

# AI x Telecoms: Accelerating the Intelligent World



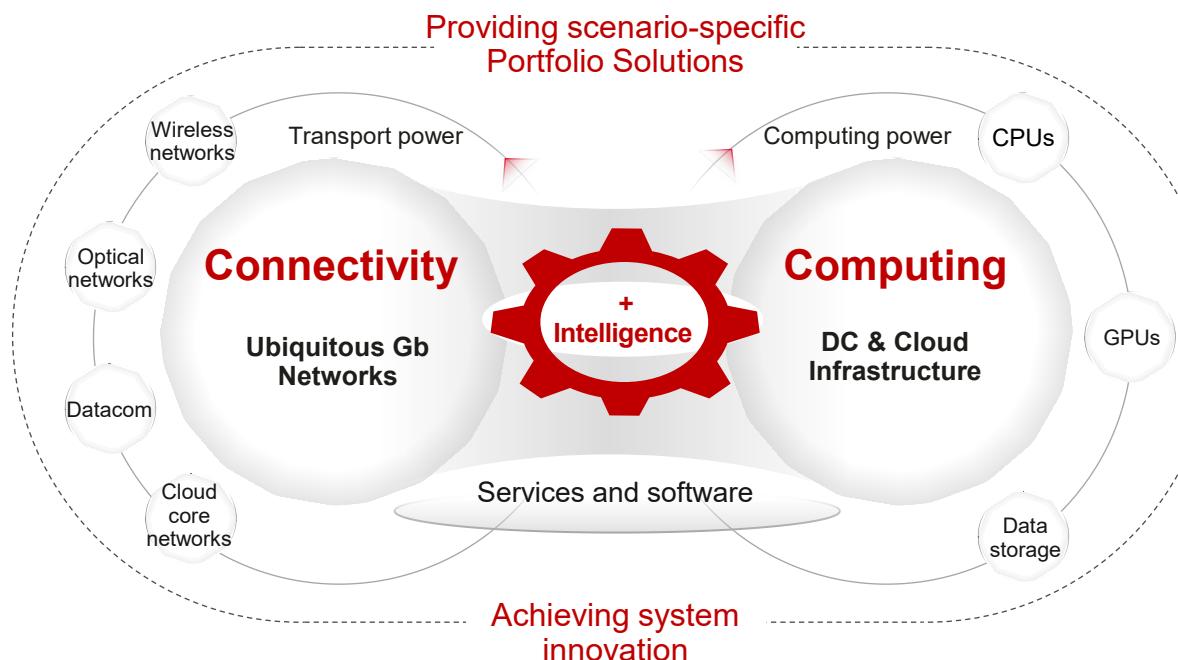
**Keynote presentation for: InfoCom World 2025, AI-Volution A Brave New World**

# Advanced ICT infrastructure is the foundation of the brave new intelligent world



## Connectivity

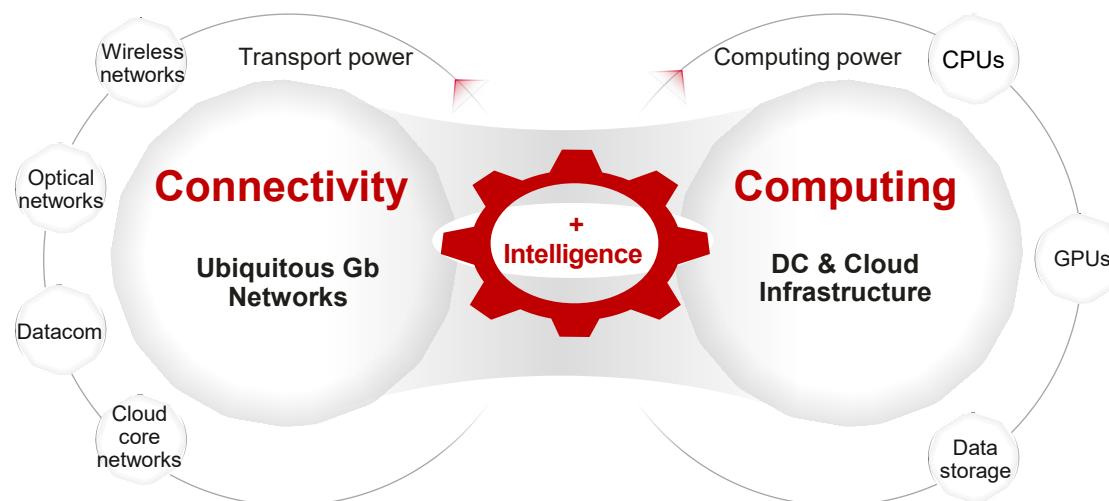
- **Networks for AI, AI for Networks.**
- Unlocking the potential of mobile AI with 5G-A, and enabling ubiquitous 10Gbps connectivity with Next Generation Fiber Access & Transport.
- Building premium computing networks for the age of AI.



