

Transforming Telecom Networks From Infrastructure to Intelligent Platforms

EuCNC&6G Summit

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From transporting bits to coordinate intelligence



Digital Voice



Initial Data



Applications



B2B Services



AI Native

Each evolution has made a new collective capability visible



Pillars of the Future Network



**AI and Cloud
Native**



**Disaggregation
& Openness**



Automation



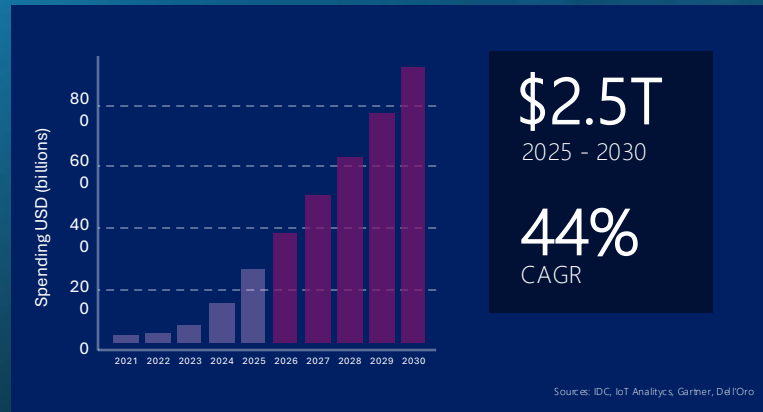
Trustworthiness

Which Services will deliver our networks?

