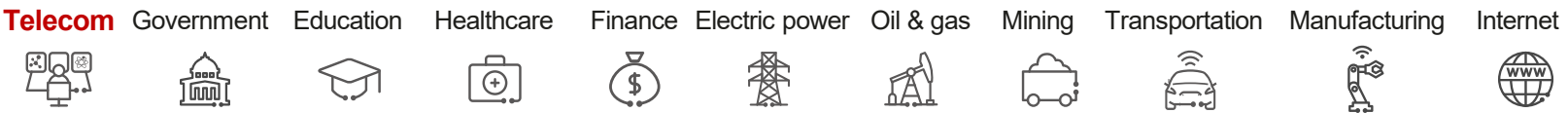


AI x Telecoms: Accelerating the Intelligent World

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

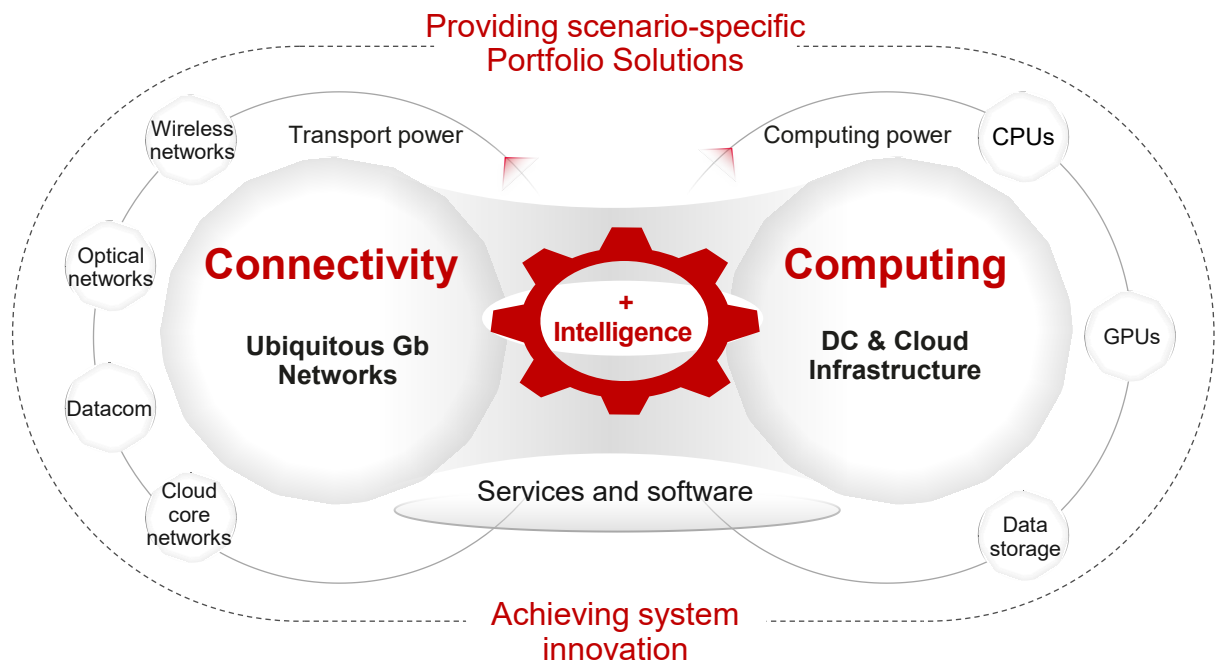
Advanced ICT infrastructure is the foundation of the brave new intelligent world