## Computing

- Diversified Computing Capabilities.
- Building future-proof Storage power to unleash the value of data.
- Effective & Diverse Green Energy Generation and Energy Storage Solutions.

# AI will impact both the business & network domains of the telecom industry



## AI for Services:

### Experience Monetization

- Speed-tiering
- AI specific Tariffs
- UL focus

### AI Devices & Services

- AI Phones
- AI Glasses
- AI Assistants / Agents

### Innovative Bundling

- Enable AI + Connection Service to drive new growth.

## Network for AI:

### DC-centric target network

DCN    ↔    DCI    ↔    DCA

Lossless &  
High throughput

High-performance & Cross Region

Agile access for AI services



Scenario based Agents



## AI for Network:

### Autonomous Driving Network L4

DCN: Data Center Network DCI: Data Center Interconnect DCA: Data Center Access

# AI for services: Enabling MBB tariff innovation + innovative upselling

## Experience Monetization

### ➤ Speed-tiering Packages:

- Adopted by **32** EU Operators from 19 Countries.
- 20+ EU Operators Release **1 Gbps** Packages.

### ➤ Scenario Experience Packages:

- Hotspot Booster / Live Streaming / Gaming Acceleration.
- **UL-based Packages:** In 80% of AI agents' multimodal interactions the Uplink > Downlink.
- **DL:UL For a Video Call is: 1:1**
- **DL: UL For Object Recognition is : 1:50**

## AI Services

- **AI Phones:** **80%** penetration rate by 2030.
  - Information searching via AI Bots and AI Apps.
  - Personal Assistants.
  - Calling Agents.
- **AI Glasses:** **80m** devices by 2030.
  - Video Calls.
  - Object Identification.
  - Visual Information Browse.
- **Call Assistants & AI Apps:**
  - Call Summary.
  - Call Transcription.
  - Real-time Translation.

## Innovative Bundling

- **AI Privileges:** 9+ Operators already using Comms Subscription + AI Bundling for User Retention.

