



FTTH 2025
CONFERENCE **AMSTERDAM**
25-27 MARCH

Workshop 5/1

There is Life After Fiber (Rollout)

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Status of FttH roll out in the Netherlands

Mathieu Andriessen - managing director

A close-up photograph of several network cables (red, green, blue, white) plugged into a white network switch. The cables are plugged into the ports on the right side of the switch. The background is a plain, light-colored surface.

90 members from the broadband value chain

- Telecoms and broadband network owners (mobile, fiber, cable, DSL, fixed wireless)
- Telecoms contractors
- Vendors
- ISPs and TV providers







Dutch FttH roll out: 99% HP

Dutch housing stock

9.000.000

6.000.000

3.000.000

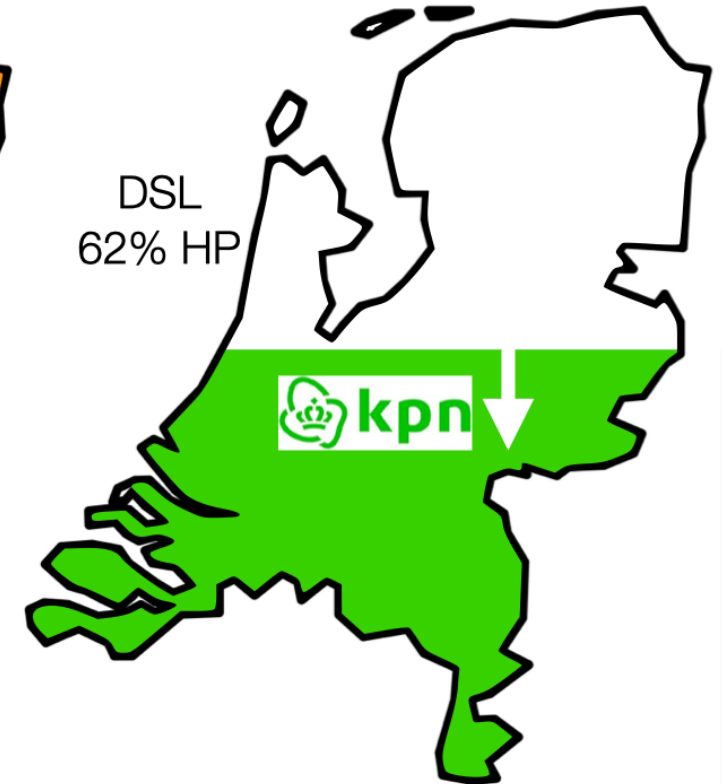
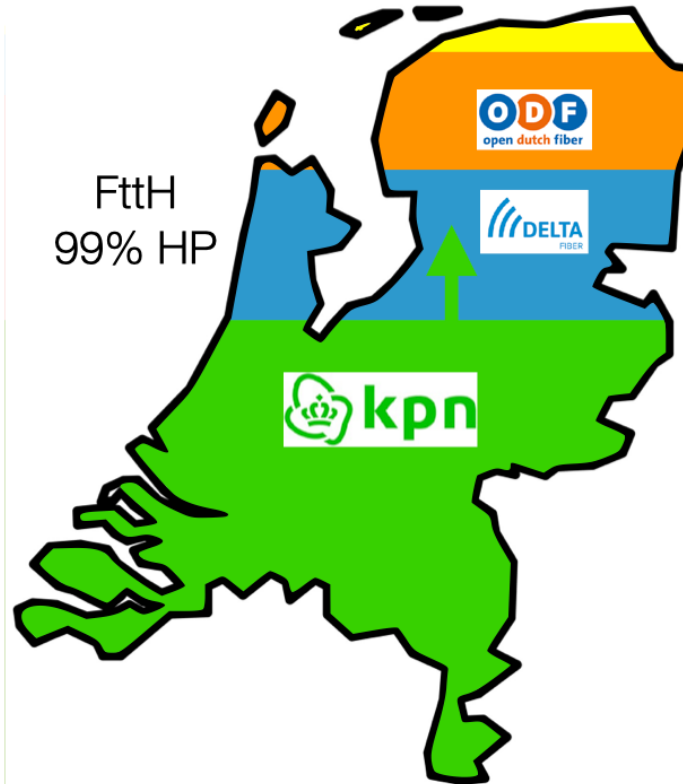
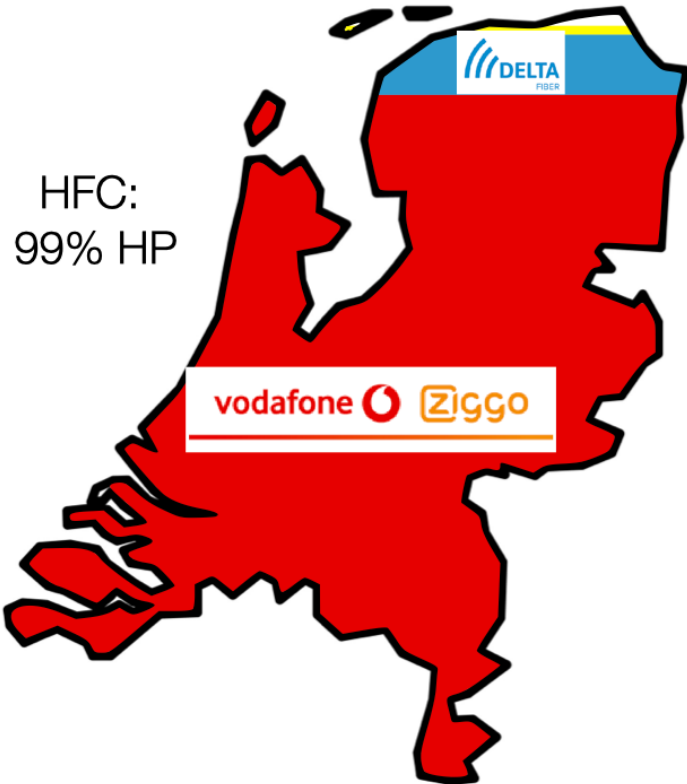
2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024

