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Lightstorm Intro Deck



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Lightstorm?
What do we
Stand For ?**

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LIGHTSTORM CONTEXT - WHO ARE WE ?

Investment by I
Squared Capital

Long-term plan to build a
fiber-based, carrier neutral
platform across Asia

Addressing the explosive
demand of internet-based data
and video services in emerging
Asian countries

**Our platform
builds on the
strong need for:**

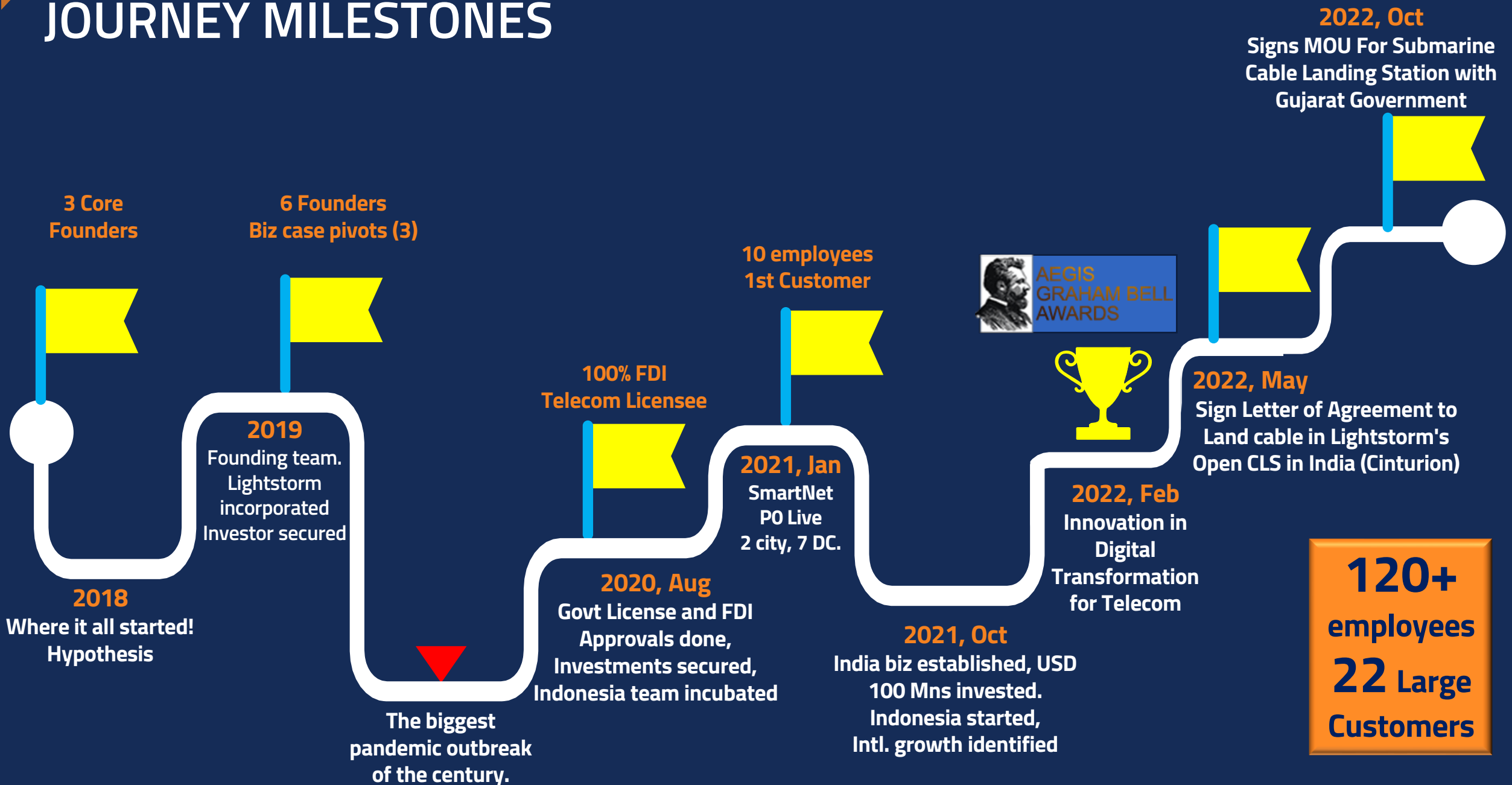
1

Fiber infrastructure built specifically for high video and data use environment, adjacent to existing aging telco infrastructure

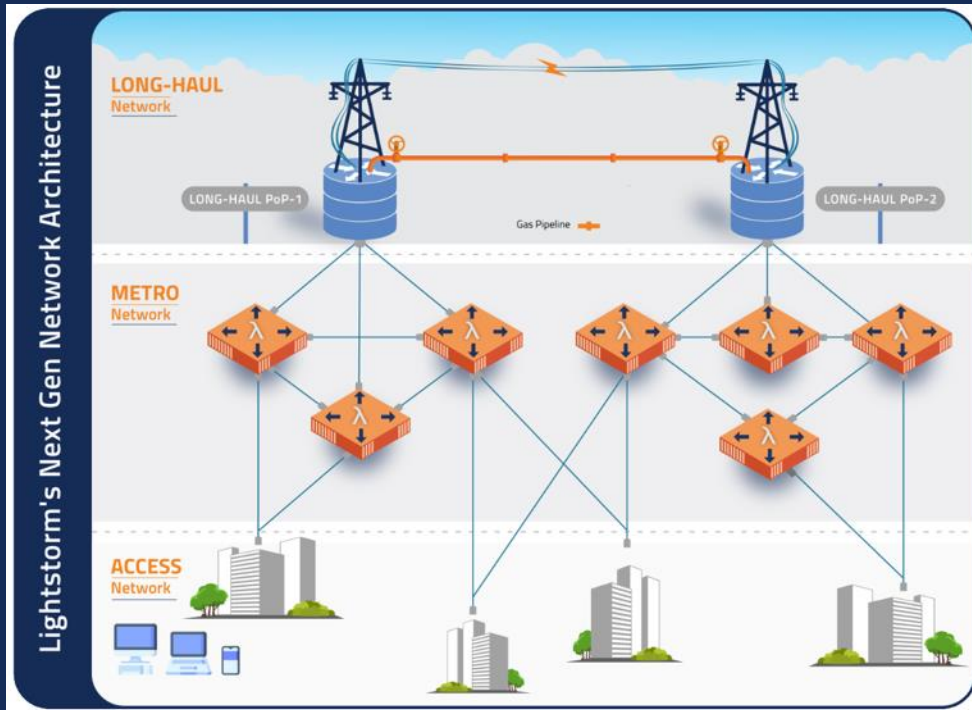
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Solving problems that limit the growth of digital infrastructure