- **AI Glasses Bundle:** €4.25 for 48 month Contract

**With contract**  
**Mobile Only**  
A device from  
4.25€/month  
+19€ initial payment

### Special Series 180GB 5G+

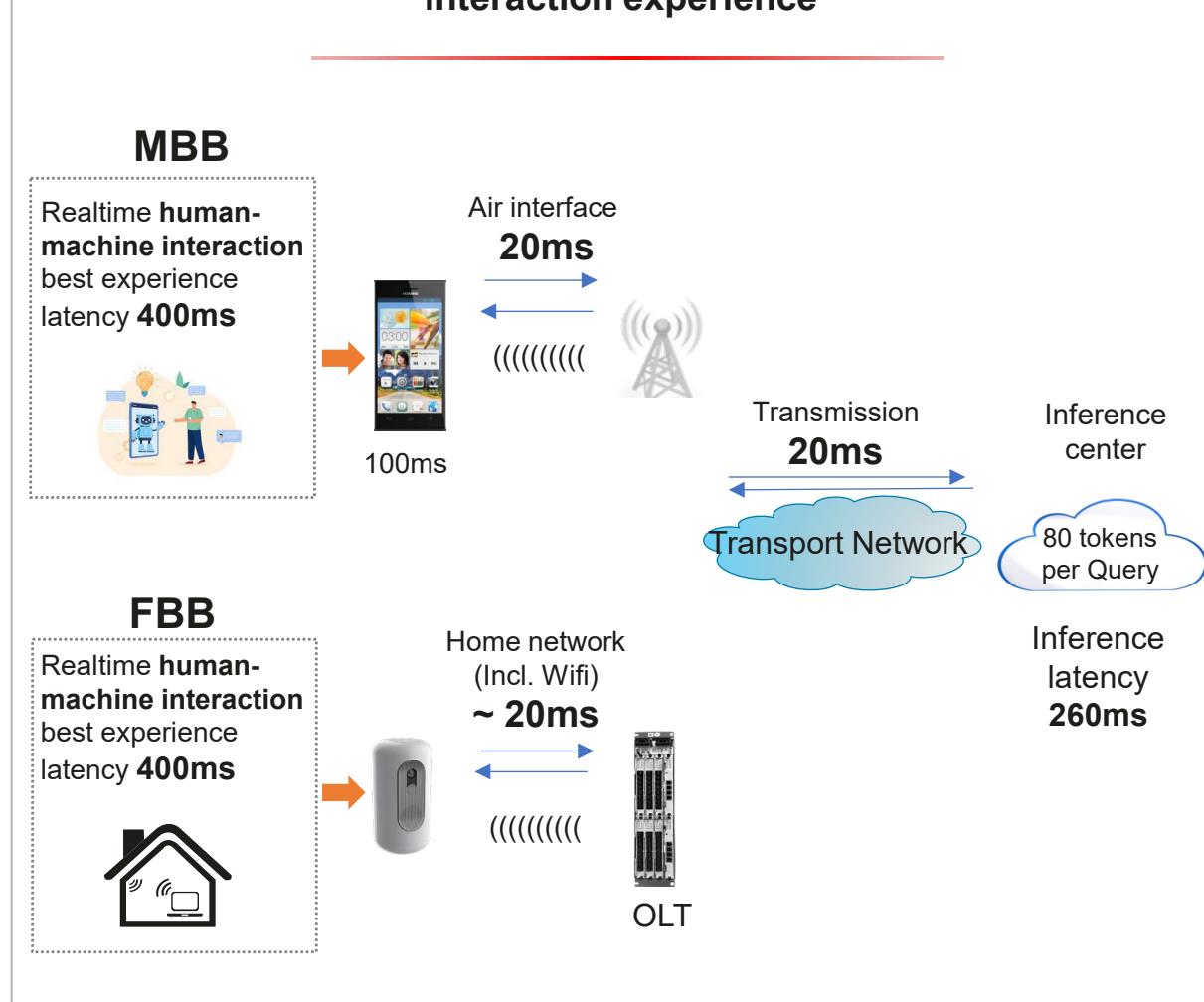
□ Dedicated 5G+ bandwidth  
✓ ChatGPT Plus free for 12 months

