



Broadband India Summit

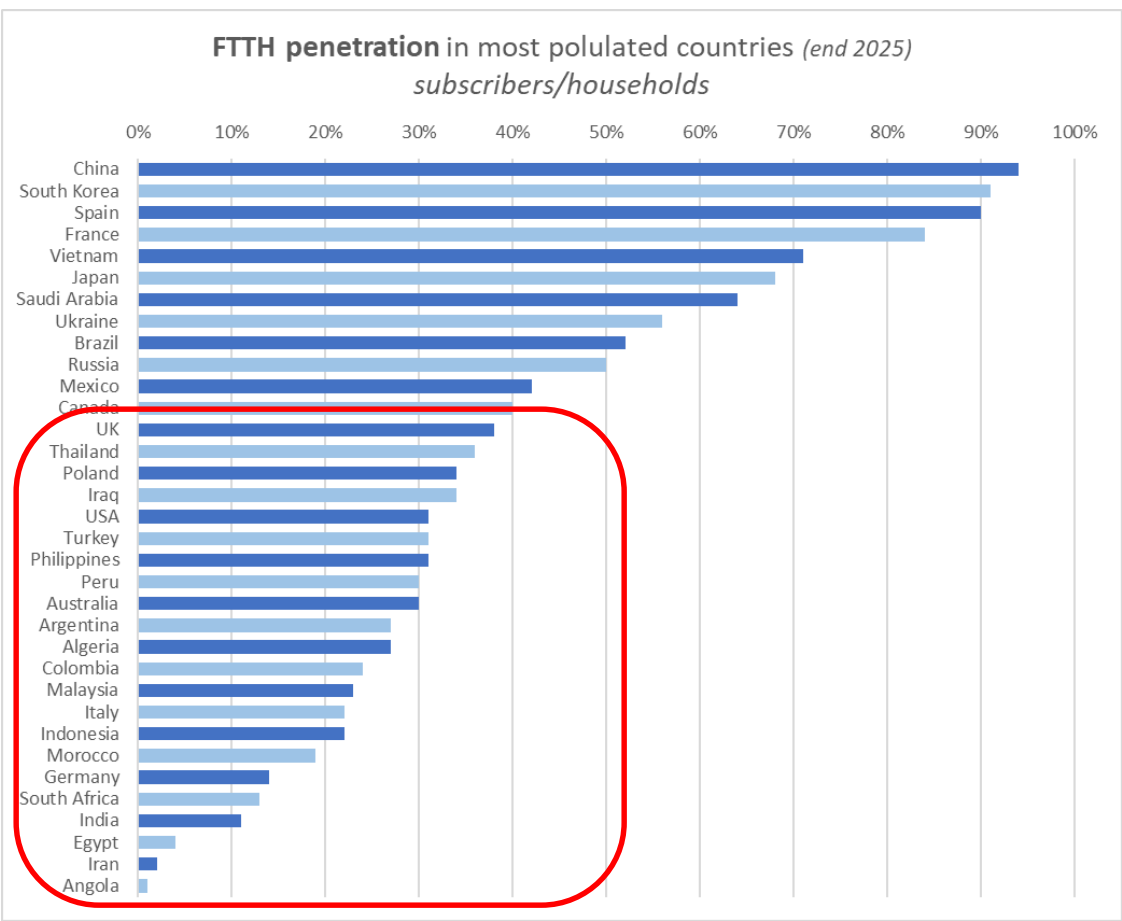
24 June 2026

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Global Optical Infrastructure Drivers