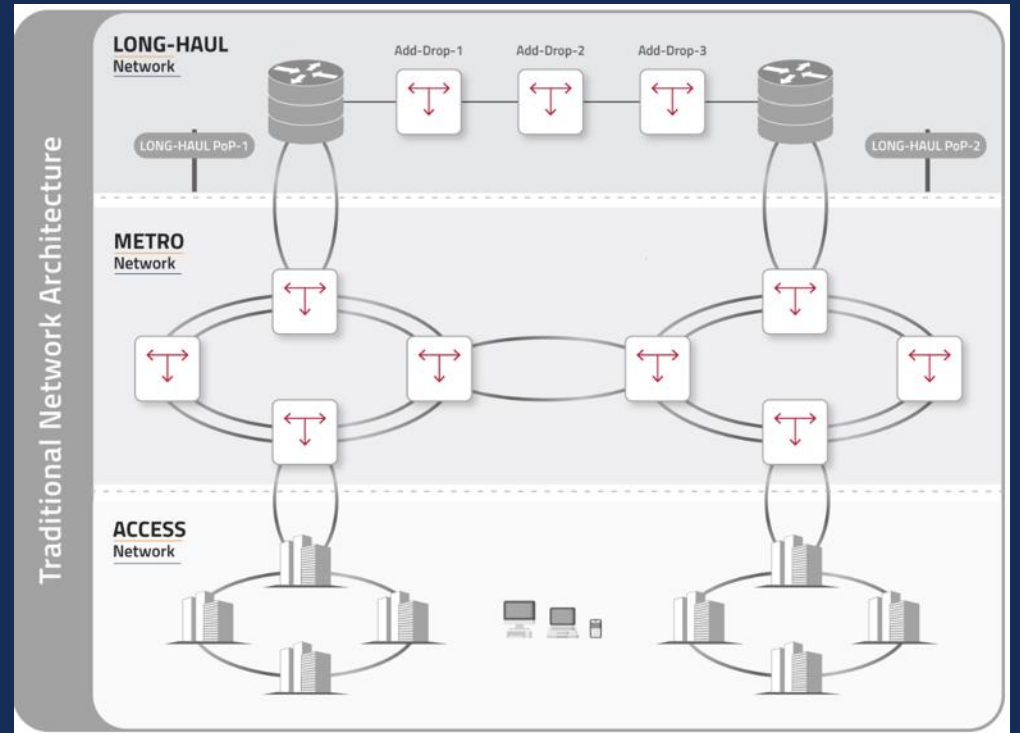
JOURNEY MILESTONES



HOW ARE WE DIFFERENT ?

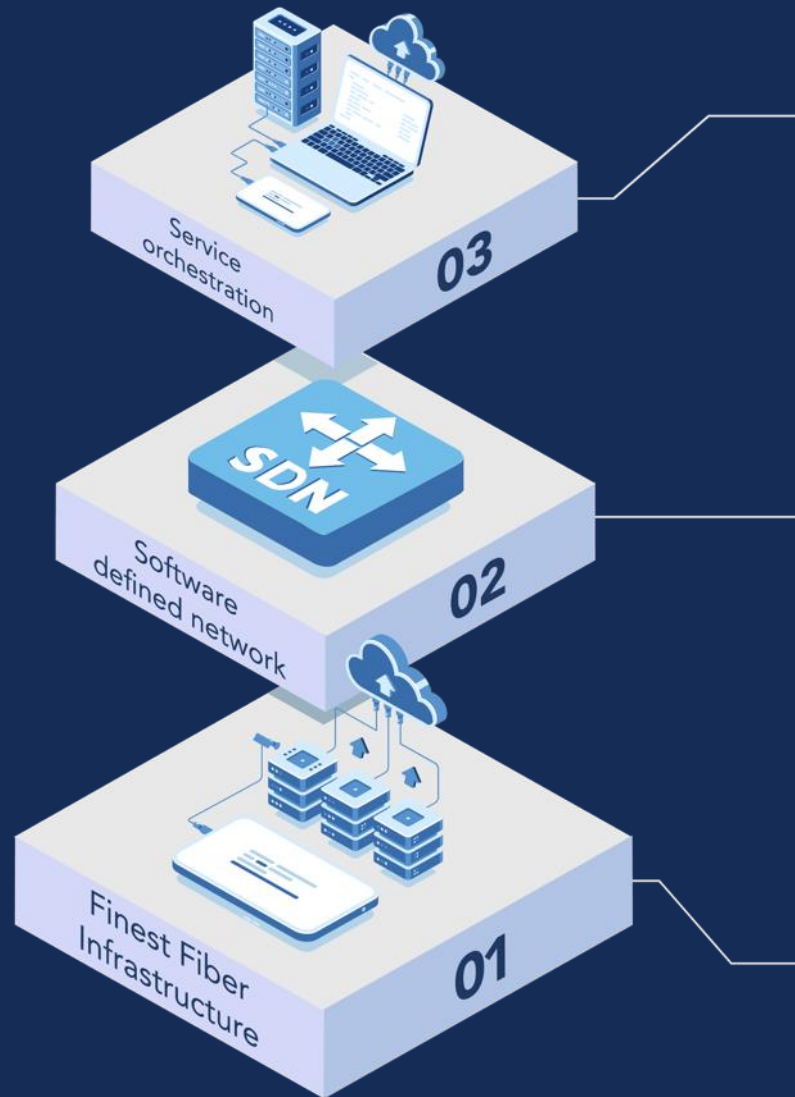


- 90 % of Long-Haul Fiber on OPGW/Utility Route
- Zero flaps because of OPGW/Utility Fiber infrastructure
- P2P Linear Long-Haul/Metro Express Network Architecture
- Better Latency as no Add/Drop in between Source/Destination
- MTDCs Targeted Leaf & Spine based Architecture in Metro
- All Long-Haul/Metro PoP located with-in Tier-3/4 DCs for high availability
- Single Hardware across Metro/Long-Haul network for Operation ease