Amplifying Industrial Digitalization & Intelligence

Connectivity

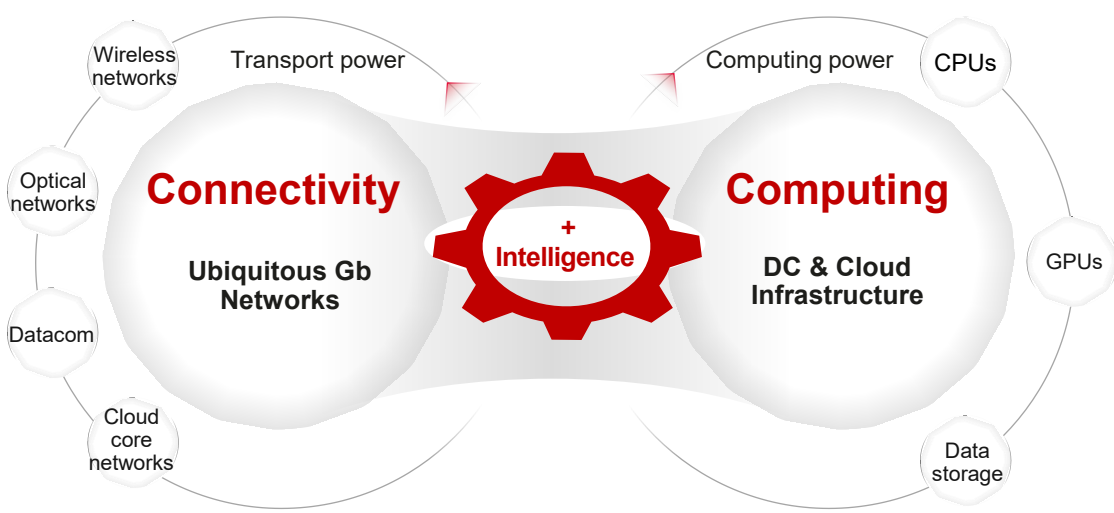
- **Networks for AI, AI for Networks.**
- Unlocking the potential of mobile AI with 5G-A, and enabling ubiquitous 10Gbps connectivity with Next Generation Fiber Access & Transport.
- Building premium computing networks for the age of AI.



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

Lossless & High throughput

DCI

High-performance & Cross Region

DCA

Agile access for AI services

AI for Network:

Autonomous Driving Network L4



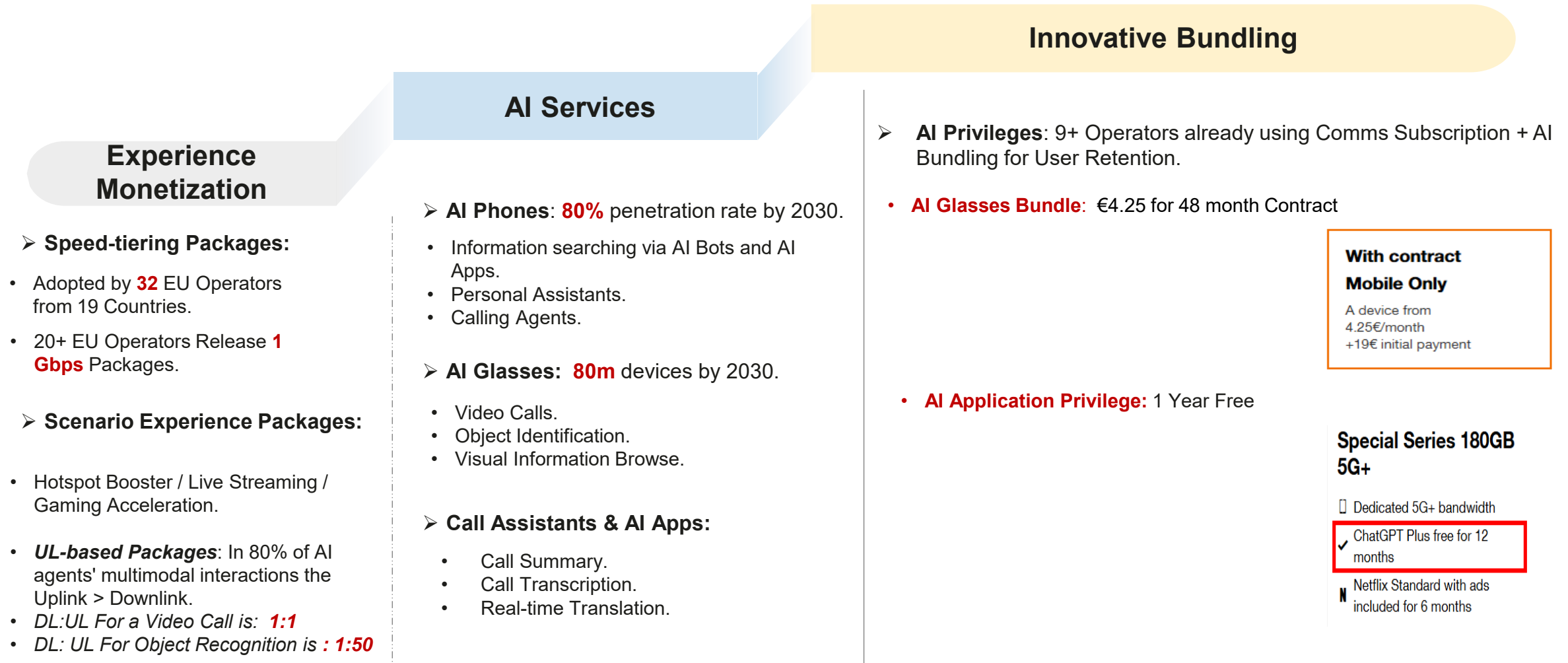
Scenario based Agents



Role based Copilots

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

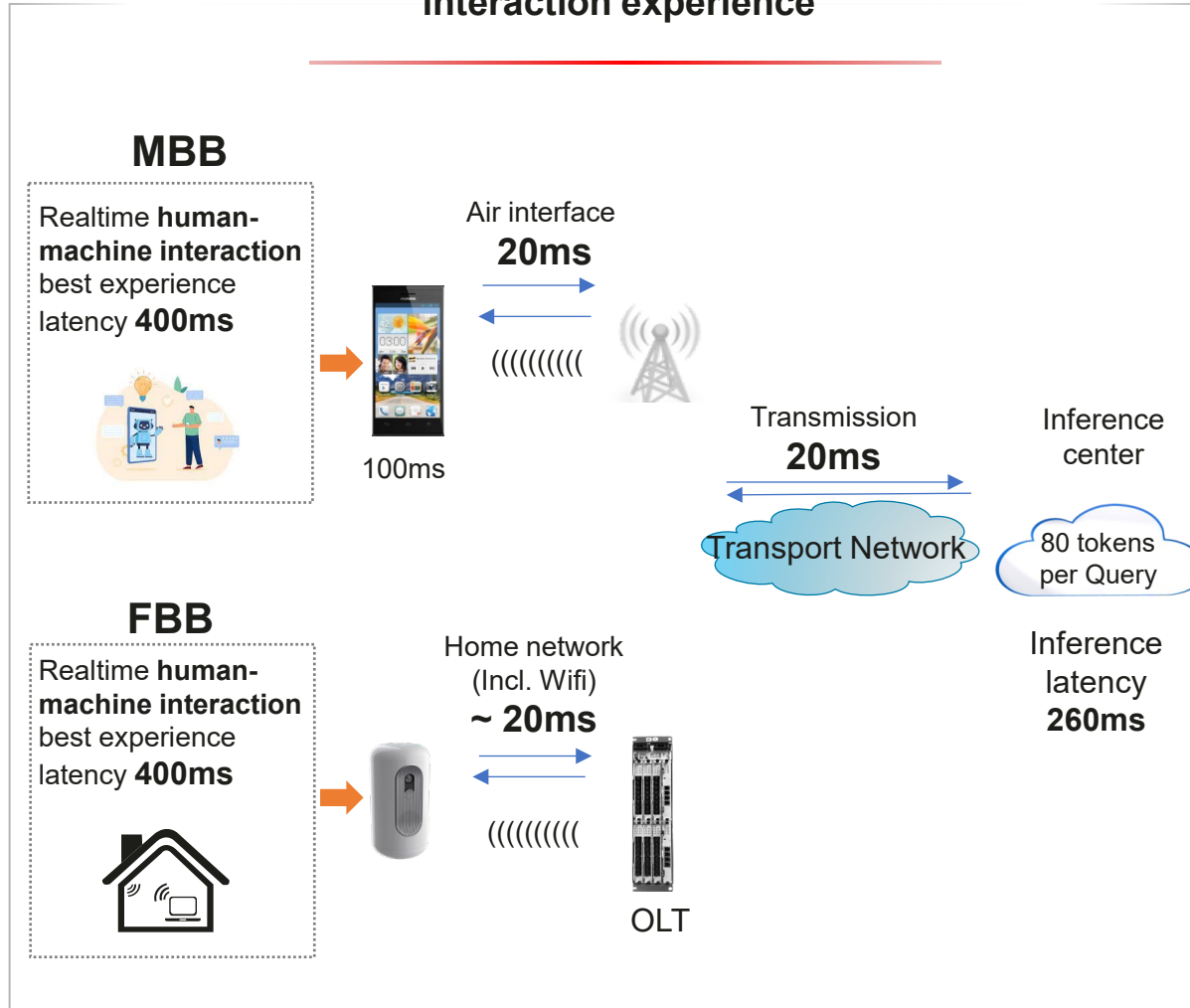
AI for services: Enabling MBB tariff innovation + innovative upselling