FttH Homes Passed



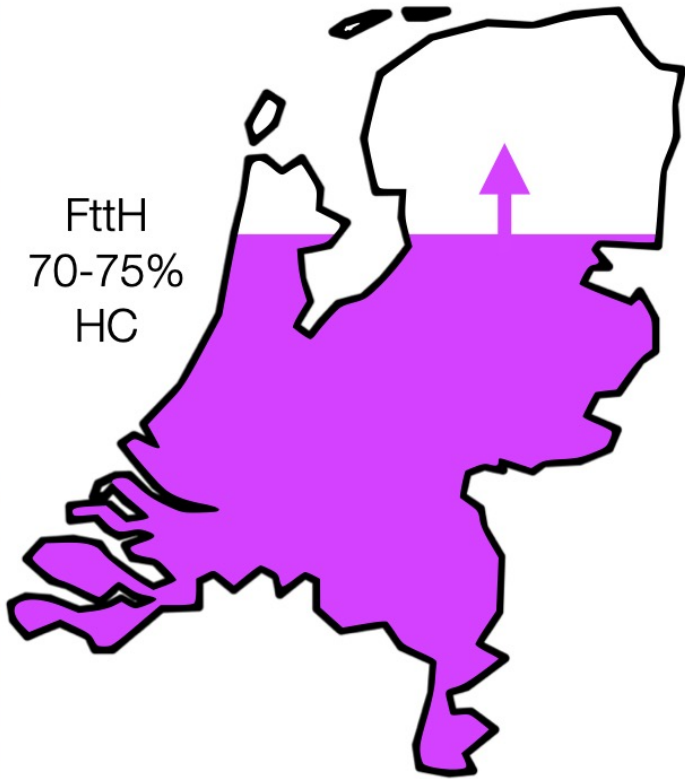


Two fixed gigabit networks + copper switch off





HP≠HC: ± 2.5 mln homes remain to be connected

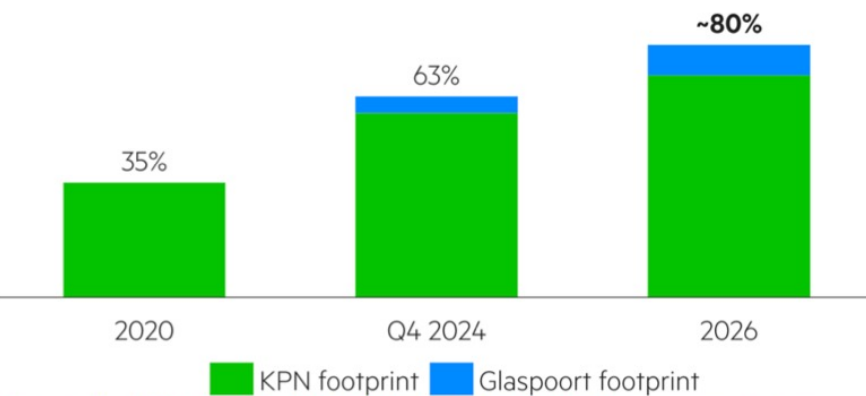




FttH overbuilds....

Leading fiber footprint

homes passed as a % of Dutch households



- small number of overbuilds to date
- but KPN 2026 goal is +1.4 mln HP (!)



.....or consolidation?



11 januari 2024

Glasvezelnetwerk Coöperatie Glasvezel Noord overgedragen aan KPN

KPN en de Coöperatie Glasvezel Noord (CGN) hebben op 11 januari 2024 overeenstemming bereikt over de overname van het glasvezelnetwerk van de coöperatie. De ledenraad van de coöperatie heeft daar unaniem mee ingestemd. Het netwerk bestaat uit circa 3700 adressen en ligt in het noorden van Drenthe. De adressen in de buitengebieden van de gemeenten Assen, Noordenveld en Tynaarlo zijn voorzien van een glasvezelaansluiting, van CGN.