- ~ 90 % of NLD routes are on underground Fiber
- More prone to Flaps/Fiber cuts as its all UG Fiber
- Non-Linear Ring based architecture with multiple Add/Drop locations
- Multiple Add/Drop Locations in-between leads into high Latency
- Designed for wireless/Enterprise market segment using traditional ring-based architecture
- Multiple OEMs, Layers, Legacy hardware involved with operation complexity

LIGHTSTORM DIFFERENTIATORS



Orchestration via platform

- On-demand Network-as-a-Service platform
- DCI, Cloud, IX Connect solutions
- xScale Network (nx10Gs, nx100Gs, multiple lambda, managed spectrum, terabyte scale)
- Self-service portal (on-demand provisioning, Visibility, SLA metrics, dashboard)

Intelligent software defined mesh network

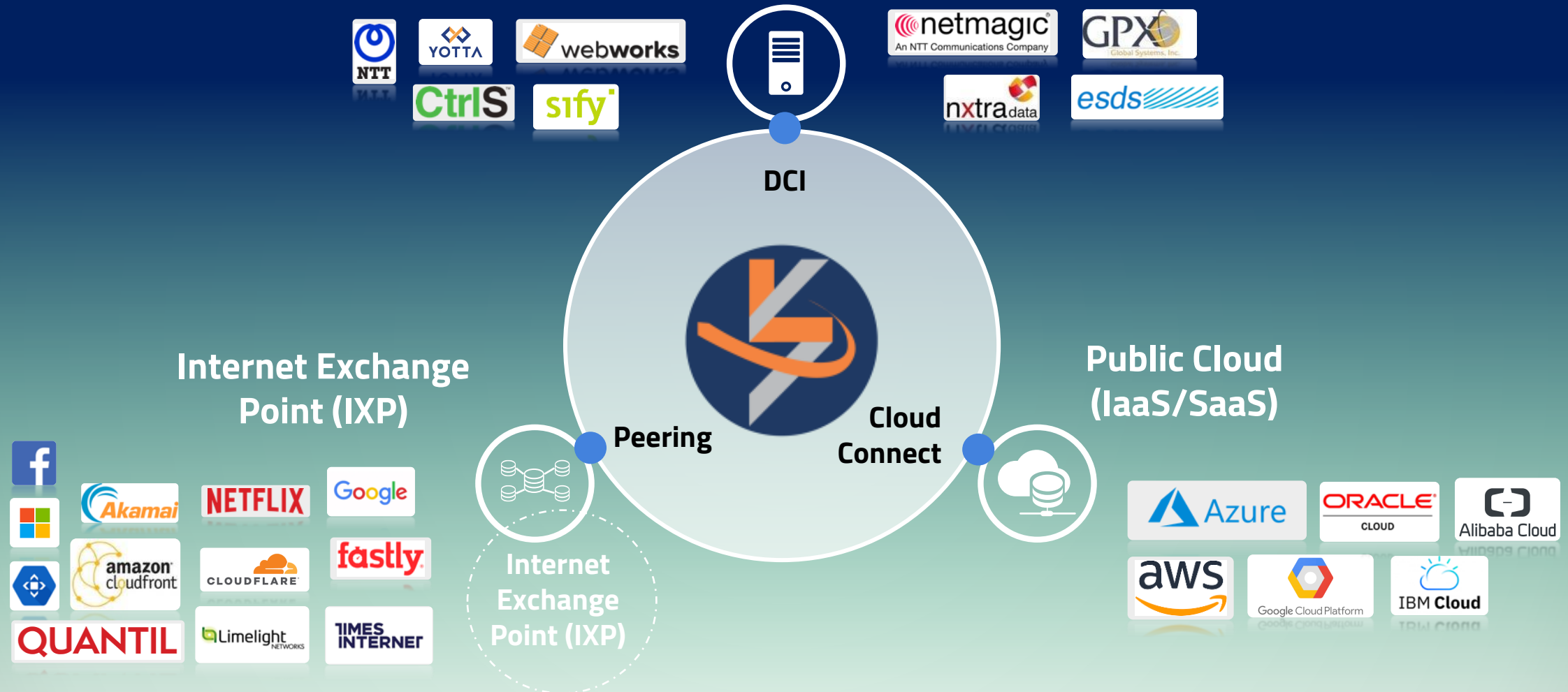
- Any to Any 3*Path connectivity
- Express Metro Network with no Add/Drop
- Leaf and Spine network architecture
- 100% software defined and programmable
- CDCF ASON based solution in NLD/Metro
- Country First 300 Gig Line Rate per channel in NLD
- Country First 600 Gig Line Rate per channel in Metro

Finest fiber infrastructure

- 12,000Km fiber network, 92% on utility grade infra
- The only network to have exclusive linear routes with OPGW & Utility Fiber
- Best SLA & Uptime considering fiber route is along OPGW High-Tension Towers or Utility Gas Pipeline
- Shortest latency between DC within and across Cities
- Designed for 100% uptime

THE CONNECTED ECOSYSTEM PLAY

50+ Datacentres



Connecting India's Digital Ecosystem

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SOLUTIONS

Data Center Interconnect

- Connects major Datacenters across the country
- Dedicated connections ranging from 10Gbps to multiple 100Gbps over India's first xScale Network

Cloud Connect

- Interconnection to major public cloud service providers over Lightstorm Platform
- Dedicated and secure connections to the cloud
- SmartNet is designed to support the most demanding SLAs (uptime, latency, flap) in the industry

IX Peering

- Dedicated and secure interconnections to major Internet Exchanges
- Allows enterprises to access IX without the need to deploy physical infrastructure