✗ Netflix Standard with ads included for 6 months

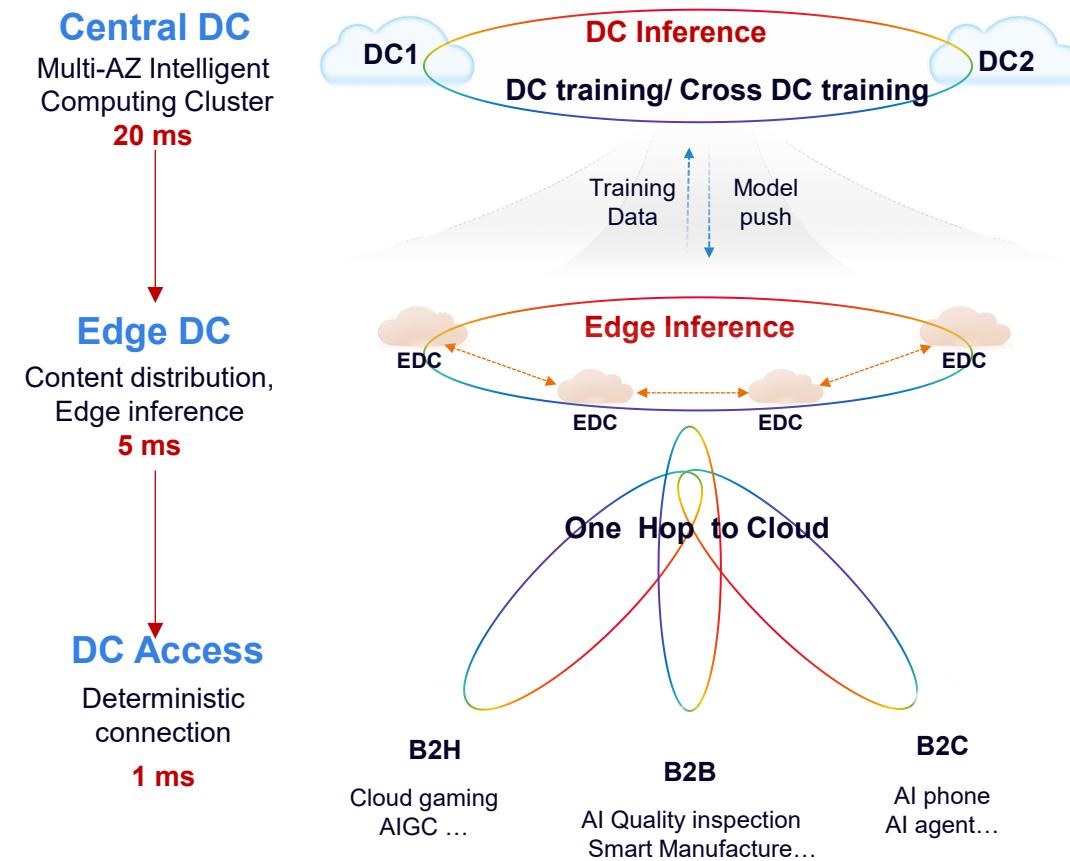
Source: Counterpoint, Wellsenn, GGI, Goldman Sachs

# Network for AI: Target network to guarantee AI application experience

RTT for transport network < 10ms, to guarantee AI application interaction experience

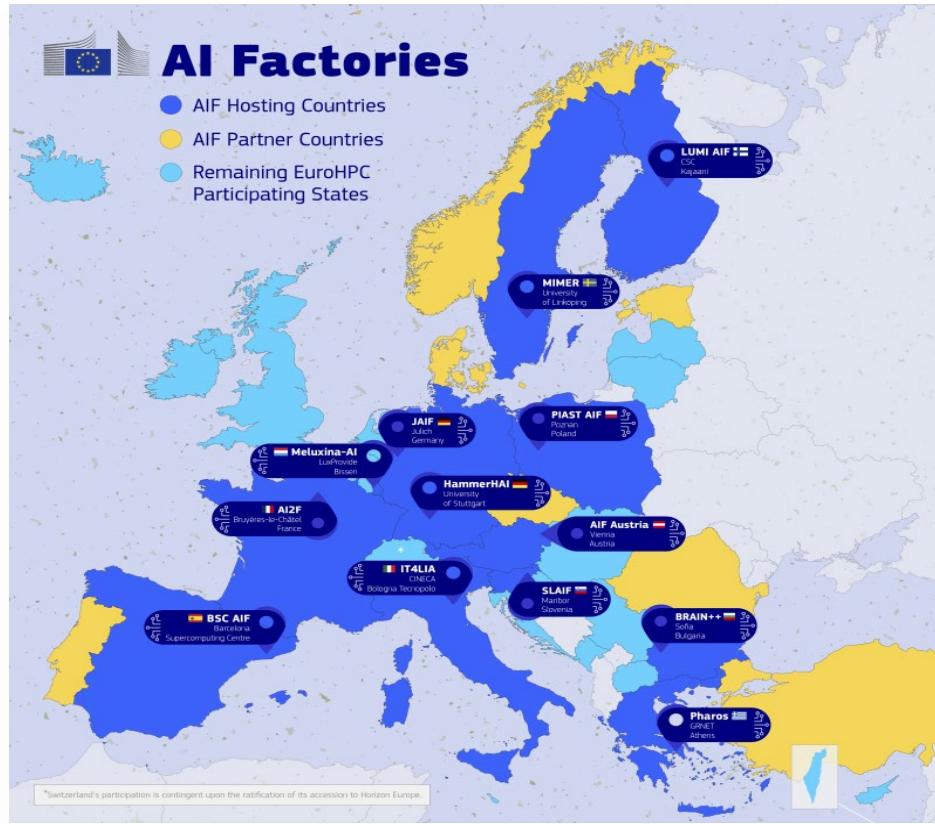


AI-centric Target Network  
(1 - 5 - 20ms Delay Circles)



