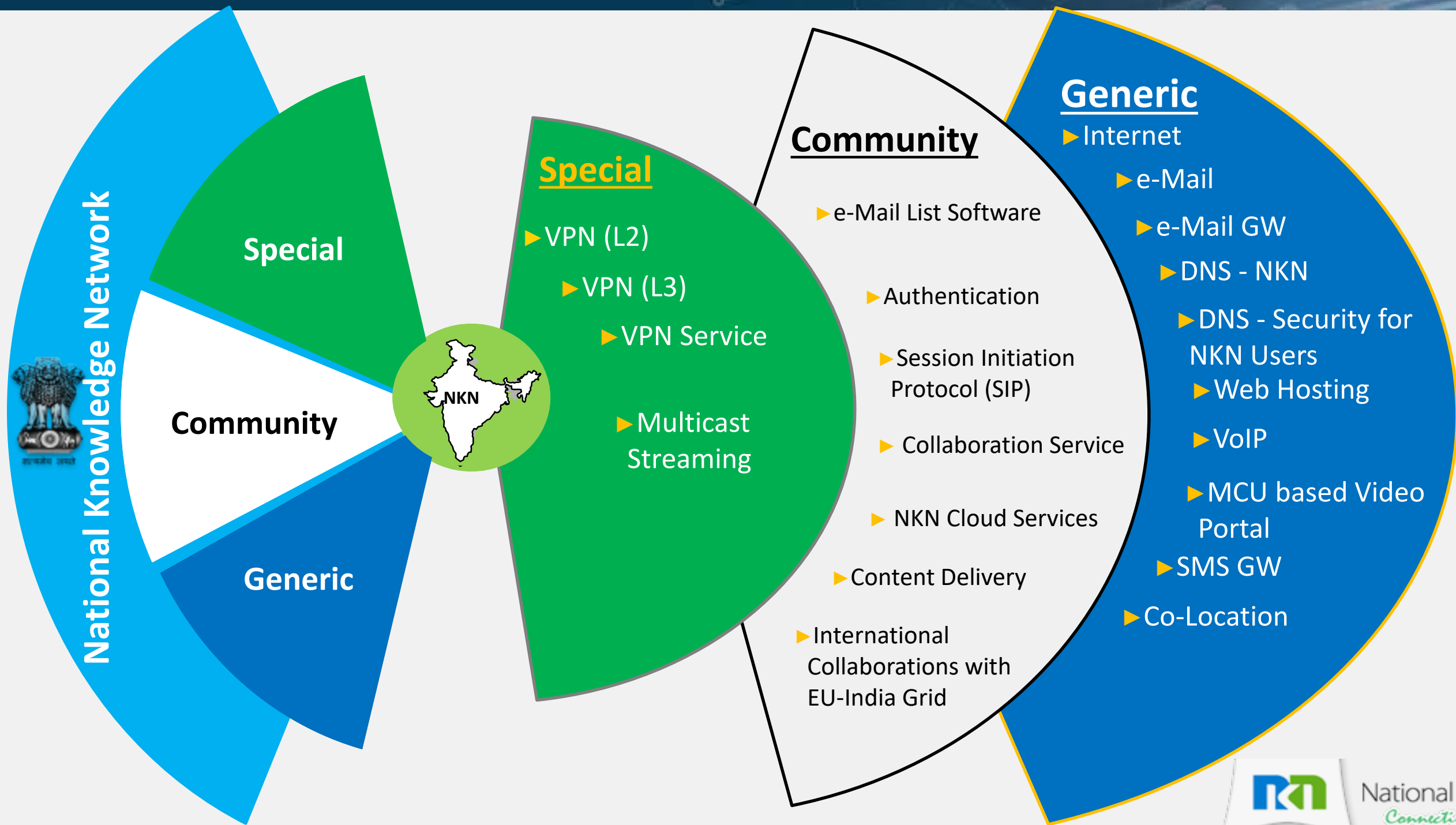
Singapore
Amsterdam
&
Geneva

24*7
Network
Monitoring
Centre

GEANT, Internet2,
SingAREN,
Asi@Connect,
CERN
NORDUnet &
LEARN



NKN Services



Network connection