Tailor-made Networking Platform

- One-stop-solution for networking requirements in & out of India
- Bespoke networking platform including IP ASN, connections to peering exchanges, Cloud & DC
- Expertise in designing networks for cloud, gaming, & CDN space
- Provides fully managed services from Day-0 to Day-1 to Day-2 operations



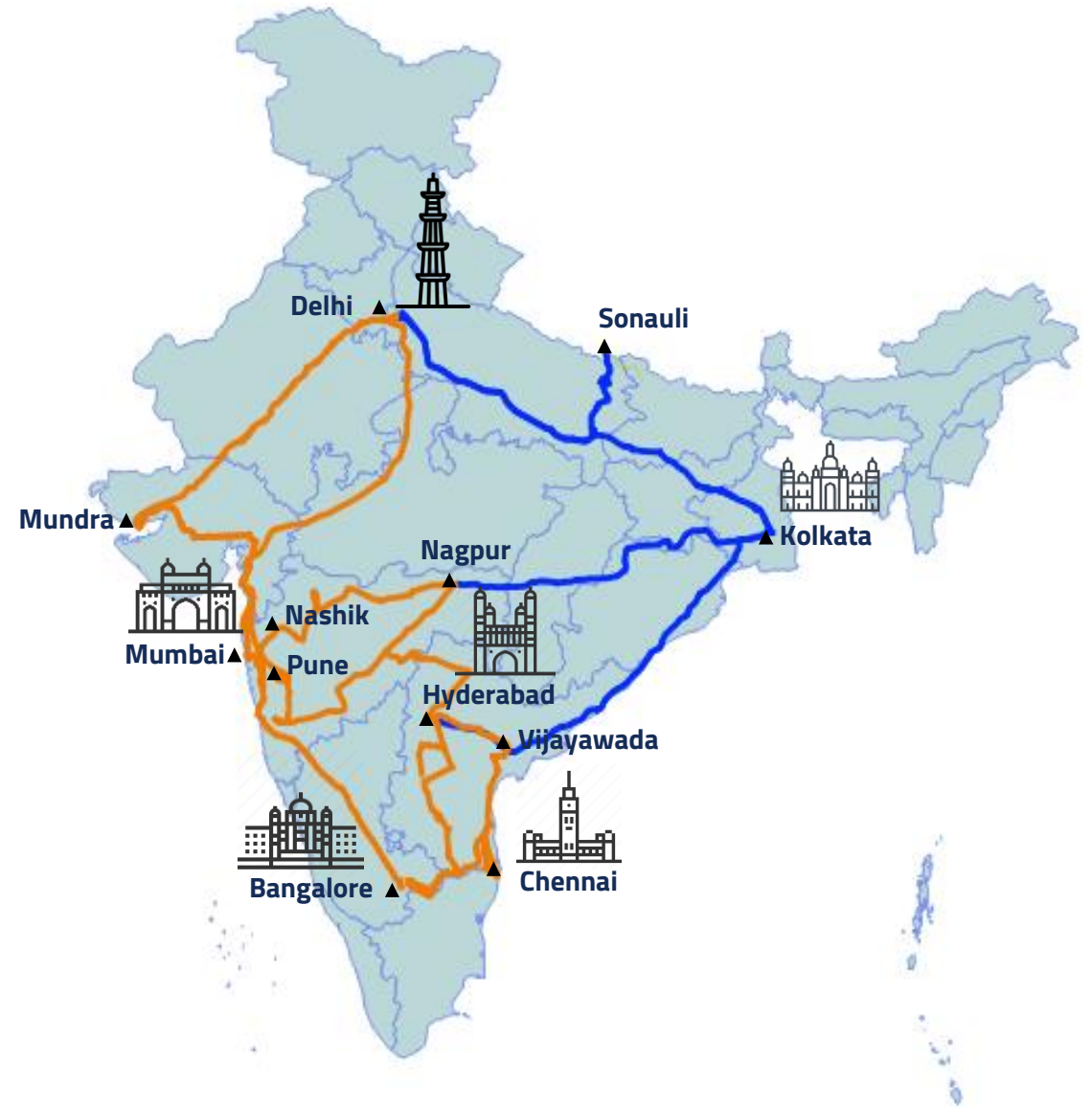
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Lightstorm Network Footprint



OUR NETWORK

We are India's first carrier-neutral infrastructure connecting 55+ DC now with aggressive plans to connect several hundreds soon