FTTx, still a lot to do



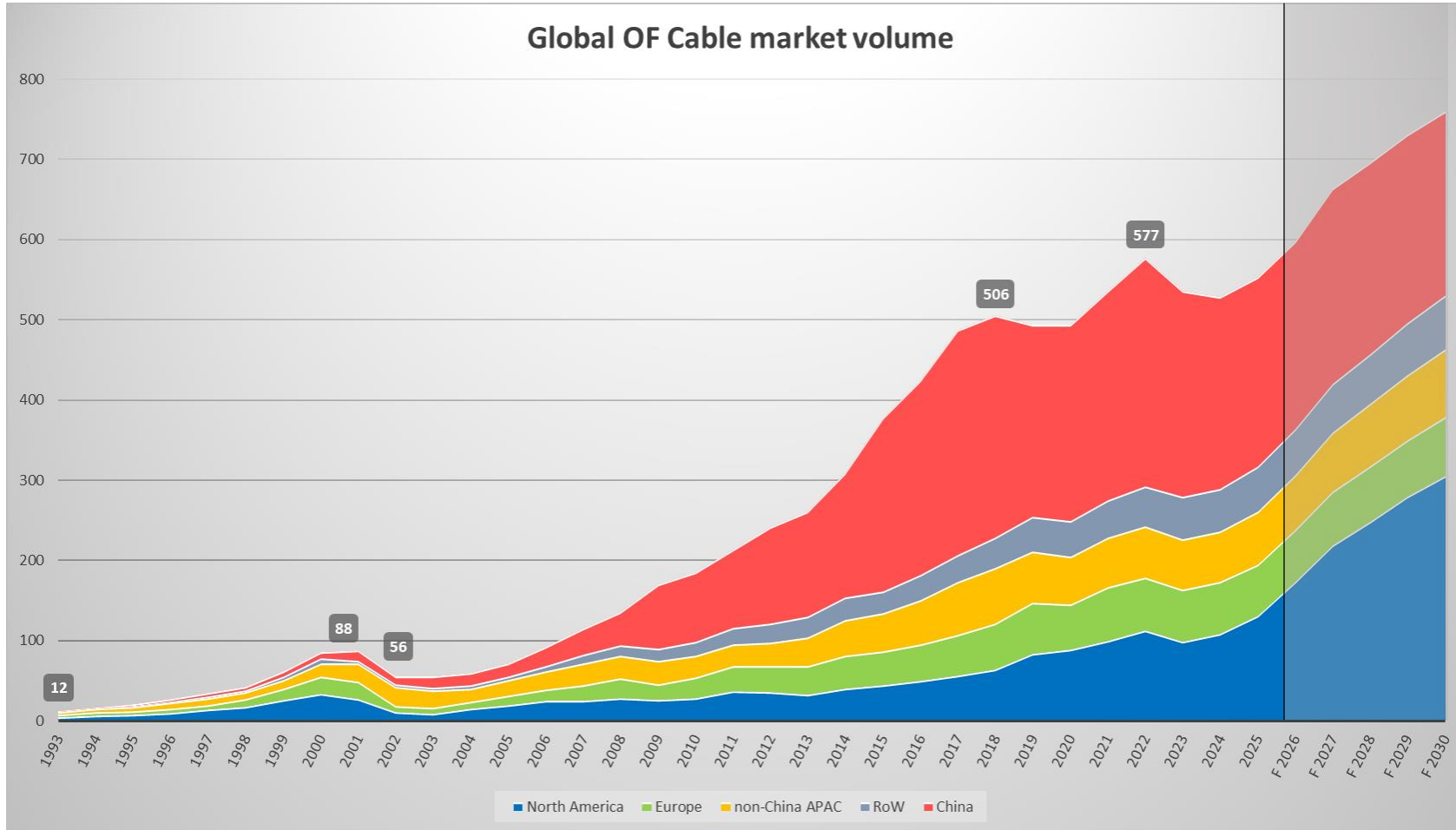
Data Center Interconnection



Long Haul & Metro Enhancement + Various Verticals



Optical Fibre : 30 Years of Growth

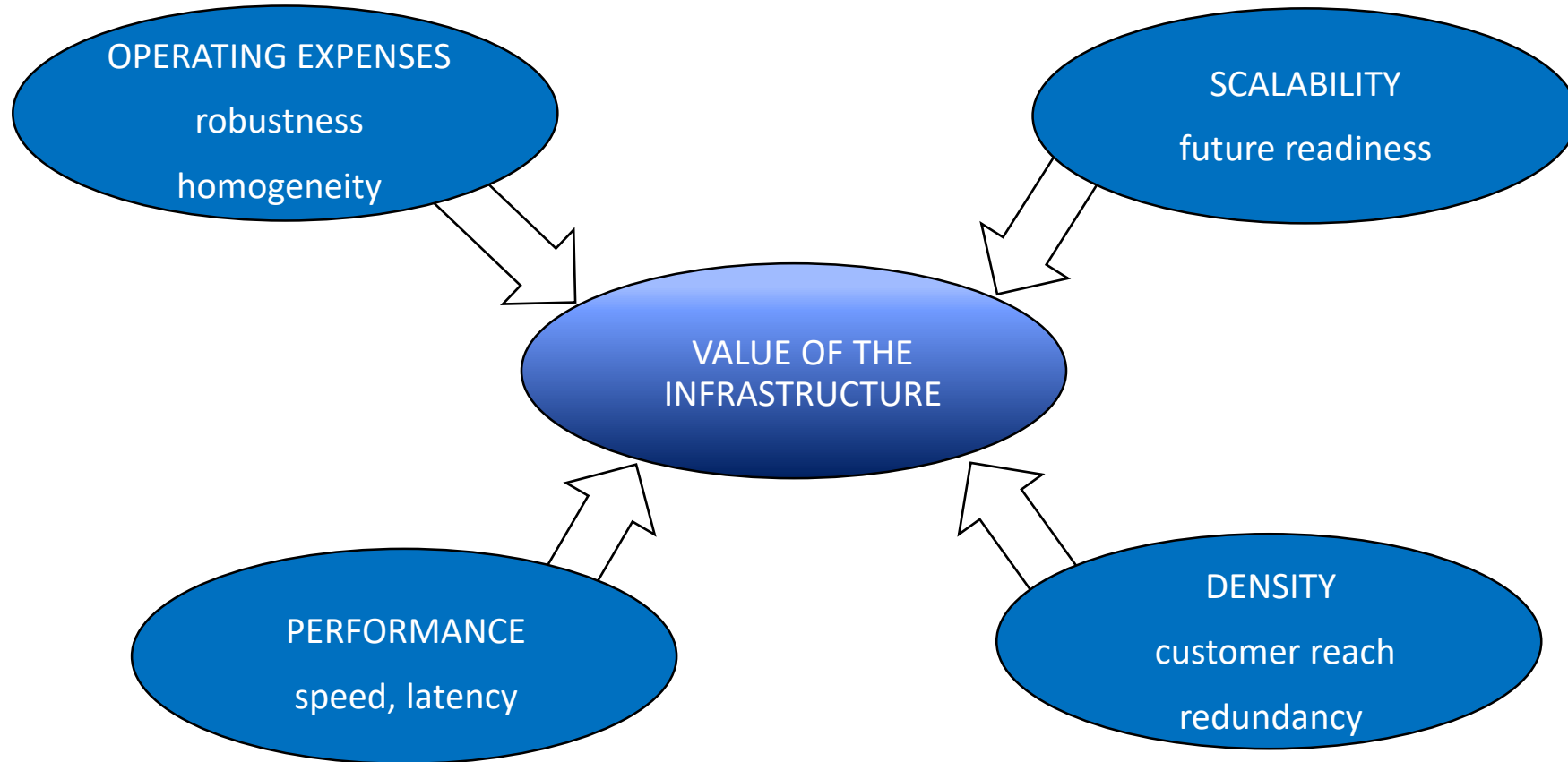


- 30 years of growth, and more to come
- Optical Fiber now largely a commodity
- Volume now back to its peak
- US growth driving the next 5 years
- Large part of the rise is non-Telco