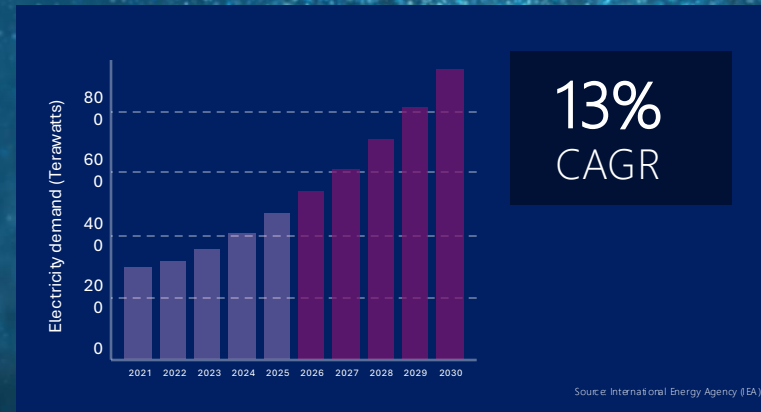


Opportunities in the AI era

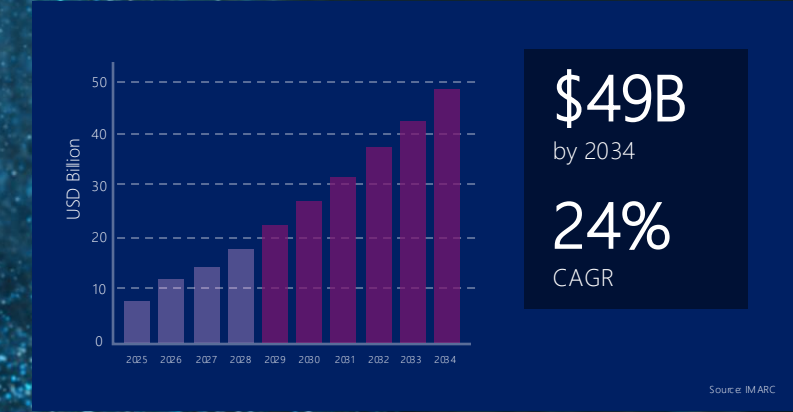
Global AI infrastructure spend



Power demand and scarcity



EU edge computing market



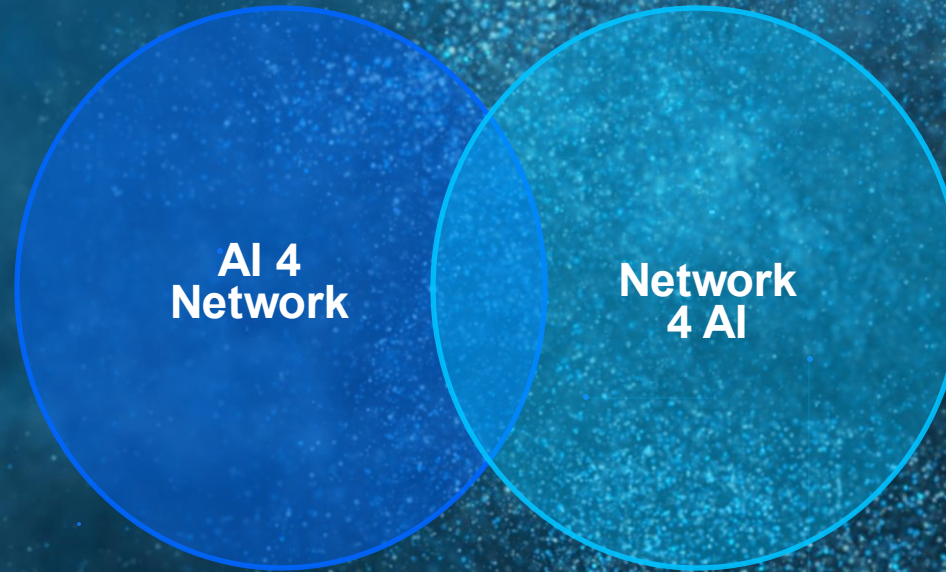
Network as an AI native infrastructure

AI for network autonomy

AI will reshape network
operating model

Requirements

Security
Federated learning
Telco LM



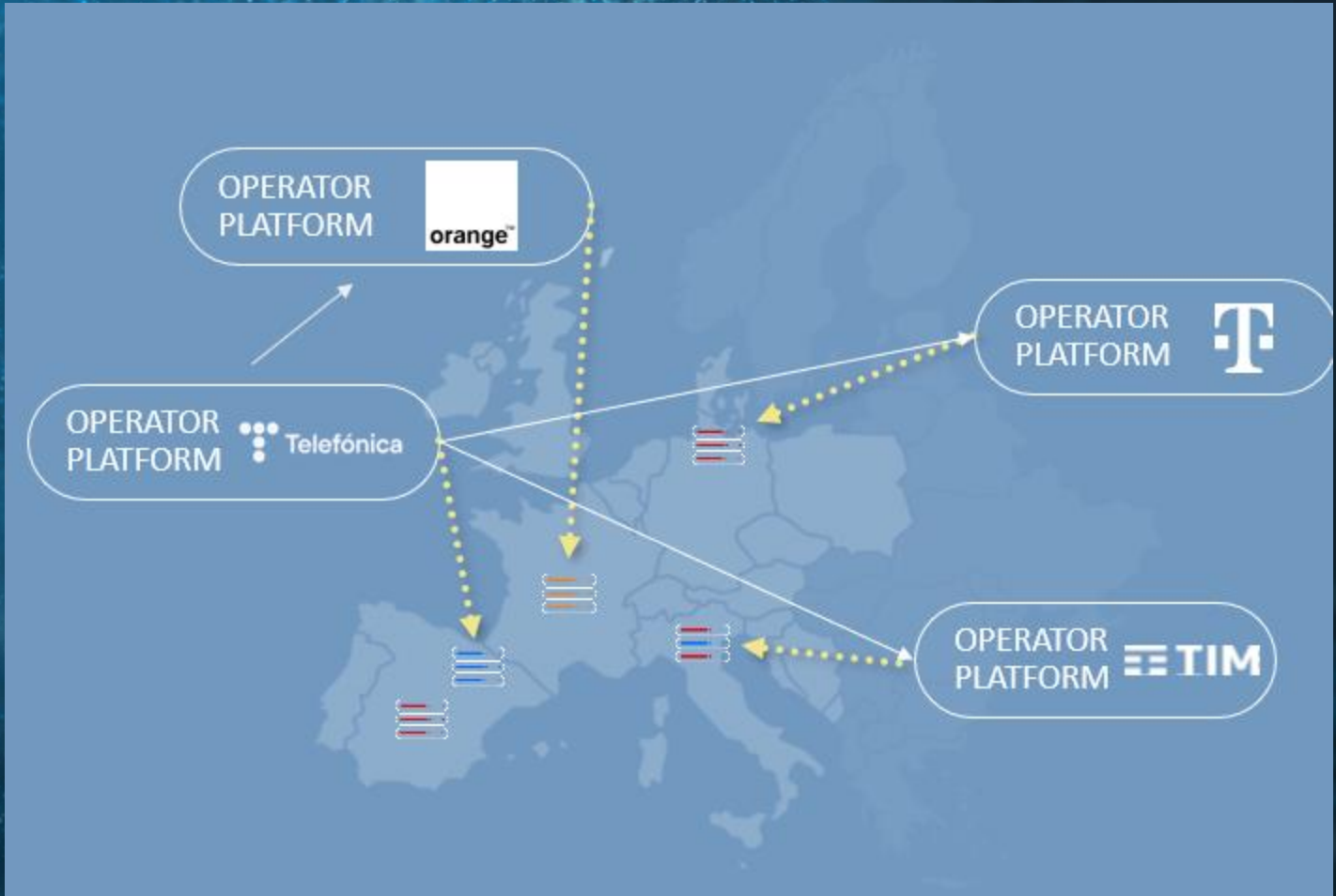
AI impacting network
traffic
Connecting Agents