# Development of DCs & AI will bring DCI & DCA opportunities

15 AI Factories are expected to be operational  
(2025~2026)

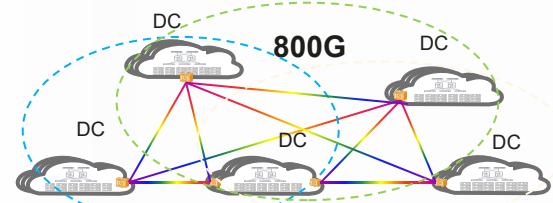


Target: enabling the pan-EU AI ecosystem and promoting growth by **prioritizing access for AI startups and SMEs.**

Source: <https://digital-strategy.ec.europa.eu/en/policies/ai-factories>

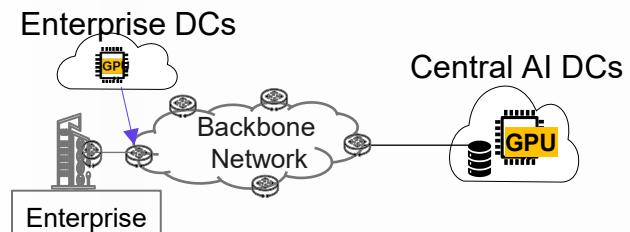
DCI & DCA are New Business Opportunities

## Opportunity 1: DC Interconnection (DCI)



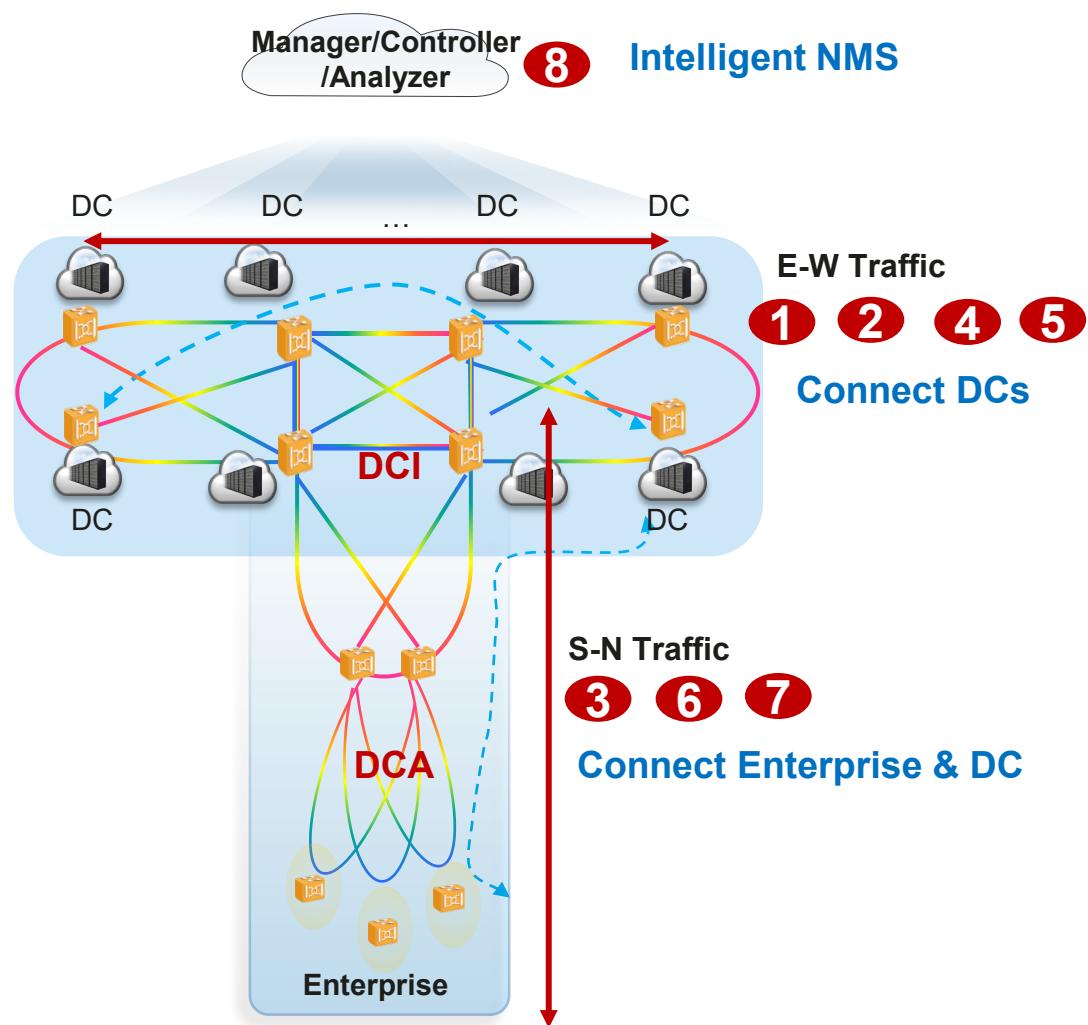
- International AI/Cloud Provider
- EU Cloud Provider
- Large enterprise co-DC