+ growing military applications

A Long-Term Investment

the value of the infrastructure is determined by today's decisions



Challenges

wars and trade wars disruptions

scarcity of some key materials

labour shortage in certain countries

optical fibre shortage

What Really Matters

Long Lasting Robust Products

*facing decades of mechanical stress
and temperature cycling*

Avoiding:

- Service disruptions
- Re-investment
- Extra civil works
- Maintenance costs

- Installation time (usual 2-3 days)
- Installation costs (# half the Capex)
- Service disruption

A fibre network's life is tough!

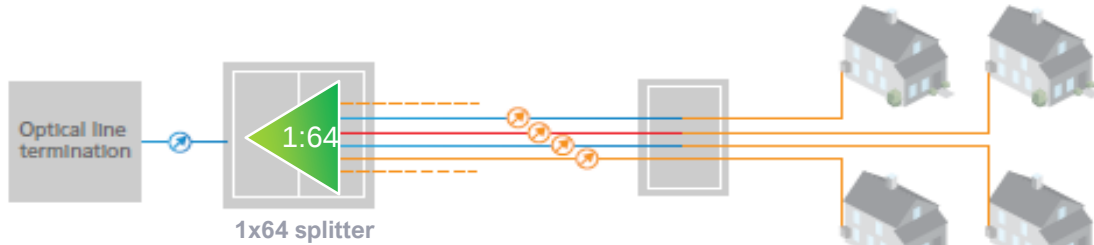
a network real life is tough!

raw fiber is a commodity, but connectivity is



FTTP – Network Topology Choices

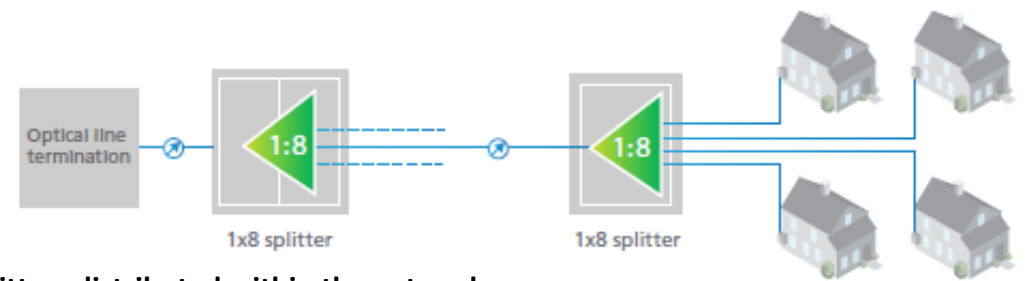
Centralized



“Home Run” individual fibers from Splitter to Subscriber

- Maximum network flexibility
- High Fiber count – increase installation and civils cost

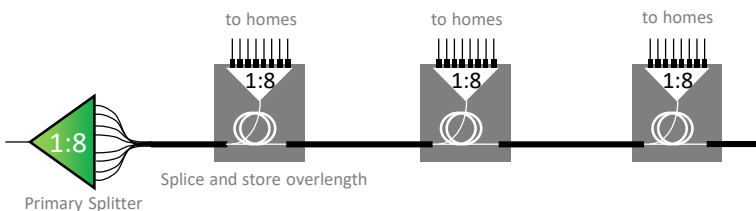
Cascaded - Star



Splitters distributed within the network

- Reduced fiber count – infrastructure needs
- OLT Port utilization and provision of PtP services within the network

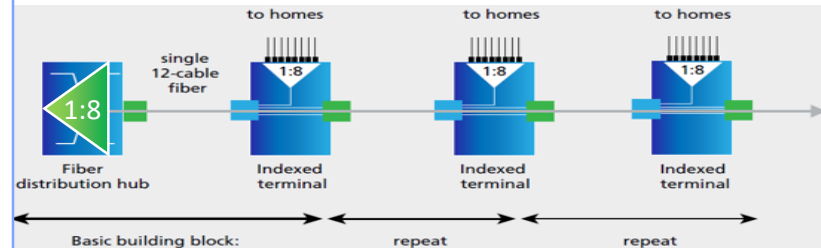
Cascaded – Spliced Daisy chain



Cable accessed at each terminal location and spliced to splitter

- Minimizes cable hauling, allows for simple PtP integration
- Requires cable prep and splice at each location

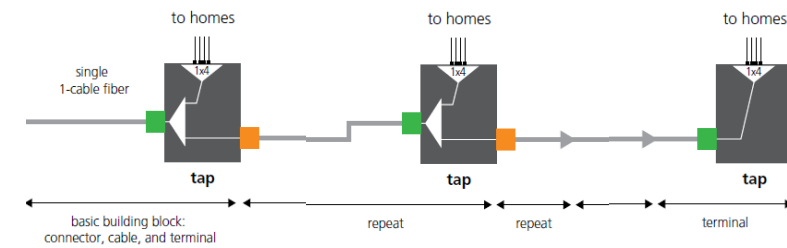
Cascaded - Indexing



Plug and Play cascaded PON

- Reduces installation requirements and speed of deployment
- Increased optical loss due to increased connectors