Continuous compute for
inferencing

Latency, uplink, compute
orchestration

European Cloud Edge Continuum

- **Federated edge**
Deploy applications seamlessly across nodes from different cloud domains.
- **European footprint**
Extends the reach of a single operator, enabling a true European footprint.
- **Open to new players**
The federation is open to other European technology players.



IPCEI Cis deployment as starting point of Euro 3C innovation exploration



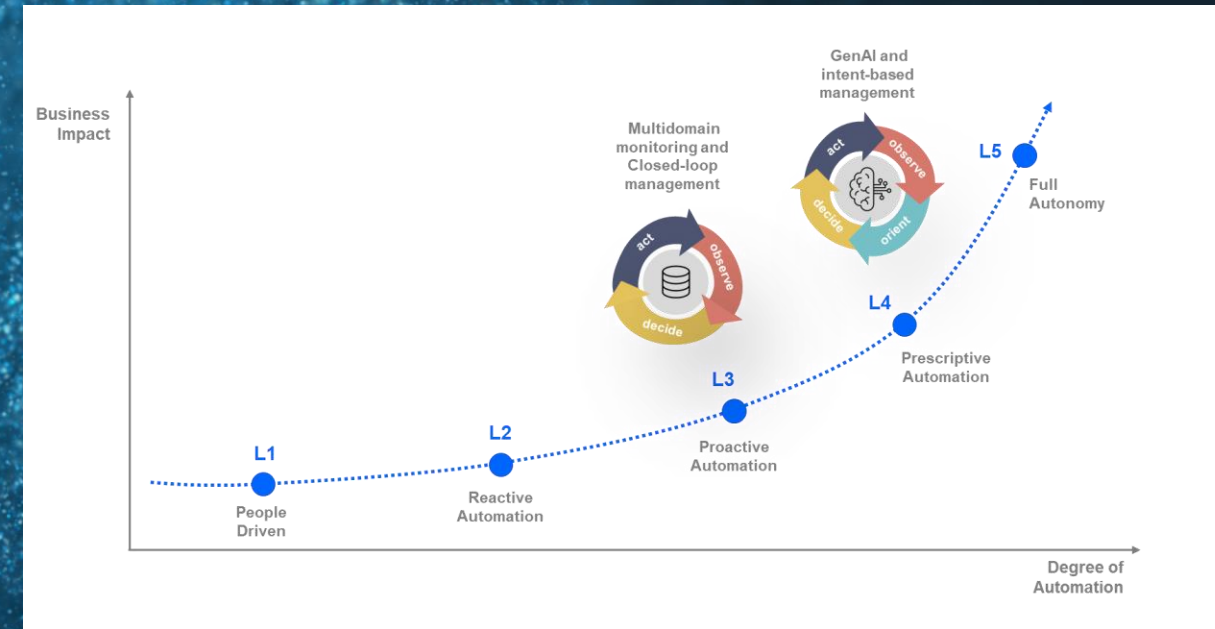
**>60% big network outages are
caused by human errors**

**Automation needed to be able to
offer complex new services**

Automation drives efficiency

Telefónica Autonomous Network Journey

- The Autonomous Network Journey (ANJ) program was launched in Telefónica in 2021 is the strategic driver of Telefónica's network transformation.
- ANJ is a holistic program covering all network domains - Core, Transport, IP, Fixed Access, Mobile Access and Telco Cloud - and the full end-to-end lifecycle of network processes, from planning to testing, deployment and operations.
- It drives the adoption of disaggregated and softwarized architectures and a new operating model in Network, with autonomy as the central focus, enabled by AI Use Cases.