## Opportunity 2: Enterprise Access to DC (DCA)



- Enterprise LLM training
- Edge Inference

# Target DCI & DCA network architecture in the AI era



## Features & Benefits:

Ultra Large capacity

Extreme Reliability

Unified Automation

## Key Requirements & Technologies:

1 WDM C+L & 800G

2 IP: 400G/800G

3 High Throughput

4 Zero-Packet-Loss: 2T2R

5 High-Reliability: 50ms-ASON

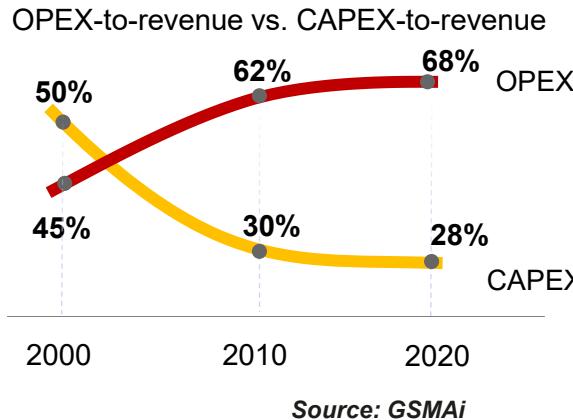
6 Quantum-Safe: QKD and PQC

7 Bandwidth on Demand

8 AI O&M: Automation

# AI for Network: Autonomous network level 4 is coming into reality

## Telco OPEX Trends and Challenges



## TM Forum Autonomous Network Level 4 Taxonomy

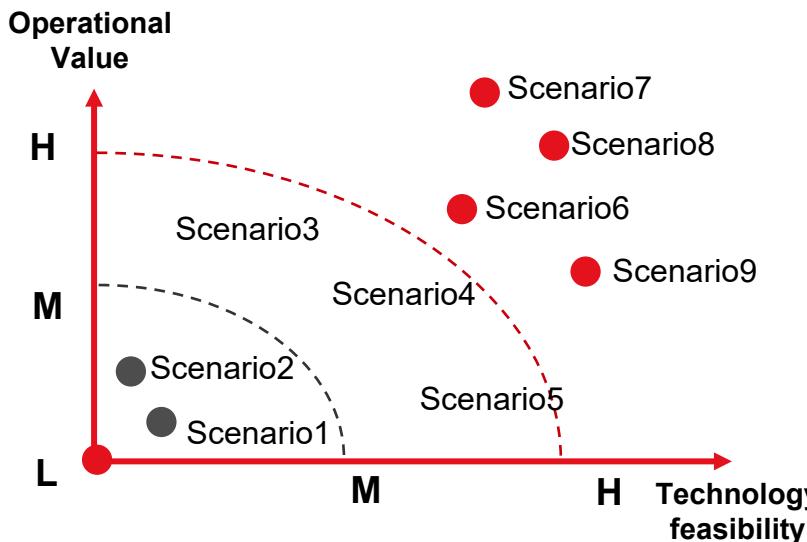
Autonomous Levels	LO: Manual Operation & Maintenance	LT: Assisted Operation & Maintenance	L2: Partial Autonomous Networks	L3: Conditional Autonomous Networks	L4: High Autonomous Networks	L5: Full Autonomous Networks
Execution	P	P/S	S	S	S	S
Awareness	P	P/S	P/S	S	S	S
Analysis	P	P	P/S	P/S	S	S
Decision	P	P	P	P/S	S	S
Intent/Experience	P	P	P	P	P/S	S
Applicability	N/A		Select scenarios		All scenarios	