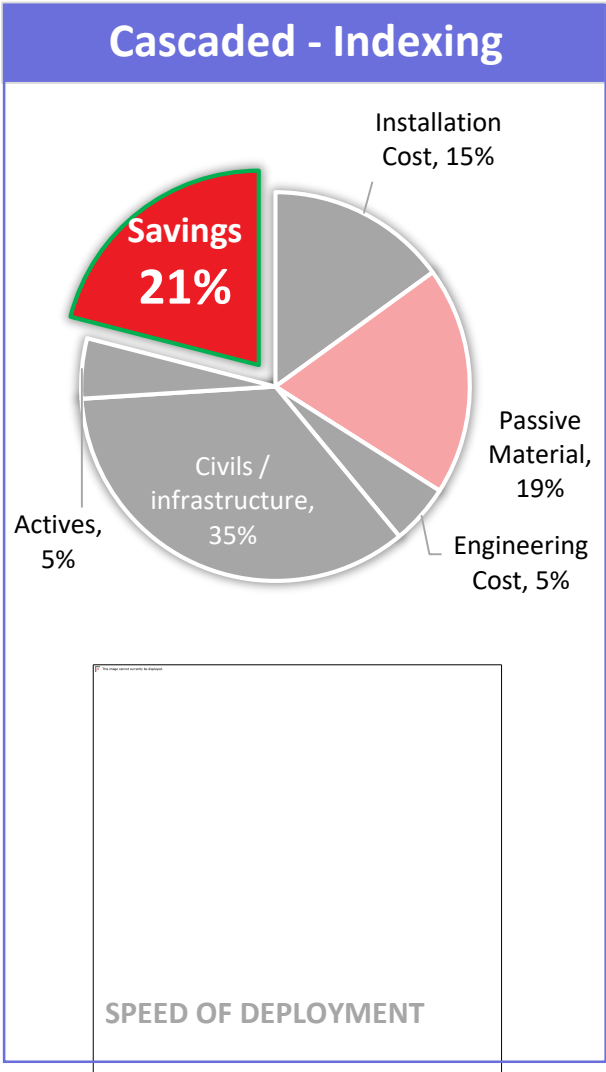
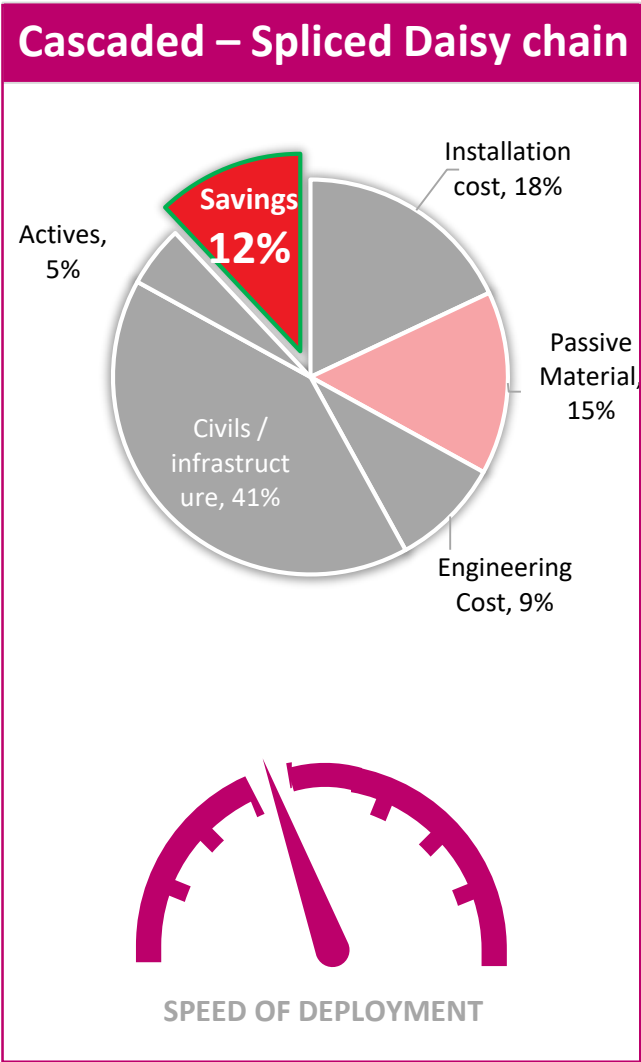
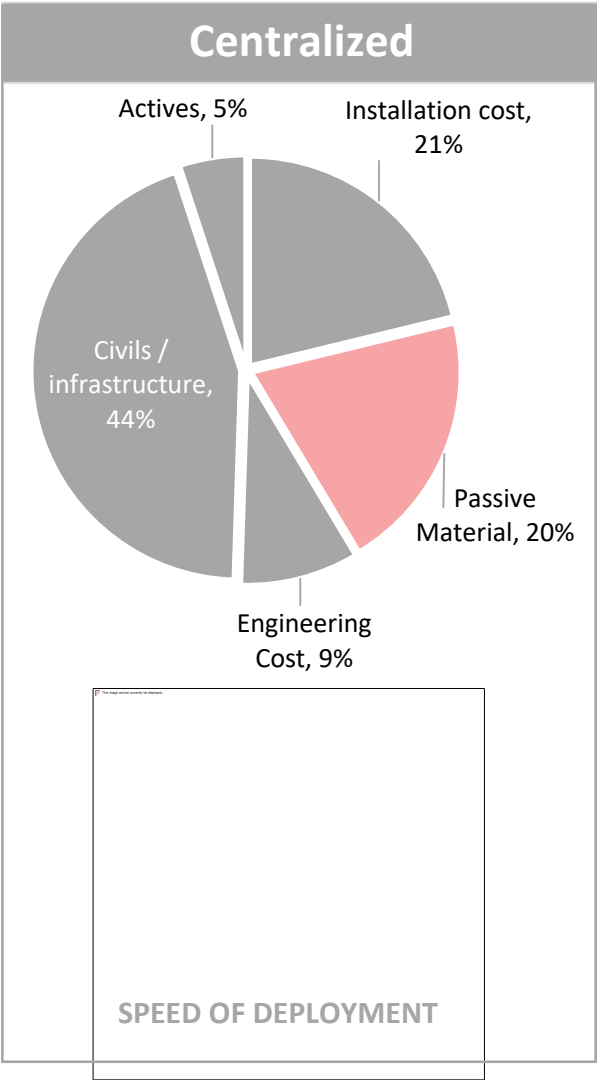
Cascaded - TAP