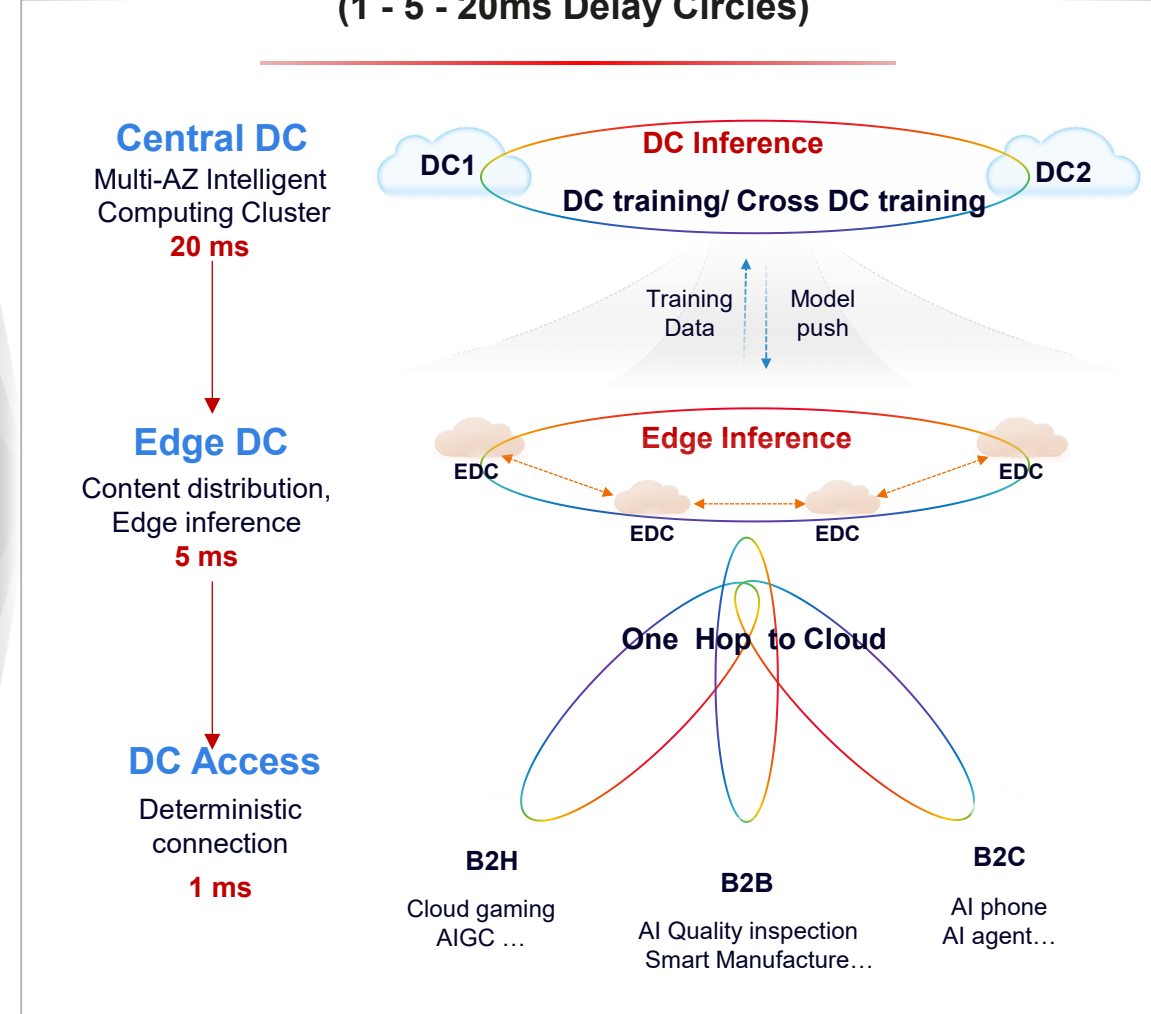
Source: Counterpoint, Wellsenn, GGI, Goldman Sachs