P People (manual) S System (autonomous)

**L4 vs L3**  
**Analysis and Decision**  
 are performed by the system, closed-loop ops

SOC & NOC O&M      AI-Agentic O&M

## High-value Scenario Identification



## Focus on High-value Scenarios

Service Oriented		B2C	B2H		B2B		
			Home Broadband	IPTV	Private Line	5G B2B	IOT
Service Marketing					✓	✓	
Service Delivery			✓	✓			
Service Assurance					✓		✓
Fault management		✓					
Complaint Handling			✓				✓
Network Oriented		RAN	Core	FAN	Tx	IP	Others
Network Planning					✓	✓	
Network deployment					✓	✓	
Fault management		✓					
Network Change			✓				
Quality Optimization					✓		
Energy Optimization		✓					

Source: TMF "AN whitepaper 7.0" Jun 2025

# AI for Network: O&M + AI improve efficiency in high-value scenarios

Demo

## “Minimum-to-none” human intervention Use Cases

- Energy Efficiency Optimization

*RAN: 7% to 9% RAN Energy Saving*



- WDM Network “Zero Outage”

*Fault locating time: 4 hours → 15 minutes*

- RAN Intelligent Optimization

*Data Volume: +5%~10%*

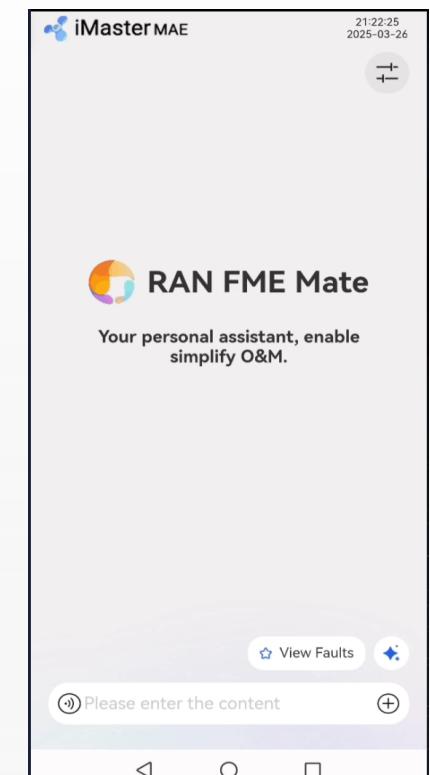
- RAN Intelligent Maintenance (FME Copilot )

*MTTR: 3.4 hours → 2.3 hours*

- HBB Complaint Handling (Fault Agent + FME Copilot)

*Home visit rate: 35% → 20%*

## RAN FME Mate



## Autonomous Network Intelligent Operation Use Cases

- RAN Predictive Maintenance

*Fault prediction accuracy: 86%+*



- Network NPS Care

*Reducing Detractors: -28%*

- RAN Intelligent Maintenance (FME Copilot )

*MTTR: -20%, NOC work: -20%*

- Energy Efficiency Optimization (Optimal Agent)

*IP Network: 5% energy saving*

- Signaling Storm Prevention (Data Analytics Function)

*Core Network: incidents -50%*

-30%

MTTR Reduction

 HUAWEI

# Looking ahead: 10 technological leaps for the intelligent world 2035