Glaspoort B.V.,
Holding B.V (A
Netwerk B.V. o
Consument en

Glaspoort en DELTA Fiber Netwerk vragen een vergunning aan voor overname (concentratiemelding)

KPN KIEST VOOR DIGITALE STAD

In juli 2024 heeft KPN het glasvezel netwerken in Lochem overgenomen van Digitale Stad. Digitale Stad zal als strategische partner namens en in samenwerking met KPN een rol blijven spelen bij de exploitatie van het netwerk. Naast het incasseren van de maandelijkse vastrechtvergoeding zal Digitale Stad het aanspreekpunt blijven voor alle vragen van bewoners. Zowel voor bewoners met een opgeleverde glasvezelaansluiting als ook voor

Delta neemt glasvezelnetwerk Rodin over

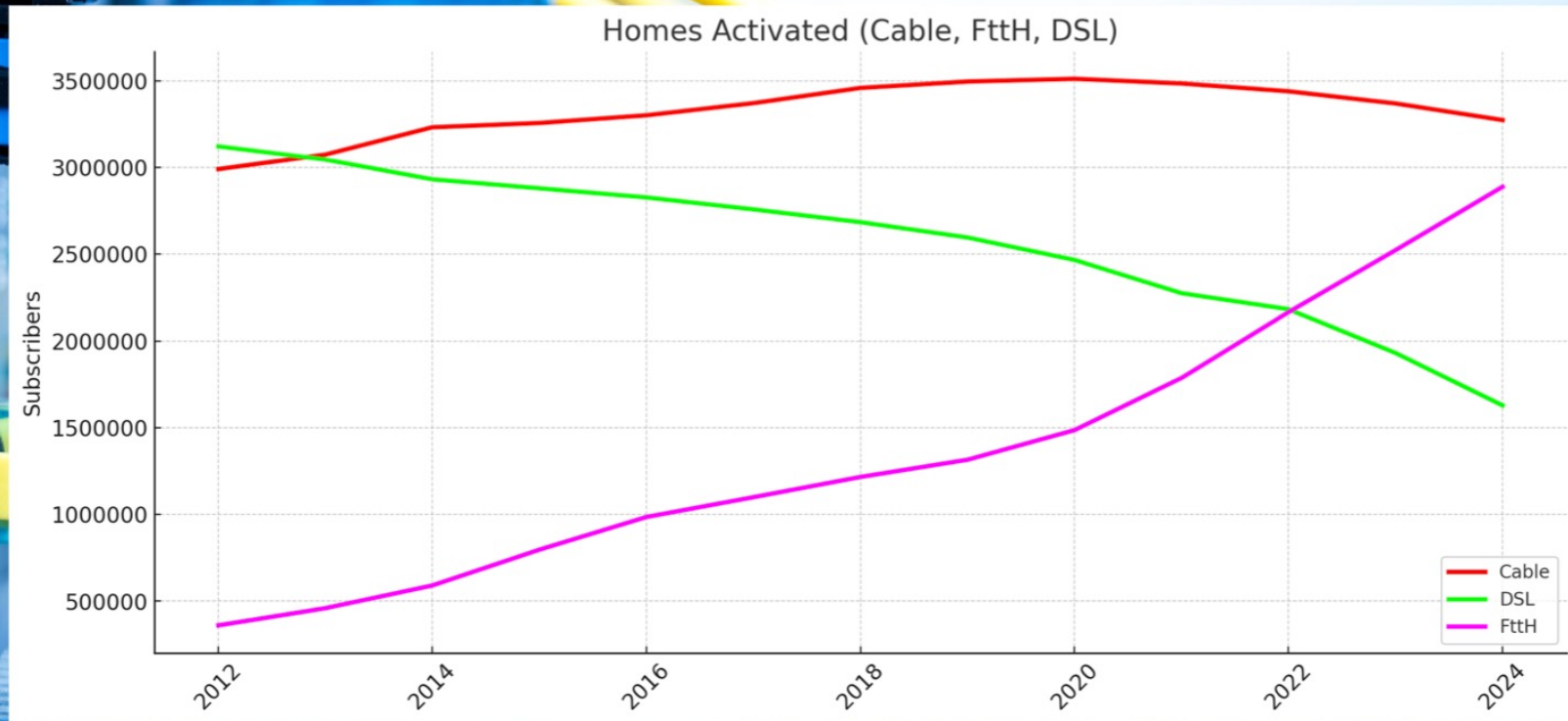
2 juli 2024, 11:44 - 1 minuut lees tijd



odijn Broadband Groningen en Rodin wordt
A Netwerk in Schiedam. De Rodin-bedrijven
ta heeft een akkoord bereikt met de curator.



FttH due to overtake DOCSIS Homes Activated





Opportunity for FttH growth: gigabit demand





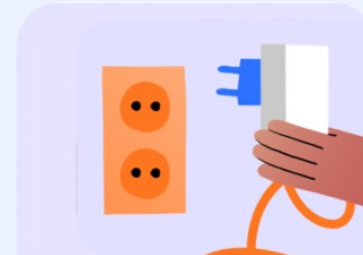
Challenge for FttH growth: 5G FWA

Klik&Klaar Internet werkt zo.