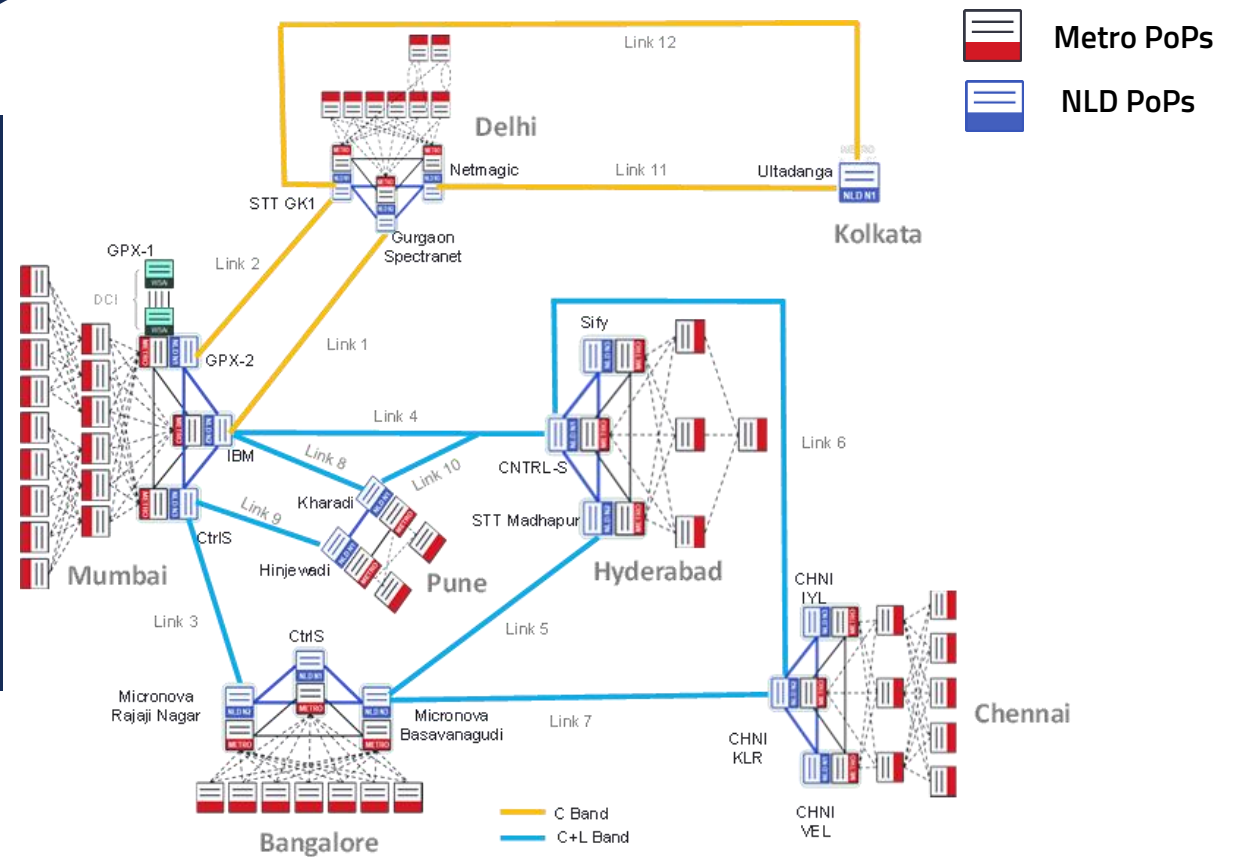


LIGHTSTORM SMARTNET NETWORK

Network Topology



Network Architecture



~ 12,000 Km Fiber for PAN India NLD Network

- SmartNet, **first of its kind in India**, is a high-capacity dedicated carrier-neutral fiber-based network connecting top cities.
- High availability network using OPGW & Utility Fiber
- Single hardware across network for Operation Excellence
- Next Gen ASON control plane capability, Auto Multi Path Protection mechanism
- SDN enabled - BoD, application, latency-based path selection service, L2VPN

LIST OF CONNECTED DCs

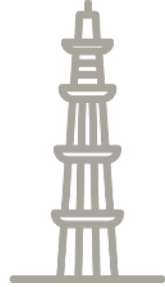
MUMBAI

- GPX1
- GPX2
- IBM
- Netmagic DC2 (Vikhroli)
- Netmagic DC 4 (Vikhroli)
- Netmagic DC 5 (Chandivali)
- NetMagic DC 6 (Chandivali)
- NetMagic DC 7 (Chandivali)
- CTRLS DC1
- CTRLS DC2
- STT DC1 (LVSB)
- STT - DC3 (BKC)
- Sify - Rabale (DC/Tower 1)
- Sify - Rabale (DC/Tower 2)
- WebWerks -DC 1
- WebWerks -DC 2
- ESDS - Mahape
- Yotta – Panvel
- NetMagic DC 8
- NetMagic DC 9



DELHI

- STT DC1 (VSB)
- STT DC2 GK1
- STT DC3 GK1
- Netmagic DC1 (Sec 63)
- Nxtra Noida 1 (Sec 62)
- CTRLS Noida DC
- Sify Noida DC
- Spectra, Gurgaon
- Yotta Noida



BENGALURU

- CTRLS Electronics City
- STT Bengaluru DC3 (KIADB Whitefield)
- Nxtra Bengaluru 1 (Whitefield)
- ESDS Whitefield
- Netmagic DC2 (Electronics City)
- Netmagic DC3 (White Field)
- MICRONOVA Rajaji Nagar



HYDERABAD

- Sify Gachibowli
- STT Hyderabad DC1 (Hitech City Madhapur)
- CTRLS DC1 (Madhapur)
- CTRLS DC2 (Financial District)



CHENNAI

- Netmagic Chennai
- Sify Chennai Tidel Park
- STT DC1 (Sivananda Salai)
- STT DC 2(Ambattur)
- Nxtra Chennai 1 (Siruseri)
- Nxtra Chennai 2 (Siruseri)



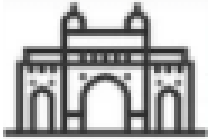
PUNE

- STT Dighi
- Nextra Hinjewadi
- Webwerk Hinjewadi
- Nextra Kharadi



LIST OF UPCOMING CONNECTED DCS (IN Q1 AND Q2 2023)

MUMBAI



- Yondr

DELHI



- STT Noida DC1

BENGALURU



- Sify (Electronics city)

HYDERABAD

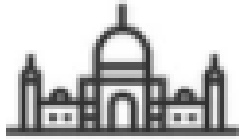


CHENNAI



- Nxtra Chennai 3 (CLS Santhome)
- NTT Ambattur
- CtrIS Ambattur

KOLKATA



- STT Ultadanga

Lightstorm Network Offering



SmartNet, first of its kind in India, is a high-capacity dedicated carrier-neutral fiber-based network connecting top cities.



India's first Carrier Neutral NLD Network built on LO ASON, without Electrical Regeneration between any two Metros, C+L band (in Southern Region)



>90 % of NLD Fiber infrastructure built using OPGW & Utility Fiber.



Best Latency in the business as no Add/Drop in between Source/ Destination



Three diverse NLD Exit Points in any Metro City, unique design to provide more resiliency.