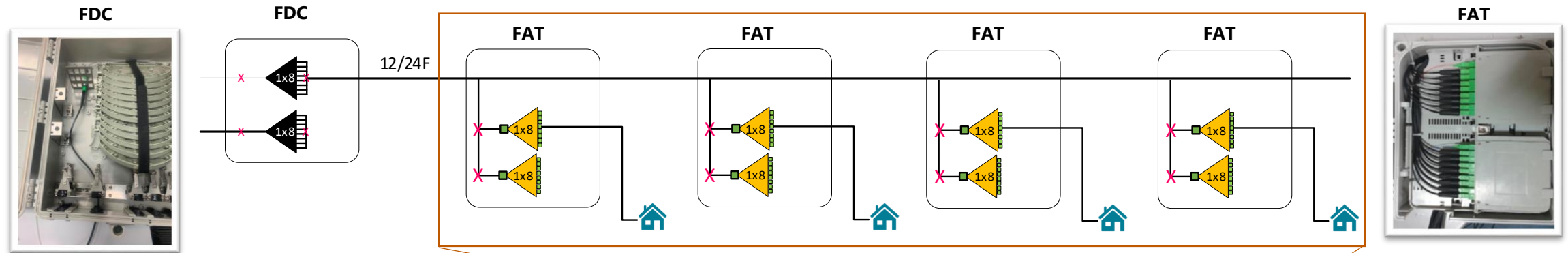
Singe fiber network diverting part of the signal to the splitter

- Lean fiber network with longer reach capabilities
- Additional planning and pre-engineering requirements

Network Topology Comparison



Traditional Spliced FTTH Network Architecture

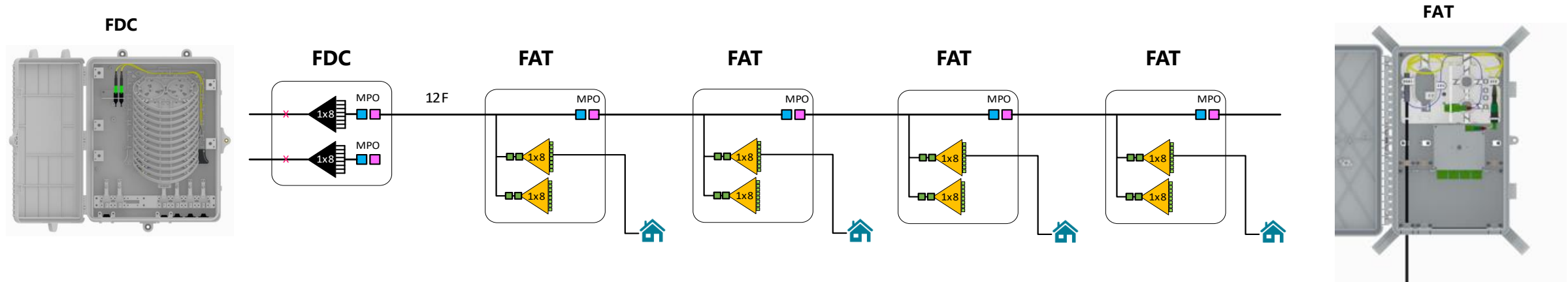


Challenges:

- High number of field splices
- High labour skills – splicing
- High labour content - truck rolls
- Speed of deployment – SLOW

- 4 FATs in each daisy chain provides 64 Home Passed
- Splicing in **every** enclosure

Plug & Play Solution with Connectorised Enclosures - Indexing



16x FDC and 128x FAT required for fibre serving area of **2048** homes:

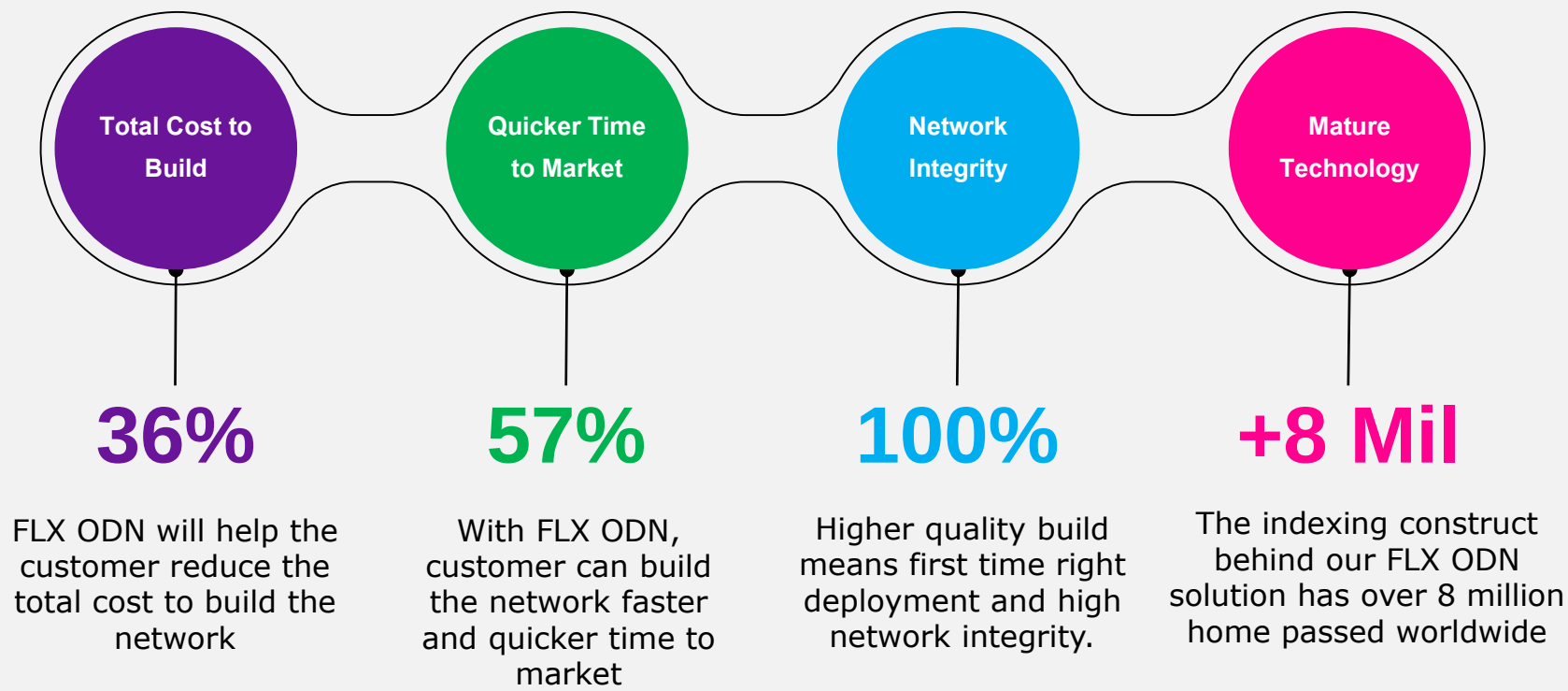
	Splice	Connectorised
Total splices:	576	32 [94% reduction]
No. splice locations:	144	16 [89% reduction]

Benefits:

- Speed of deployment – VERY FAST with **connectorised plug and play** for fast turn up
- **Low labour skills** – splicing only on input fiber (Day 1 activity only)
- **Quality & performance** – factory terminated cable assemblies

Indexing – CommScope FLX™ ODN Value Proposition

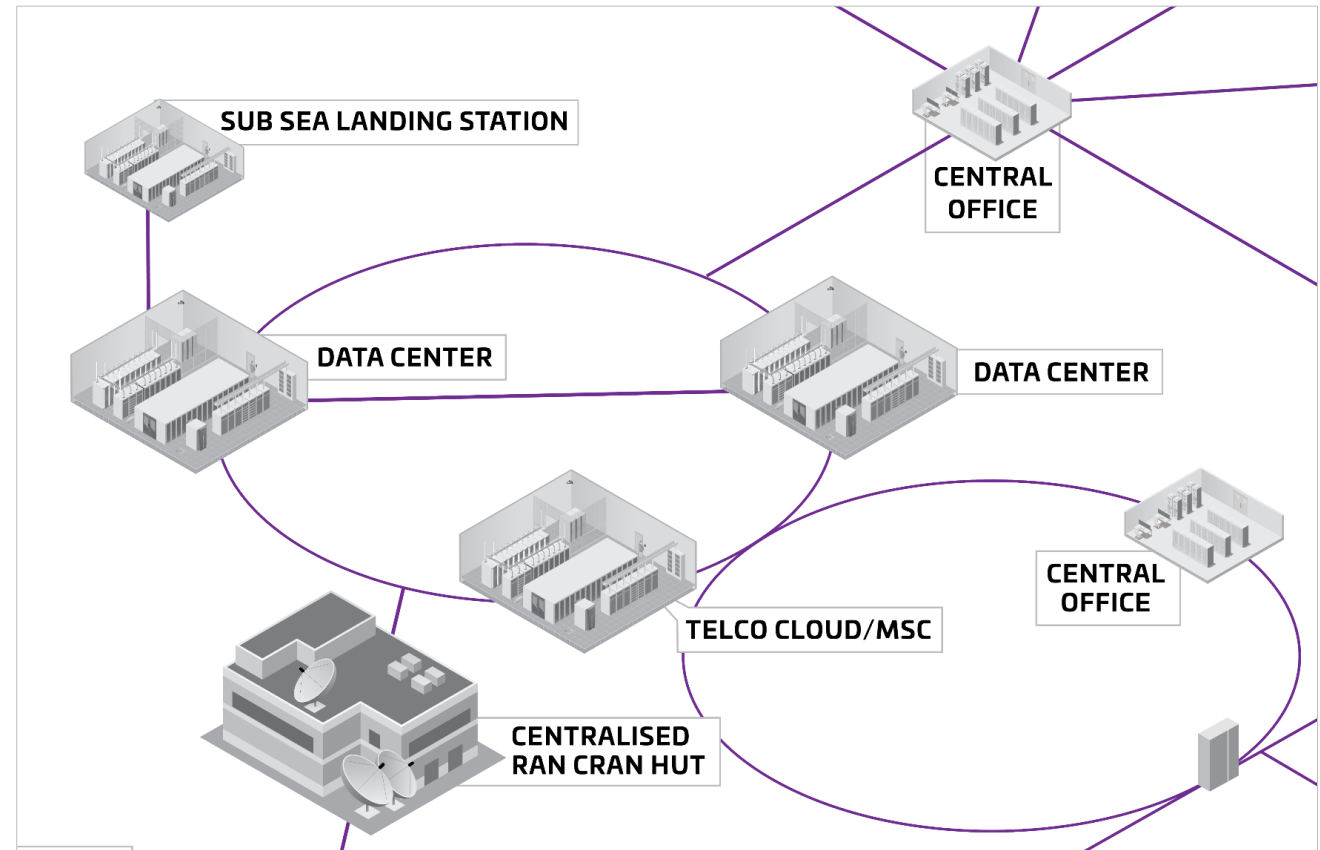
A pre-connectorised solution for building ODN FTTH networks.