Stap 1

Klik de simkaart in het 5G-modem.



Stap 2

Steek de stekker in het stopcontact.



Stap 3

Klaar. Je bent online.



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FttH Conference 2025

RAI AMSTERDAM

Building Resilient Networks for a Connected Future

NLconnect Workshop

March 25th 2025 – Jochem de Gruyter, CEO at AFIBER



AFIBER

AFIBER: PERSONAL. RELIABLE. TRUSTED.

- Dutch specialists in **high-performance FTO** and **Datacenter** connectivity
- Providing reliable B2B network solutions: **Dark Fiber, Wave, EPL, DIA**
- Experience in **secure, redundant, and high-availability** networks
- **National and international customers** that require 24x7 uninterrupted services

RED
BEE

youfone

talpa
network

Securify

LIBERTY
GLOBAL

NTT Communications

freedom
internet

GNX

Zayo

Fremantle

intermax

RETN

expereo

bizway

RTL

mobilelinks

ASIMO
NETWORKS

AFIBER

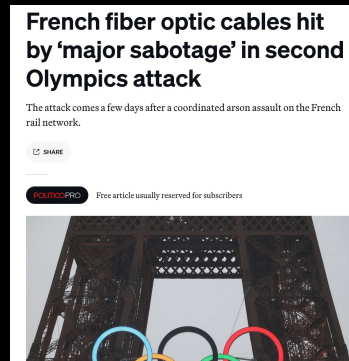
CHALLENGE: CONSUMER NETWORKS AT RISK

- **Animals**, rodent damage
- Damage caused by **vehicles, machinery** (excavation damage), or maritime activities (dragging damage)
- **Vandalism, terrorism**, planned sabotage
- **Natural disasters**, storms, earthquakes
- **Data intrusion**, unauthorized eavesdropping/tapping, in-flight data manipulation
- **Unauthorized access** and activities



CHALLENGE: CONSUMER NETWORKS AT RISK

- **Accidental fiber cuts** (construction, gardening, roadwork)
- **Cyber threats** targeting home and business networks
- Increased **demand for reliability** with remote work, IoT, and home apps
- Critical **impact of outages** on communication, healthcare, and security



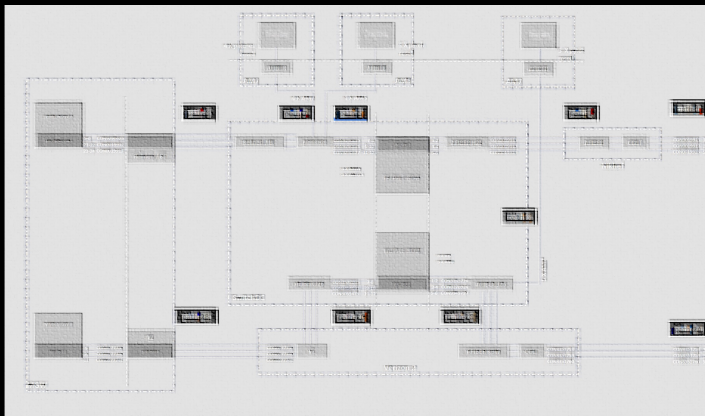
BEST PRACTICES FROM BUSINESS NETWORKS

1. **Implementing diverse and redundant paths** for resilience
2. **Proactive network monitoring** and Automated & AI-driven fault detection
3. **Standardized security measures** to protect consumer data
4. **Collaboration between ISPs, infrastructure providers, and government bodies**



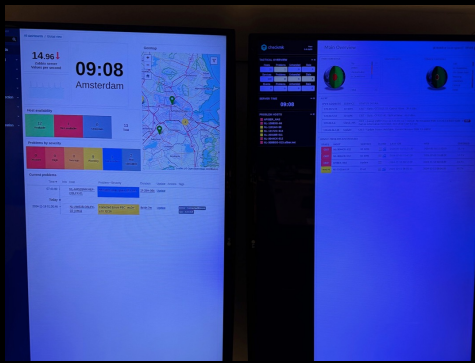
BEST PRACTICES FROM BUSINESS NETWORKS

- Addressing **in-home network reliability** (WiFi optimization, fiber-to-the-room)
- **Strengthening cybersecurity** for home networks (firewalls, encryption)
- Providing **critical redundancy** for smart homes and emergency services
- **Policy and industry collaboration** to drive resilient consumer networks



ENHANCING CONSUMER NETWORK STABILITY

- Deploying **automated failover mechanisms** to ensure uninterrupted service
- **Redundancy** at multiple levels: backbone, last mile, and in-home networks
- Improving **ONT resilience and edge device** robustness
- **Disaster recovery and alternative routing** for consumer fiber networks
- Create a **national ISP backup programme** to support emergency coverage



BUILDING RESILIENT FIBER NETWORKS FOR ALL

- **Network resilience** is key to uninterrupted digital experiences
- **Lessons from enterprise fiber design** can enhance consumer reliability
- **Industry collaboration** needed to protect consumer infrastructure
- **Let's work together** to ensure a more connected, secure future