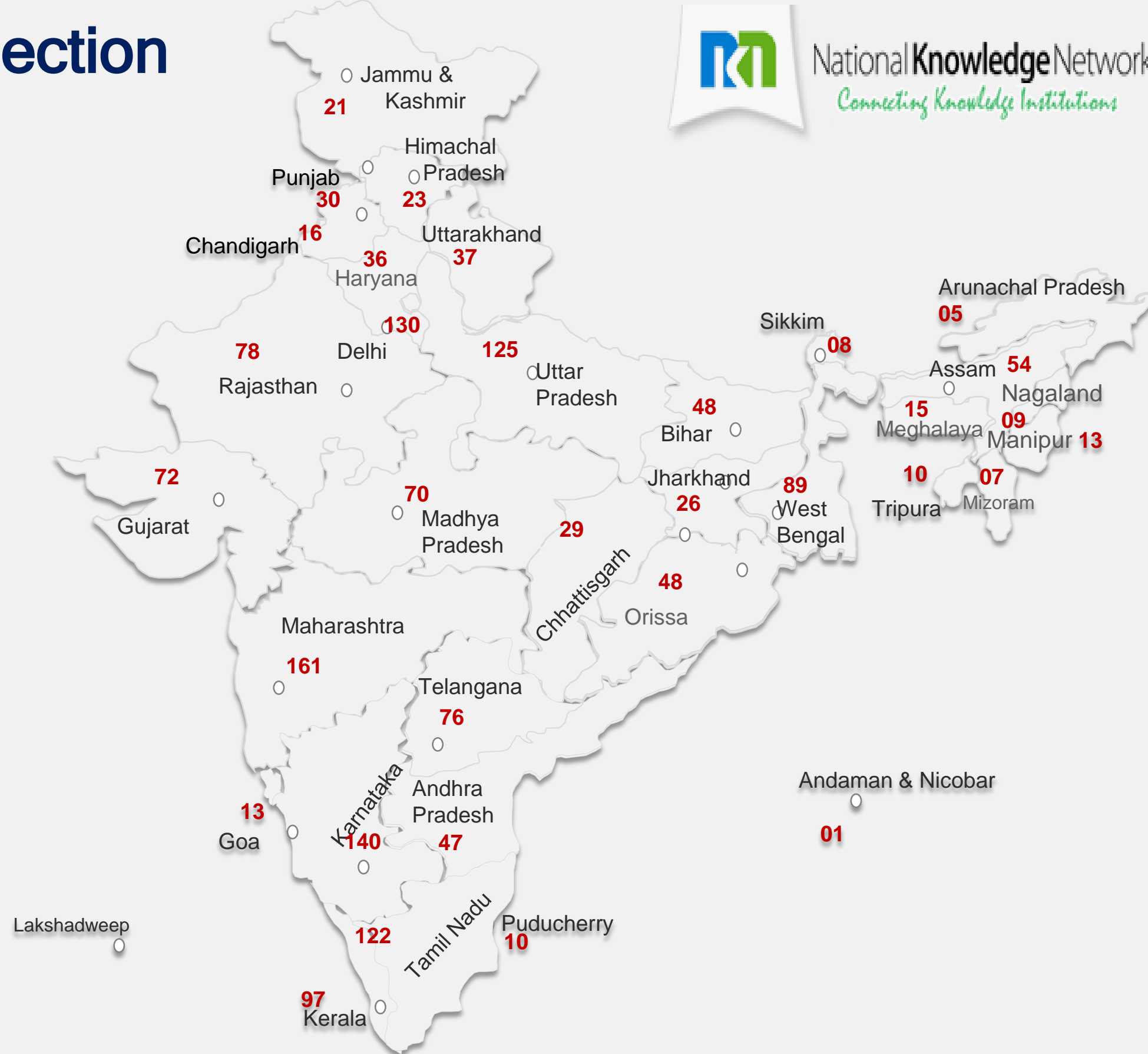


National Knowledge Network
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➤ 1667 institutes in India connected to NKN thereby touching and empowering over 5 cr. students and faculty.