Multi Tbps capacity on each NLD Sector

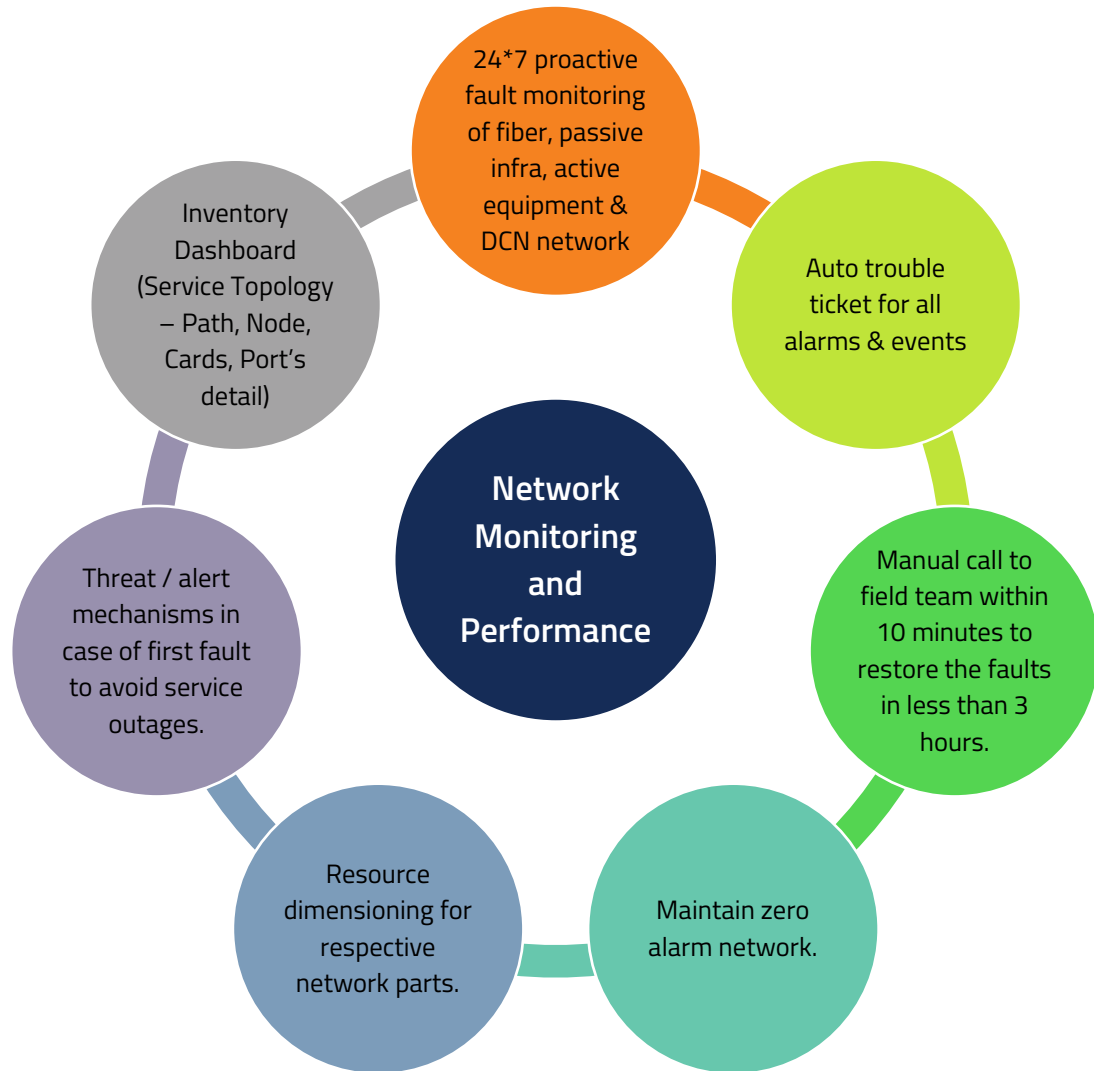


MTDCs Targeted Leaf & Spine based Architecture in Metro

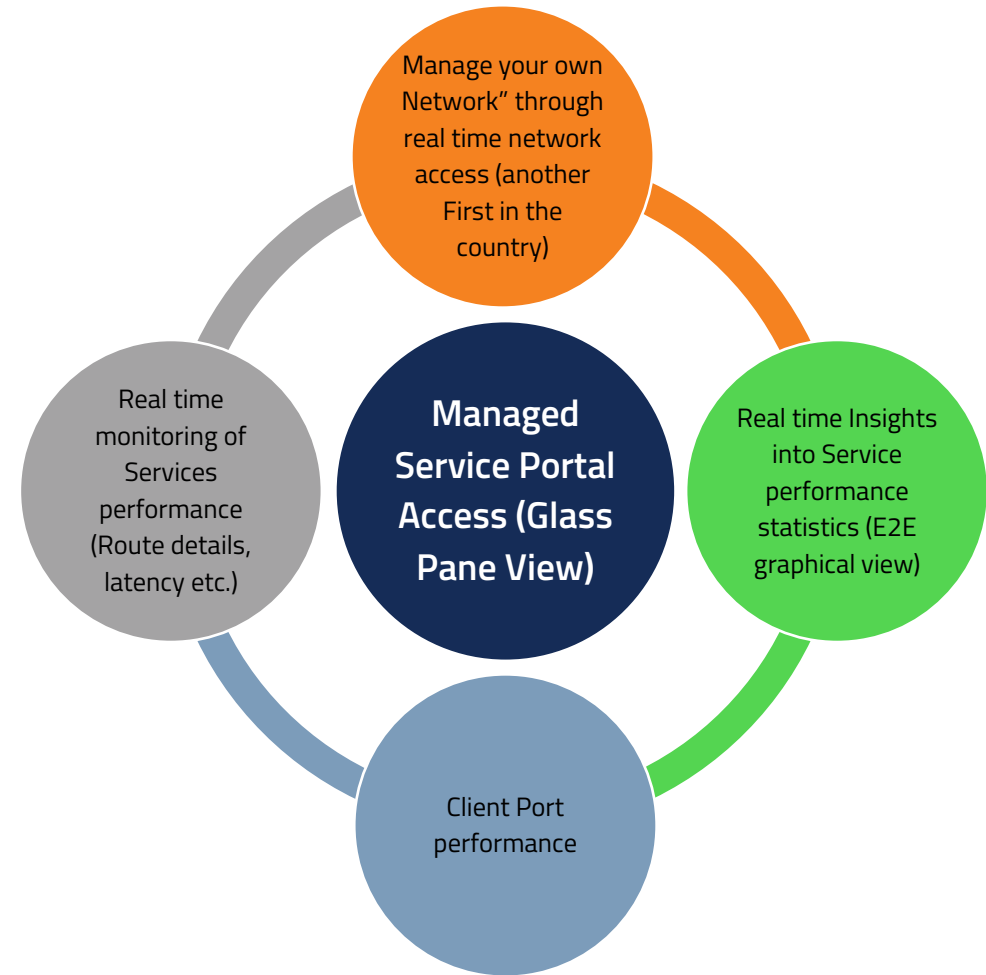


Next Gen ASON control plane capability, Auto Multi Path Protection mechanism

Lightstorm Monitoring Overview



NOC View



Glass Pane View

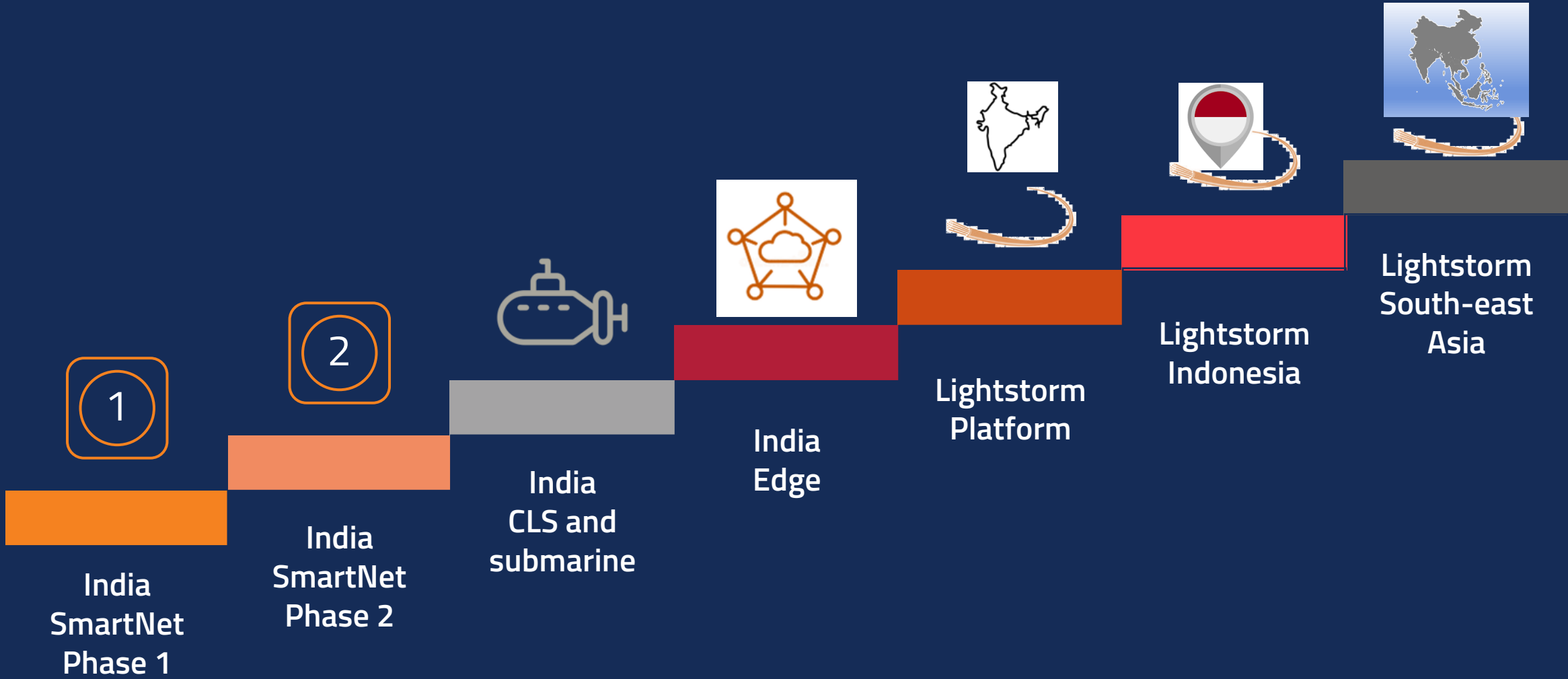


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Lightstorm Expansion Plans



EXPANSION PLANS



LIGHTSTORM CABLE LANDING STATIONS: POISED TO REVOLUTIONIZE CLS INFRA IN INDIA

1 International Cable Landings in India: Current Scenario