THANK YOU

Physical Layer Components Security Risks in Optical Fiber Infrastructures

<https://www.mdpi.com/1424-8220/22/2/588>

Red Sea cables: How UK and US spy agencies listen to the Middle East

<https://www.middleeasteye.net/news/red-sea-cables-how-us-uk-spy-agencies-listen-middle-east>

Physical-layer security in evolving optical networks

<https://ieeexplore.ieee.org/abstract/document/7537185>

Security threats and protection procedures for optical networks

<https://ietresearch.onlinelibrary.wiley.com/doi/full/10.1049/iet-opt.2016.0150>

Analyzing vulnerability of optical fiber network considering recoverability

<https://www.sciencedirect.com/science/article/abs/pii/S095183202100778X>





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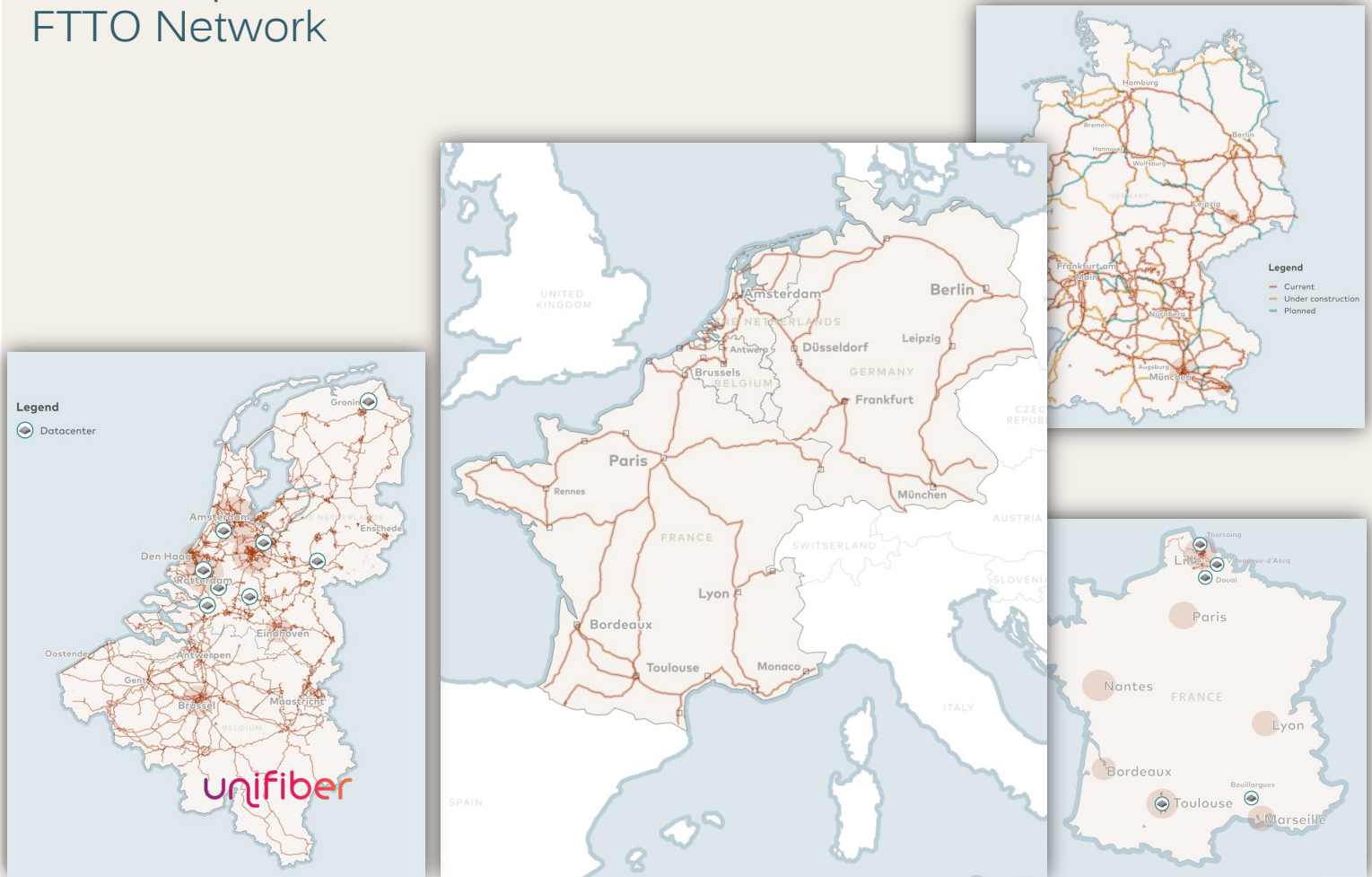
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The Footprint of Eurofiber's FTTO Network



- 
Since 2000
- 
72.300 km fiber network
- 
11 datacentres
- 
Revenue 2023: € 279M
- 
€ 200M annual investments
- 
Platinum ranking Ecovadis