Network for AI: Target network to guarantee AI application experience

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

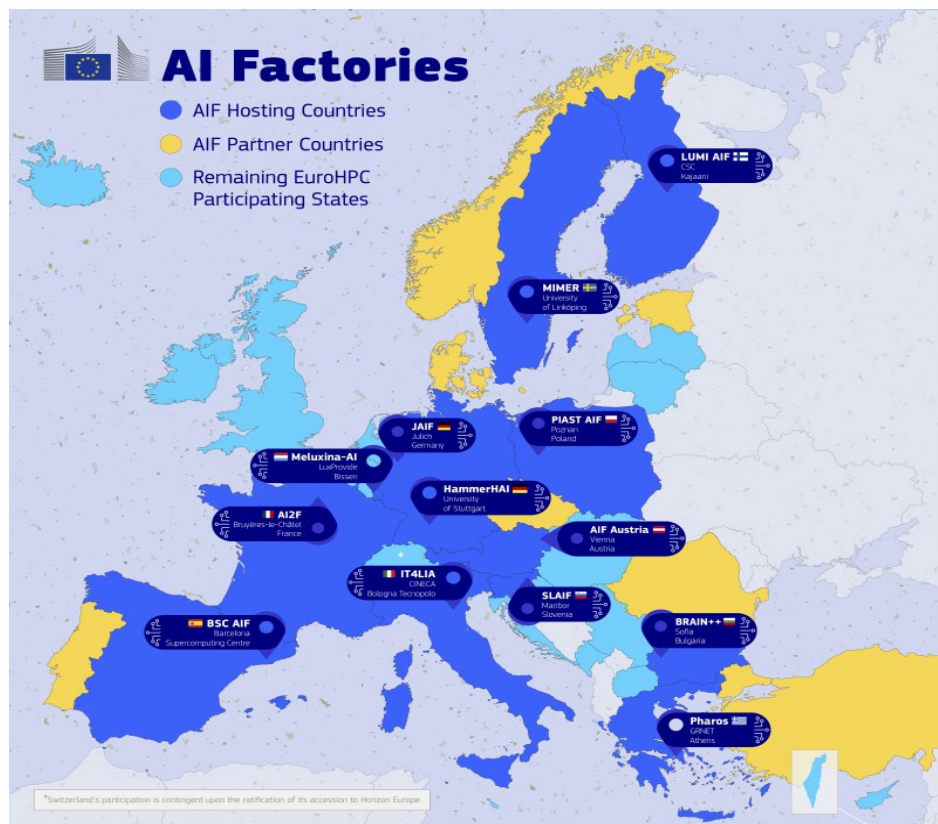


AI-centric Target Network
(1 - 5 - 20ms Delay Circles)



Development of DCs & AI will bring DCI & DCA opportunities

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

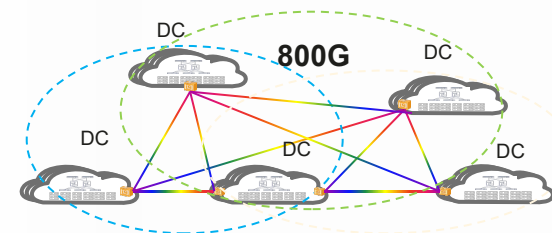


Target: enabling the pan-EU AI ecosystem and promoting growth by **prioritizing access for AI startups and SMEs.**

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

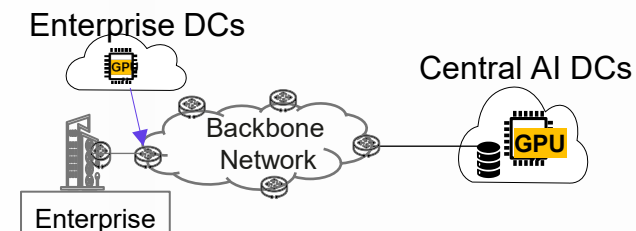
DCI & DCA are New Business Opportunities