➤ 20 NKN links in India upgraded up to 20 Gbps

➤ 66+ Virtual Classrooms



NKN International Presence

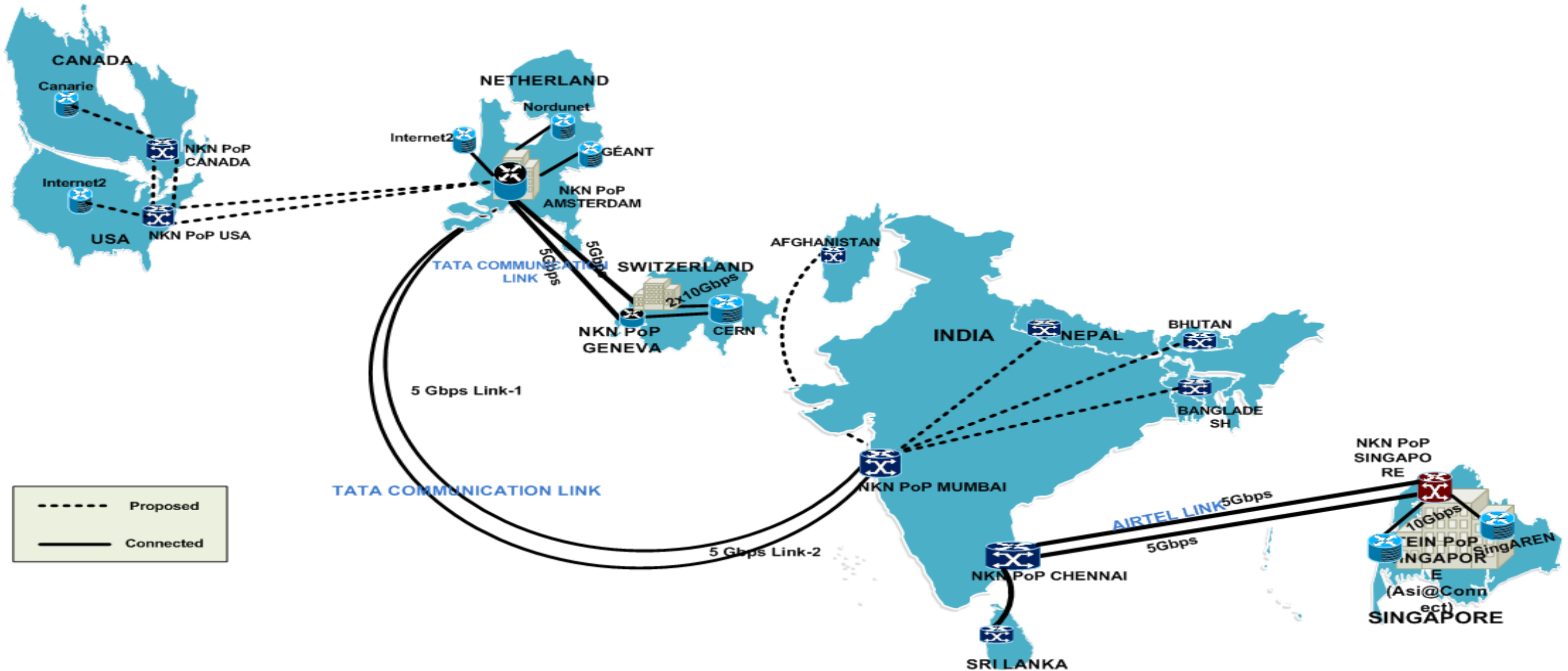
- NKN has set up its PoP's at **Singapore, Amsterdam and CERN, Geneva.**
- NKN has peered with Research and Education Networks (RENs) such as **Asia@connect in Asia Pacific, GEANT in Europe, Internet2 in USA and LEARN in Sri Lanka and NORDUnet for Nordic countries i.e. Denmark, Iceland, Norway, Sweden and Finland.**



Network connection (International)



NKN INTERNATIONAL PRESENCE



- In order to enhance collaboration between neighbouring countries NKN will establish direct connectivity to following countries:
 - Afghanistan
 - Bangladesh
 - Bhutan
 - Maldives
 - Nepal
 - Sri-Lanka (Completed)
- The rate discovery has been completed by NKN for these countries
- Connectivity between NKN and Sri Lanka has already been established in Jan 2018
- Bangladesh's BdREN and Bhutan's DrukREN will be connected soon with NKN, necessary approvals have been obtained for the same
- Other neighbouring RENs including Nepal's NepalREN and Afghanistan's AfgREN are expected soon