Captive Landing Stations: Choke points encouraging rent seeking behavior by Telcos


Over dependence on Mumbai and Chennai: Geographical risk concentration


Limited space availability and scope of expansion at existing CLS's

Existing Service providers seek monopoly while new service providers lack domestic connectivity and capital

2 Lightstorm Open CLS Infra Platform: A chain of connected Open CLS's in India

 Open CLS Architecture

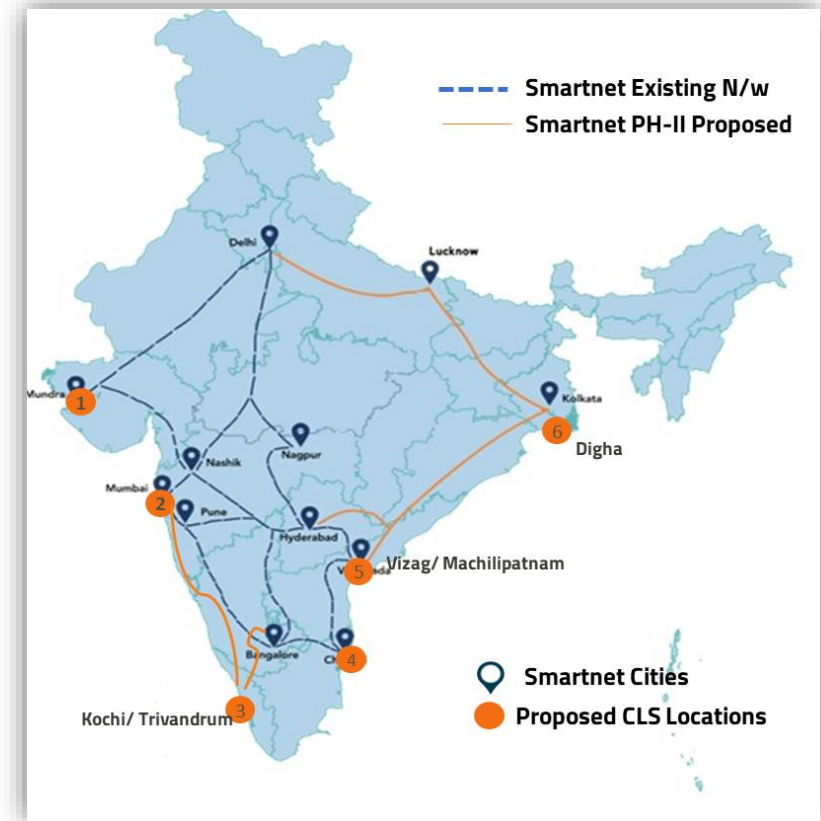
 Geographically diverse: Locations already Identified and shortlisted in 6 cities