Opportunity 1: DC Interconnection (DCI)



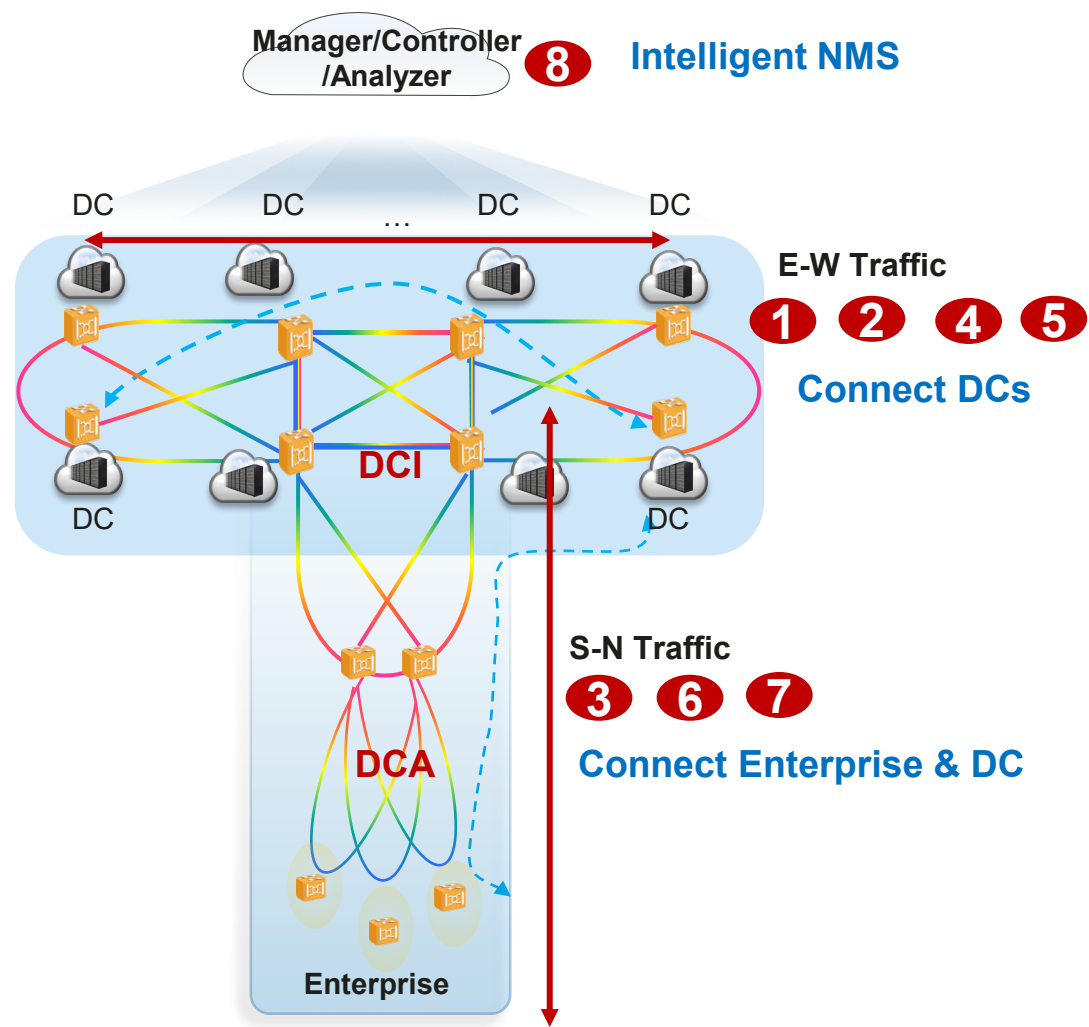
- International AI/Cloud Provider
- EU Cloud Provider
- Large enterprise co-DC