Data Centre Interconnect

DCI is the networking infrastructure that links two or more data centres, allowing for high-speed reliable data exchange between them.

DCI enables data, applications, and workloads to move between distributed data centres, which is critical for modern services like cloud computing and AI.



DCI Network Categories

Inner Campus Connection (Cluster)

connecting buildings on a campus:

- Typically, <10km

Metro DCI

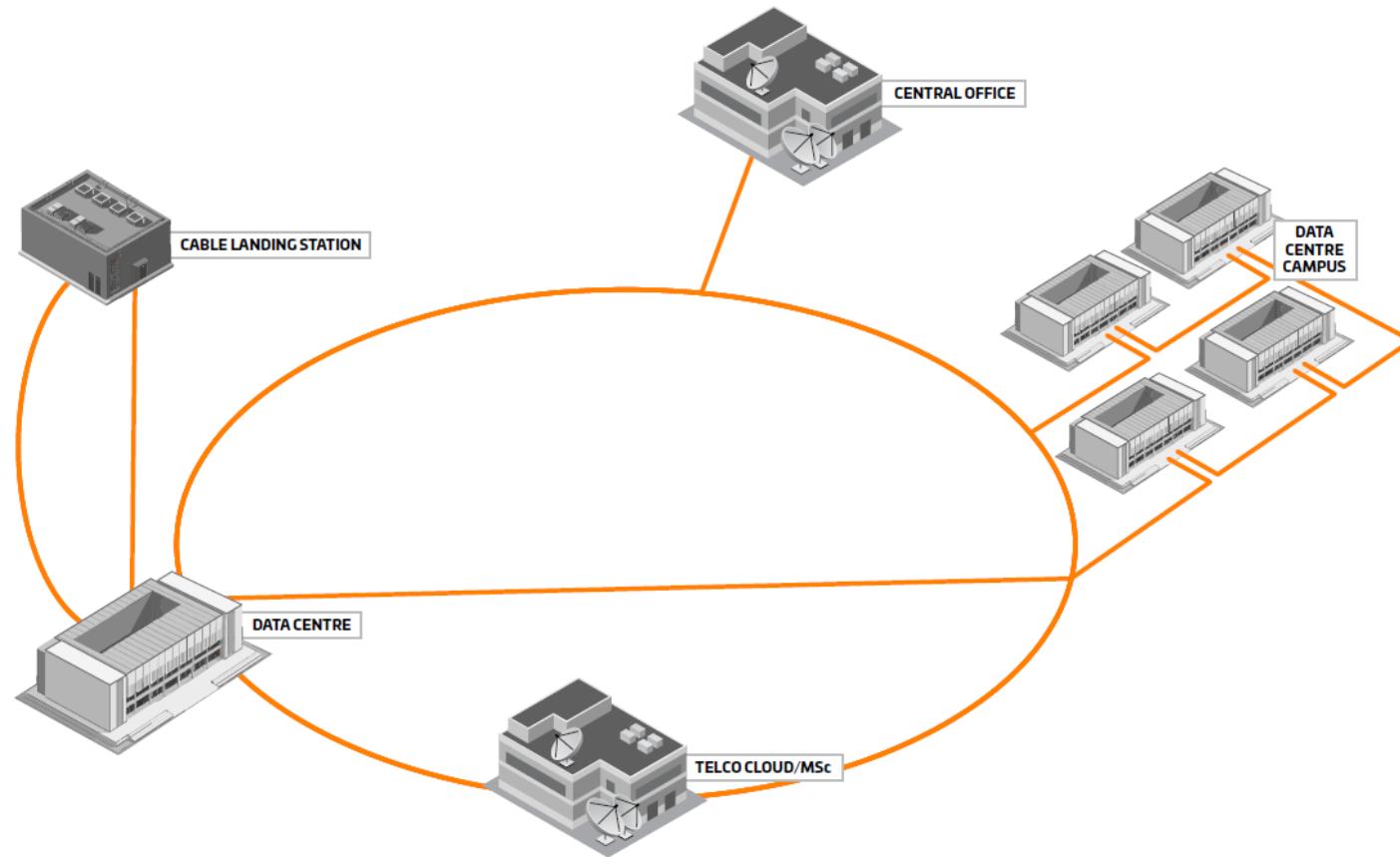
within city/metro area:

- Typically, 10 – 80km
- Also connectivity between cable landing station (CLS) / central office (CO) / DC

Long haul DCI

between major cities and spanning across continents

- Typically, >80km
- Requires in-line amplifier (ILA) sites:

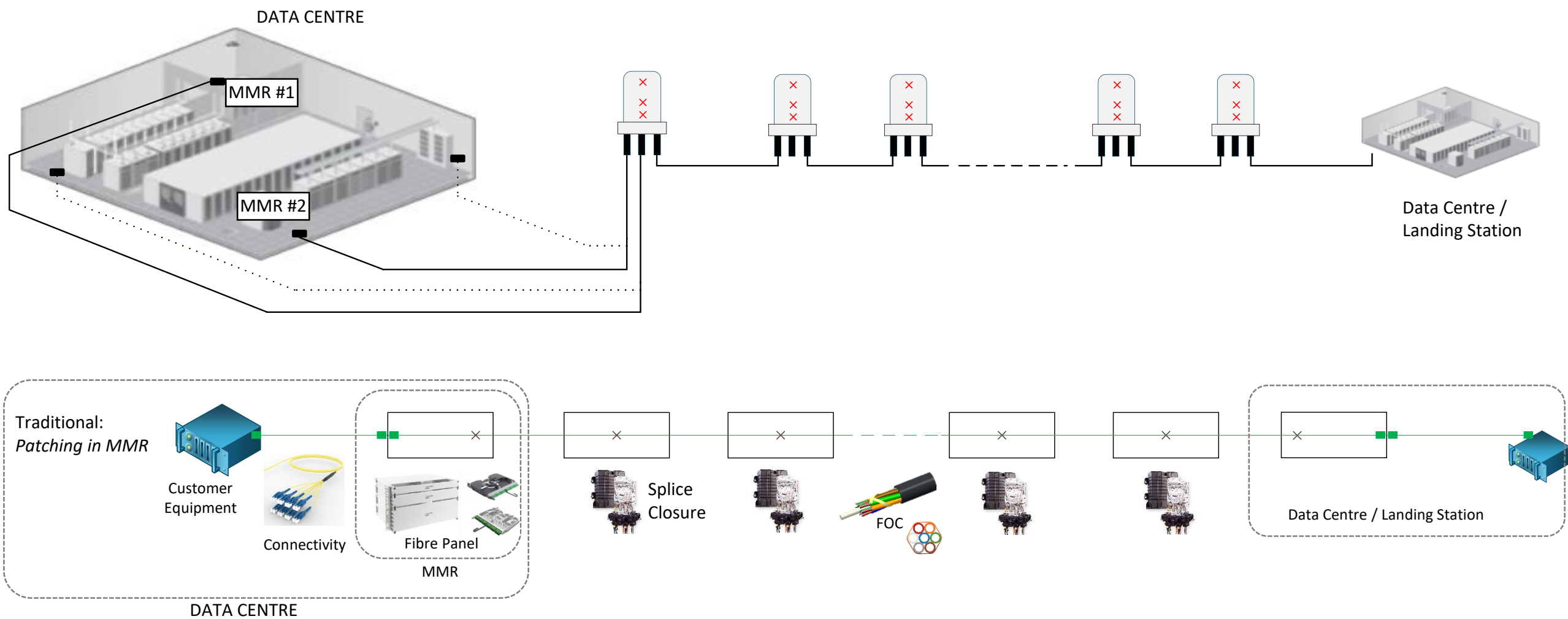


What differentiates DCI networks from others

	DCI (Dark Fibre Model)	FTTH / Standard Enterprise Fibre
Availability Commitment	• Very High uptime (99.9 – 99.99%)	• Typically, <99% uptime
MTTR (Mean Time to Repair)	• 4 – 8 hours	• FTTH: No Strict MTTR • Enterprise Network: May give 8-24 hours
Restoration Model	• Dedicated Crews, working with Technology principal (e.g., CommScope DC Pro Service)	• Standard ticketing, restoration often “best effort”
Diversity & Route Assurance	• Typically, 2-4 paths	• No diversity route
Performance Testing	• Full optical characterization	• Basic link tests
Financial Credits	• Tiered credit model linked to uptime performance and outage	• FTTH: No credits • Enterprise Network: Limited credits, low percentage
Contract Structure	• 10-15 years, or in some cases longer	• FTTH: Month to month or short-term contracts • Enterprise Network: 1–3-year service agreement

Sources: CommScope Global Experience on Data Center Interconnect (North America, Europe, and APAC)

Network Overview for Metro/Campus DCI



Data Centre Interconnect Building Blocks

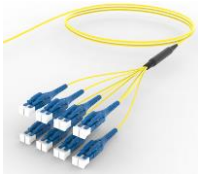
CommScope full offering on Products (OSP and ISP) and Services

Inside Plant Fibre / MMR:

Modular range of frames, panels and entrance cabinets.
Pre-connectorised cable solutions.
Factory quality for quick, reliable and efficient deployment.



Splicing cabinet



Patch cords and cables



Optical distribution frame

Fibre Optic Cables (FOC):

Underground and aerial applications.
Available with G.652.D, G.657.A1/A2, G.654.C fibre types.



Micro duct ABF



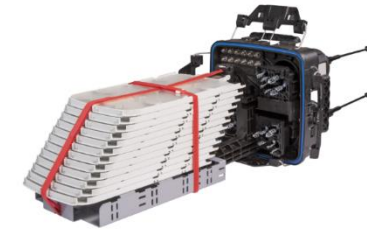
Rollable ribbon



Stranded loose tube

Fibre Splice Closures:

Field proven to reduce the total cost of ownership.
Intuitive design requiring no special tools or skills.
From small size up to 6,912 mass fusion splices.



FOSC



FIST

DC Professional Services capabilities: Design and installation works; Testing, certification and documentation; Operational support and post deployment



Thank You!