Vital

digital infrastructure

Eurofiber at a glance



euofiber CUSTOMERS

- ✓ Mobile, ISP, Telco
- ✓ Enterprise, Governments
- ✓ Healthcare, Education
- ✓ Objects, Masts, OT

euofiber COVERAGE

- ✓ Benelux, France, Germany
- ✓ Long haul, Metro, Access
- ✓ 72.300 route km's

euofiber OPEN NETWORK

- ✓ Horizontal Design
- ✓ Network of networks
- ✓ Private
- ✓ Network infra only
- ✓ Fiber Based



Where fiber-optic ends, we continue wirelessly

Eurofiber introduces the Connected Workspace

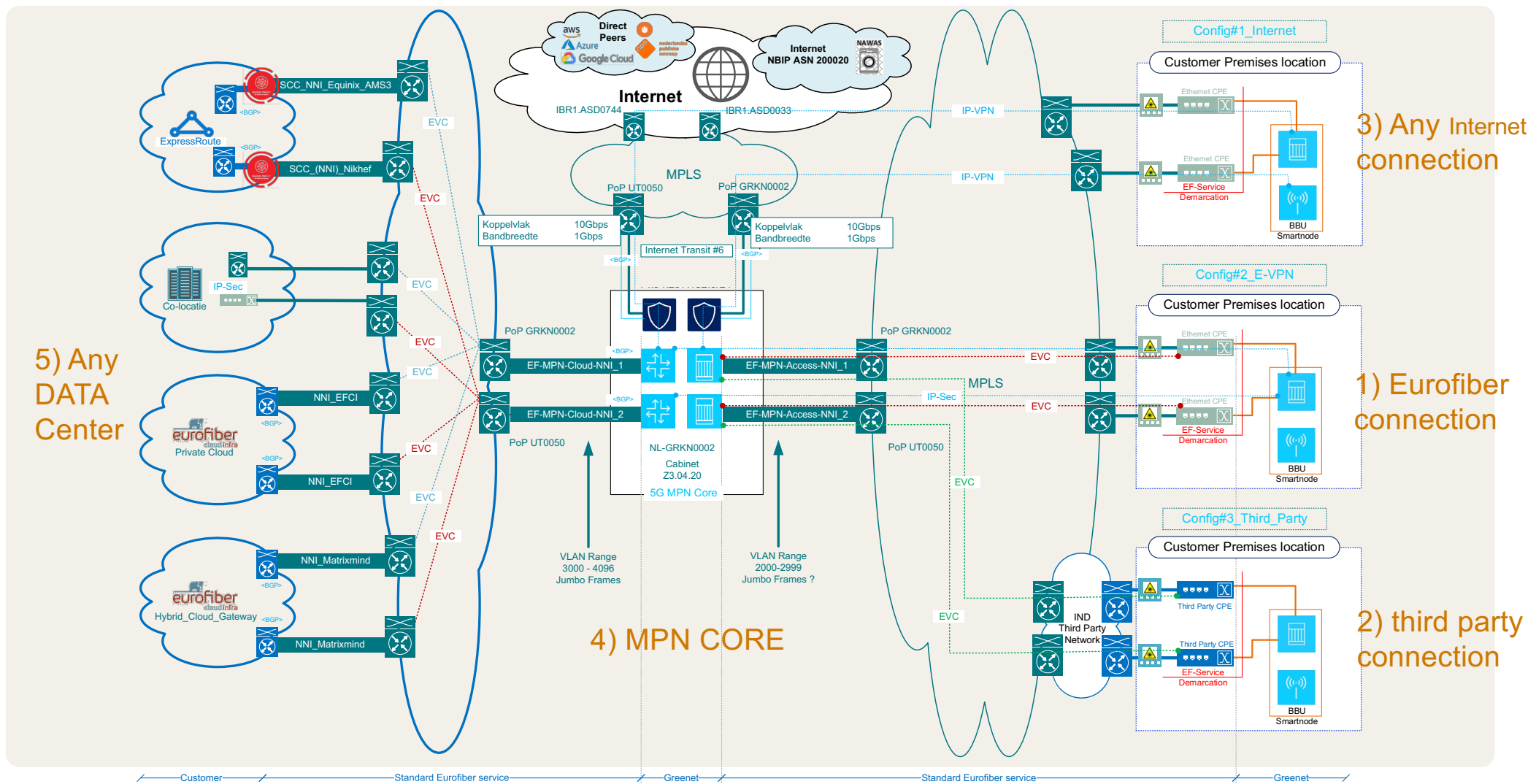
Maarsse, August 15, 2024. The announcement was already made during the Mobile World Congress 2024. Eurofiber introduces Mobile Private Network in collaboration with Nokia. With this, we combine business fiber-optic and private mobile networks into an intelligent connectivity solution for our customers. We call this solution Connected Workspace.