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

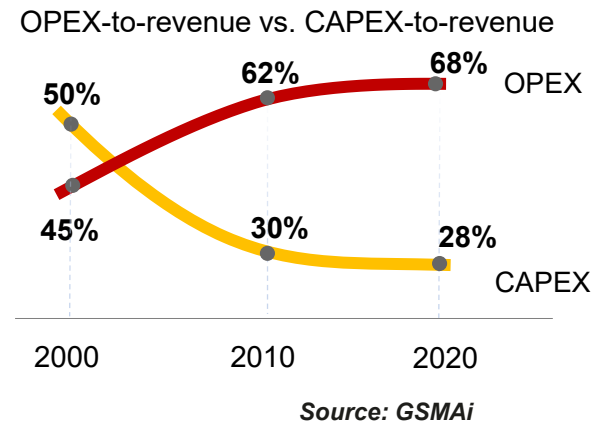
Unified Automation

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

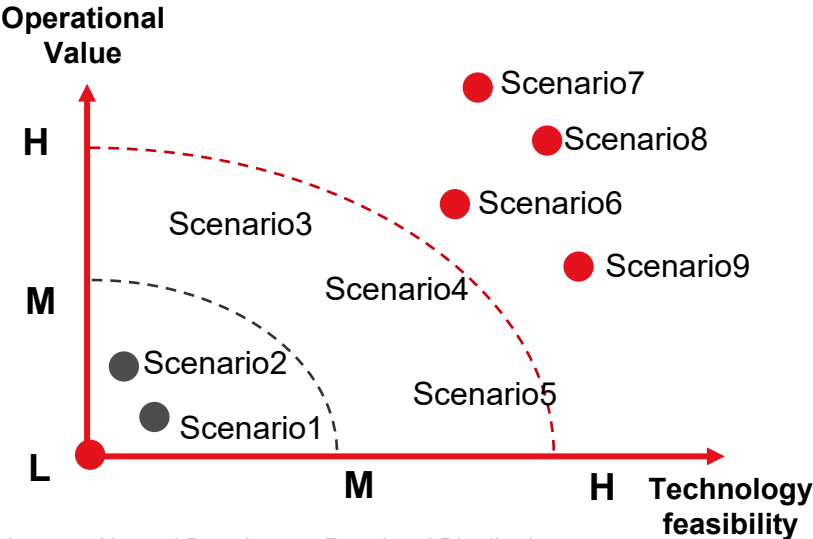
Autonomous Levels	L0: Manual Operation & Maintenance	L1: Assisted Operation & Maintenance	L2: Partial Autonomous Networks	L3: Conditional Autonomous Networks	L4: High Autonomous Networks	L5: Full Autonomous Networks
Execution	P	P/S	S	S	S	S
Awareness	P	P/S	P/S	S	S	S
Analysis	P	P	P/S	P/S	S	S
Decision	P	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	✓			✓		

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

“Minimum-to-none” human intervention Use Cases

- **Energy Efficiency Optimization**

RAN: 7% to 9% RAN Energy Saving



- **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%

- **WDM Network “Zero Outage”**

Fault locating time: 4 hours → 15 minutes

Autonomous Network Intelligent Operation Use Cases

- **RAN Predictive Maintenance**

Fault prediction accuracy: 86%+



- **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)**

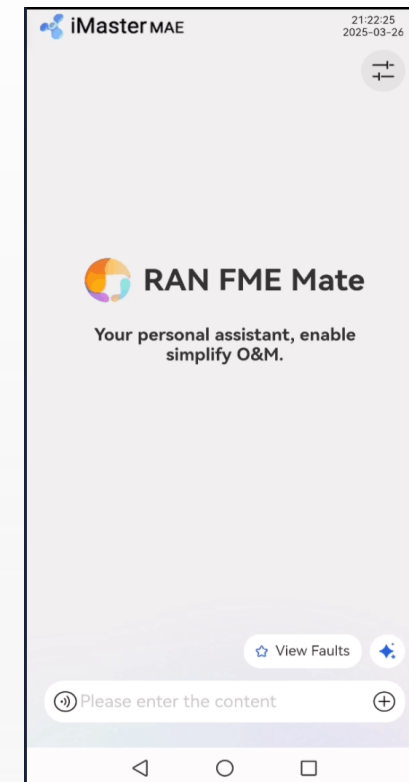
Core Network: incidents -50%

- **Network NPS Care**

Reducing Detractors: -28%

Demo

RAN FME Mate



-30%

MTTR Reduction



Looking ahead: 10 technological leaps for the intelligent world 2035