2028

2030

Network Autonomy Level

Telefónica Commitment

Level 3.75

Autonomy target for Spain,
Brazil & Germany

Level 4.00

Autonomy milestone for Spain,
Brazil & Germany

Mobile Network Evolution

What have we learnt from 5G SA?

History of 5G SA

- After issuing the first 5G standard at the end of 2017, 5G NSA deployment started in 2019
- Today 5G SA penetration is not massive in the world
- Maturity of devices for 5G SA is poor
- No proper voice solution (majority of networks using volte fallback)
- No new monetization streams massively successful

Main learnings

- Not a good idea shortcuts like 5GNSA
- Big revolution of core (SBA) not representing new use cases
- 5G used today as more capacity and throughput not as a key enabler of B2B services
- Voice solution should be ready when deploying a service
- Device maturity to be taken into account



Questions about 6G

?



- Do we need another “G” or better a smooth evolution?
- Is it better to talk about release 21, release 22 or 6G?
- Shall we rush in specifying 6G or better learn more from 5G SA?
- Do we need a 6G logo in the devices?
- Do we know now the impact of AI for specifying the right 6G?
- Will the 6G standard have more than 20% really implemented (more than 4G or 5G today)?

Monetization and 6G

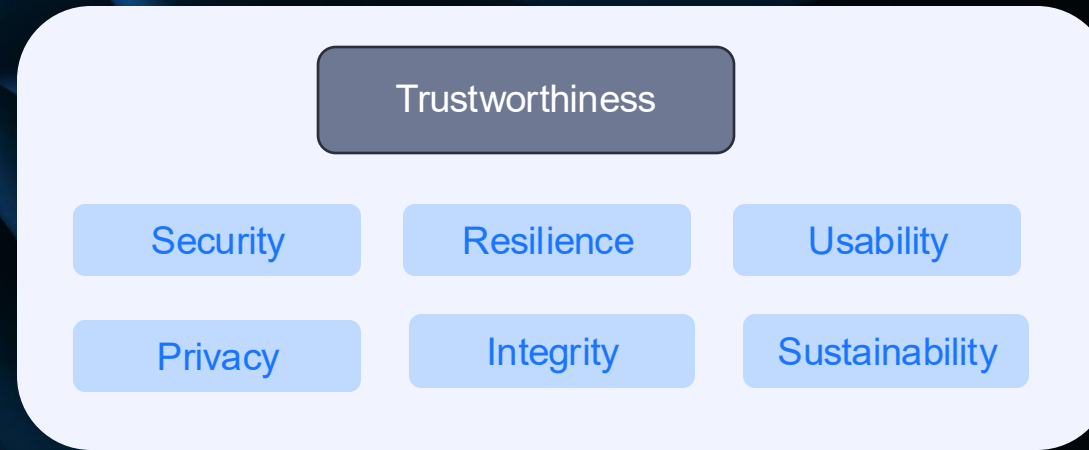


- Evolution to be driven by use case and monetization capabilities
- Differentiation per customer and service running in a simpler way (slicing simpler to deploy)
- All the capabilities to be exposed easily
- Communications services with powerful service innovation. IMS as key element
- Flexibility to implement services we do not know now
- Less bottlenecks from devices to deliver new services



**Innovation and Standardisation
should be oriented to new services
and use cases**

Trustworthy Networks



Sustainability

TIME

“Telefónica 2nd most sustainable company in the world”

Privacy
by design

Zero-trust

QKD
PQC

Telefónica Centre of
Excellence
Quantum Technologies

Resilience

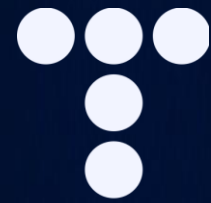
Telefónica
Autonomous
Network Journey

Sovereignty is not only defended in physical borders but also in digital domain



Call to Action

- **Telco and AI as strategical priorities**
- **Provide scale to telco business**
- **Assure European leading role in Standardization bodies**
- **Provide continuity to European innovation efforts. SNS a very relevant factor**
- **Accompany innovation in first deployment**



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