 Integrated with Smartnet: Domestic NLD & Metro Utility fiber based network

 Regulatory approvals in place

 Opportunity to build Integrated CLS DC Facility with MTDCs

3 Lightstorm CLS Plans: Deploy Open CLS systems in 6 cities



THANK YOU

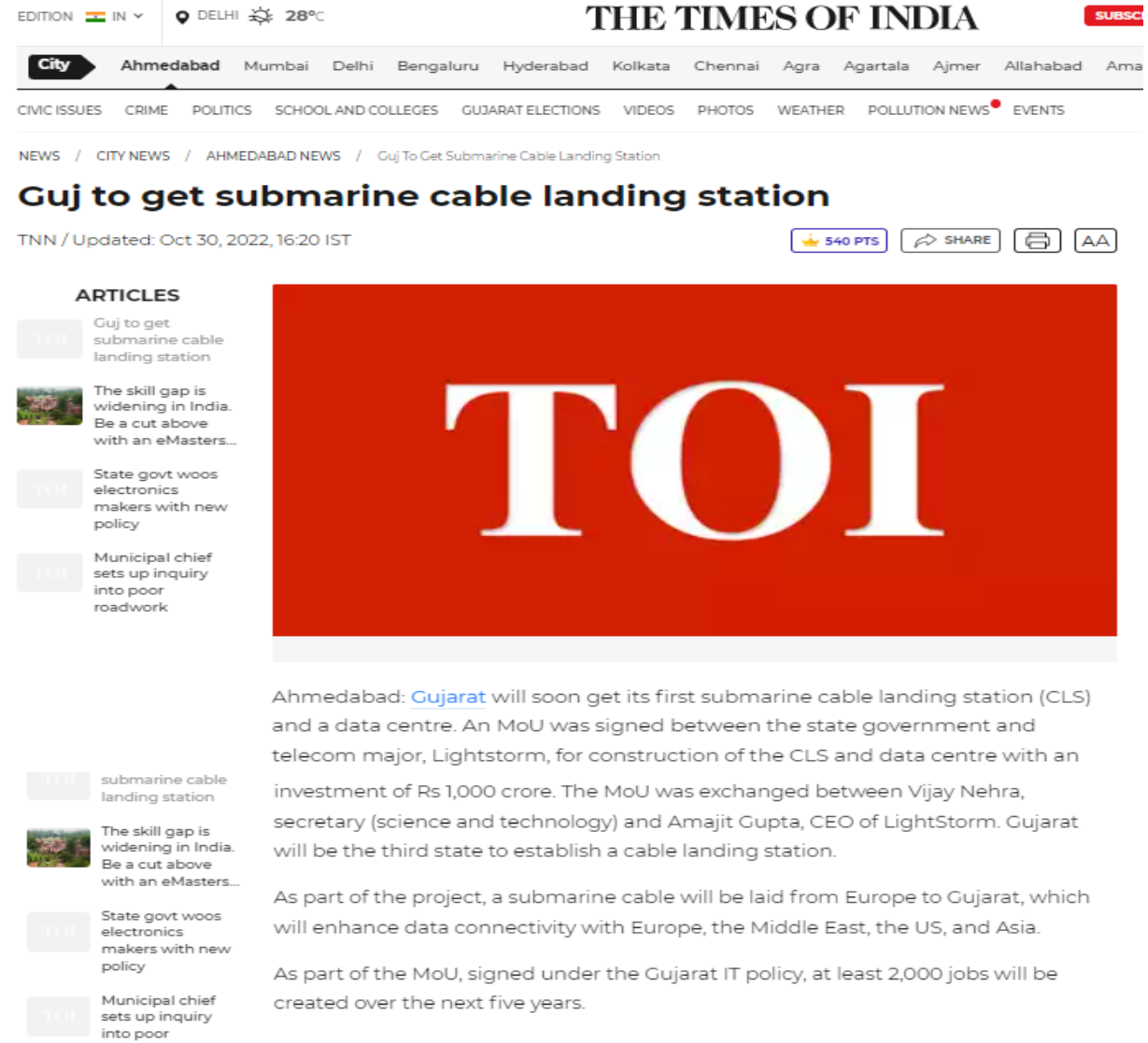


Headline of Indian Media: MoU between LTC & Gujarat Govt.

An MoU was signed between the state government and Lightstorm for construction of the CLS and data centre and first submarine cable landing station (CLS) of Gujarat.

Read more at:

https://timesofindia.indiatimes.com/city/ahmedabad/guj-to-get-submarine-cable-landing-station/articleshow/95174246.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst



The screenshot shows the top of a news article on the Times of India website. The page header includes the edition (IN), location (DELHI), and temperature (28°C). The main navigation bar lists various cities and news categories. The article title is "Guj to get submarine cable landing station" and it is dated Oct 30, 2022. A large red banner with the letters "TOI" is visible. Below the banner, the article text begins: "Ahmedabad: Gujarat will soon get its first submarine cable landing station (CLS) and a data centre. An MoU was signed between the state government and telecom major, Lightstorm, for construction of the CLS and data centre with an investment of Rs 1,000 crore. The MoU was exchanged between Vijay Nehra, secretary (science and technology) and Amajit Gupta, CEO of LightStorm. Gujarat will be the third state to establish a cable landing station. As part of the project, a submarine cable will be laid from Europe to Gujarat, which will enhance data connectivity with Europe, the Middle East, the US, and Asia. As part of the MoU, signed under the Gujarat IT policy, at least 2,000 jobs will be created over the next five years."