Mobile Private Networks fundamentals

The Eurofiber open network strategy

- We are an infrastructure player, and we would like to focus on the infrastructure- and network layer of MPN-networks.
- We are horizontally positioned, and we focus on the connectivity layer only, i.e. we are not an IT company and we do not have the intention of becoming one.
- We are looking for sustainable long-term partnerships (both commercial and operational) to accelerate our and your ambition.
- We have a nationwide open fiber network, a significant installed base and are part of the Dutch critical network infrastructure.
- We are unique in providing a Mobile Private Network solution as extension of the Eurofiber fixed connection. Like the fiber connection, the MPN will be SLA based and provided to you as a services.





5) Any DATA Center

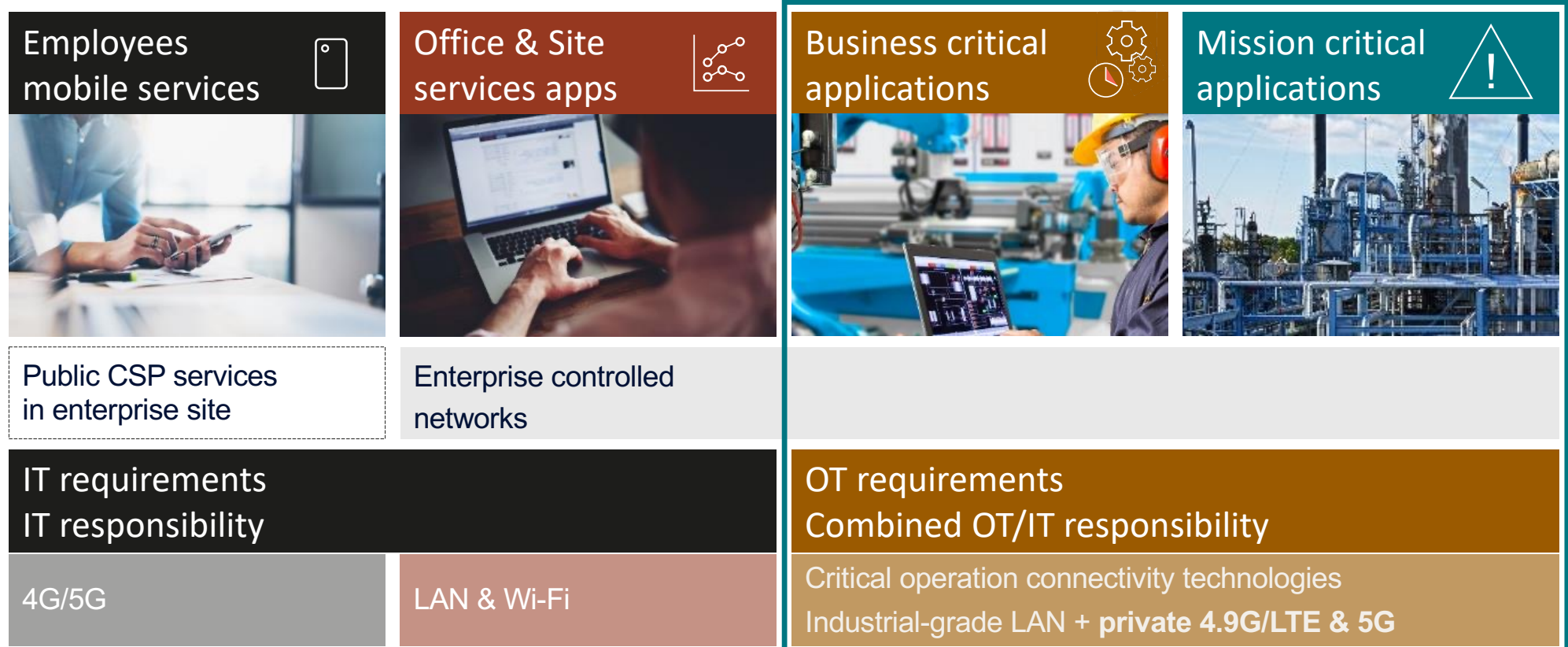
3) Any Internet connection

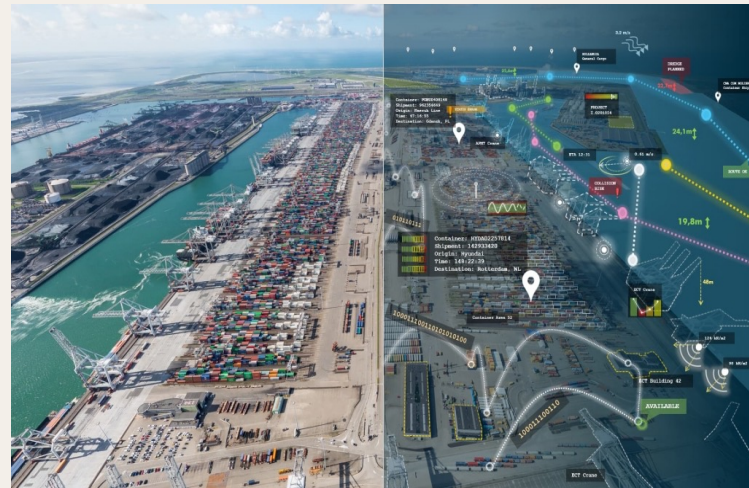
1) Eurofiber connection

2) third party connection

4) MPN CORE

Different application domains in same industrial site



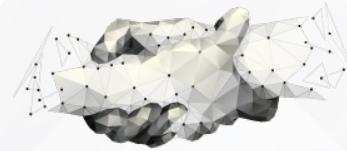


Thank you!