Establishing direct connectivity to NKN and It's Neighbouring countries

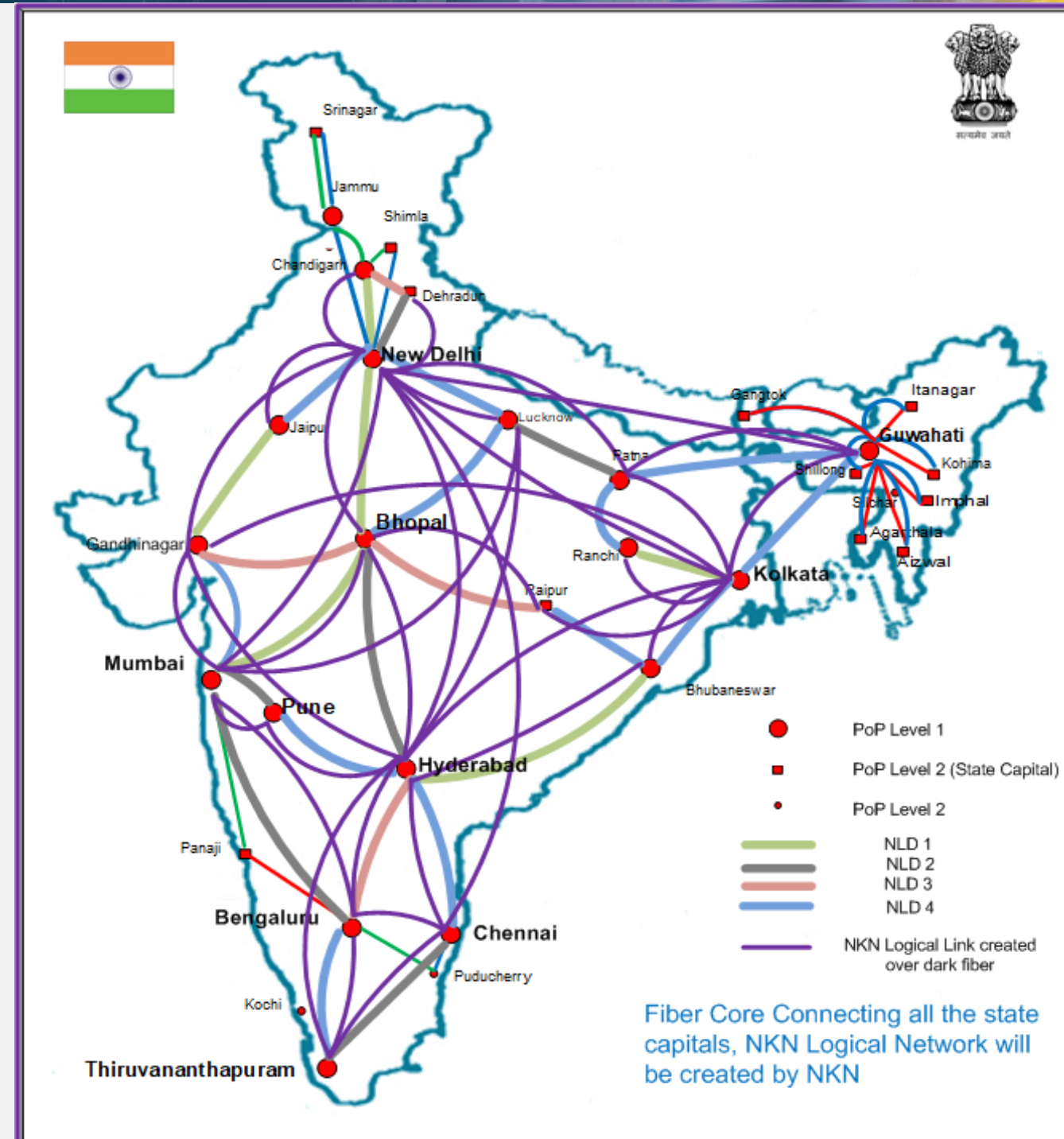
The connectivity with NKN will bring the following benefits for the countries of South Asian countries:

- **Efficient communication and dissemination of information/knowledge will be possible for scientists, educationist, students and researchers in different disciplines.**
- **Innovative & stimulating work environment for the users**
- **Collaboration and sharing of resources among user communities will be accelerated.**
- **Distance education through virtual classroom will be effectively improved.**
- **leading mission oriented agencies in the fields of nuclear, space and defence research which are a part of NKN can mentor institutes of similar nature in neighboring countries**
- **All universities, research institutions, libraries, laboratories, healthcare and agricultural institutions across the country connected on NKN can collaborate with similar institutes resulting in increased cooperation between the member countries.**



NKN Way Forward..

- Looking at the ever growing demands of Research and educational Network users, **NKN** is planning to upgrade it's network backbone to support 100G.





Thank You