Jeroen Thijsen

Business Development Eurofiber





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WORKSHOP: There's life after fiber (rollout)

Speer IT
Cocon Δ oFiber Δ



Introduction



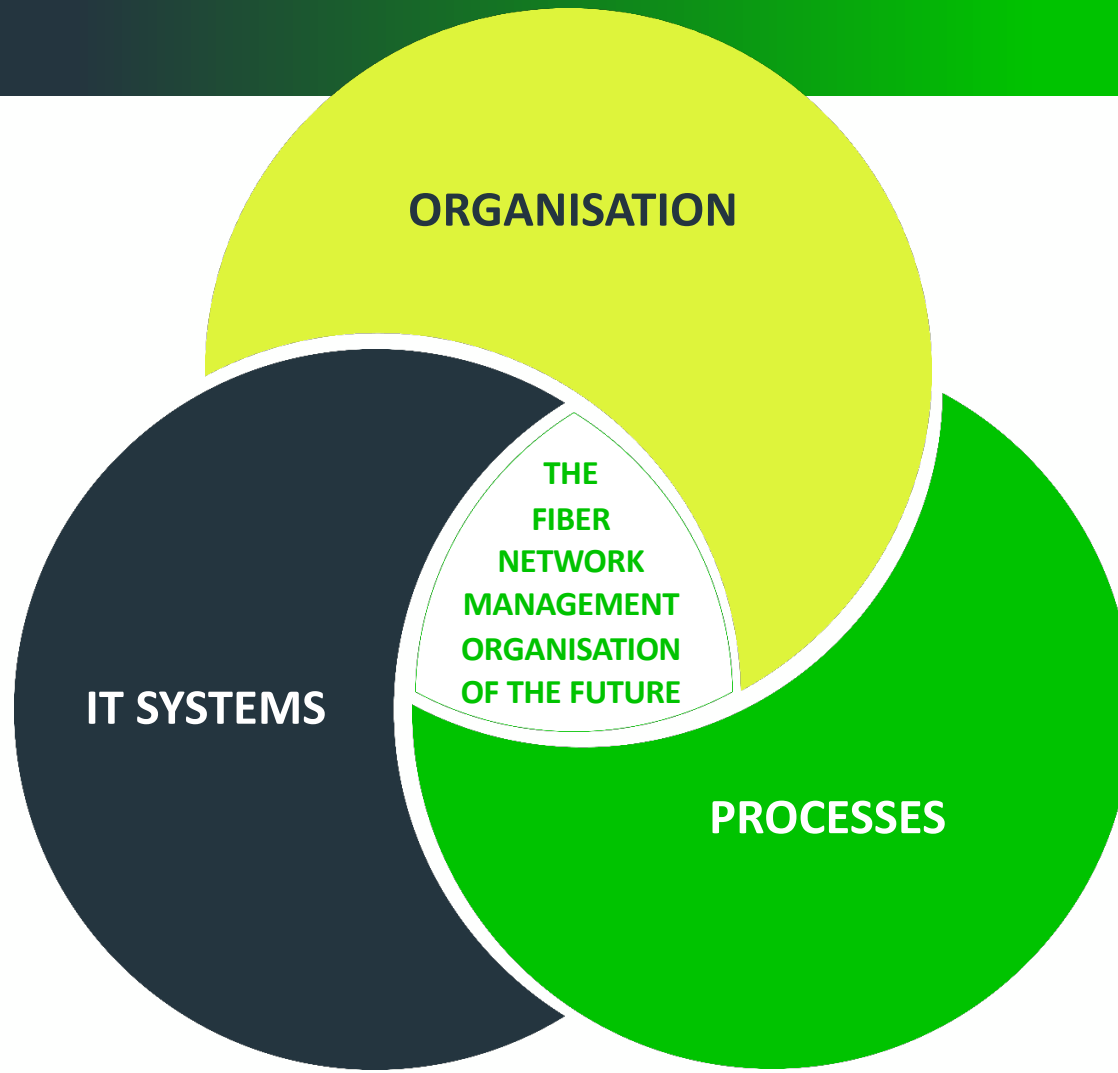
Kees Jonker
CEO
Speer IT



Jort Wever
VP Network Management
KPN

“

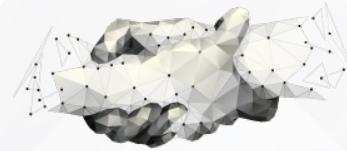
The Fiber Network Management Organization of the Future



TAKE AWAY



**IT systems and data-driven
operations —
high-quality data is the foundation
for the network of the future.**



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