

Turin, 08/06/2023

Private 5G: Experiences and Evolutions



LA FORZA DELLE CONNESSIONI

#1

Towards the Edge Continuum

#2

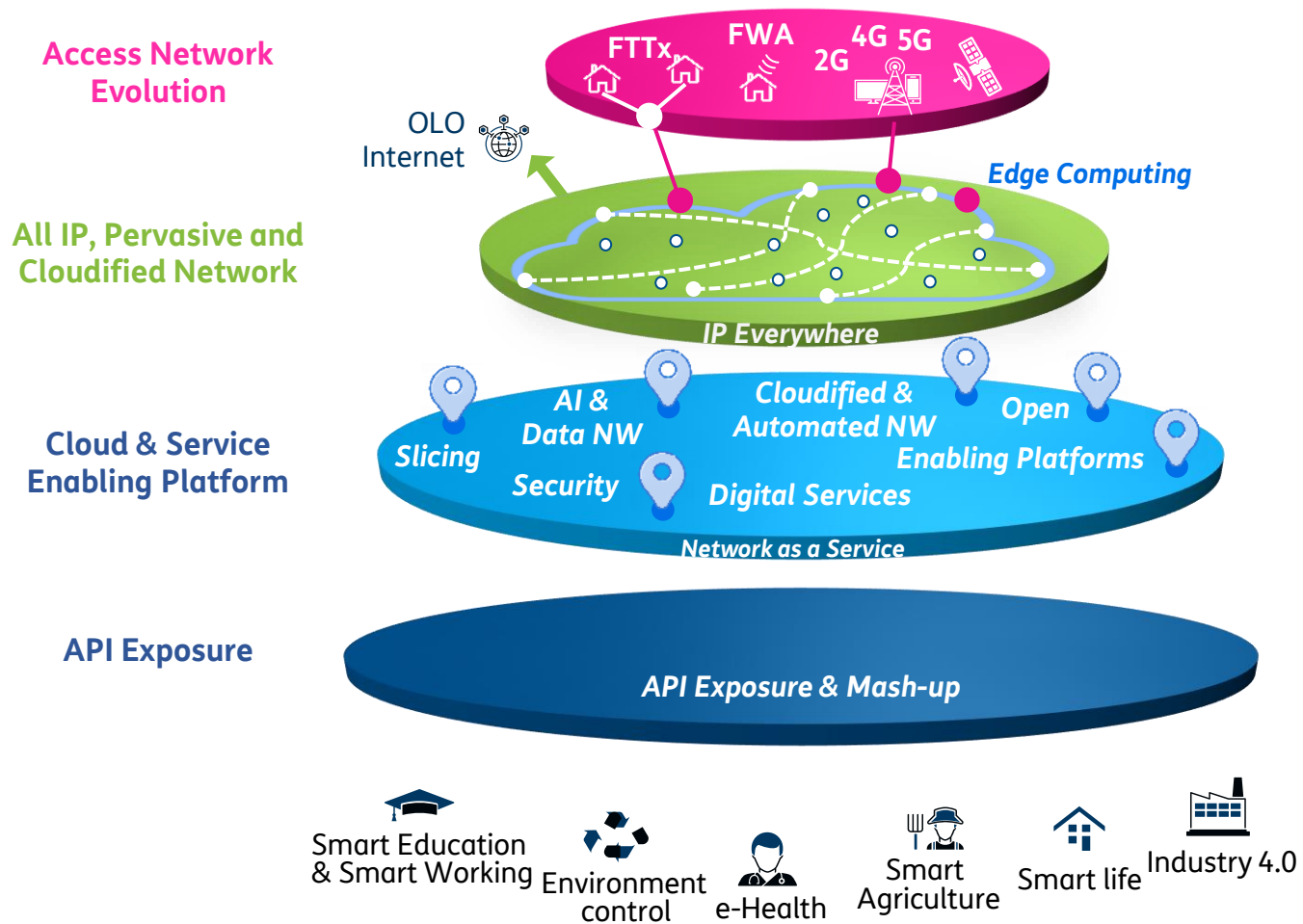
Real Market Demand

#3

Experiences and Next Steps



Evolution towards the Network as a Service paradigm



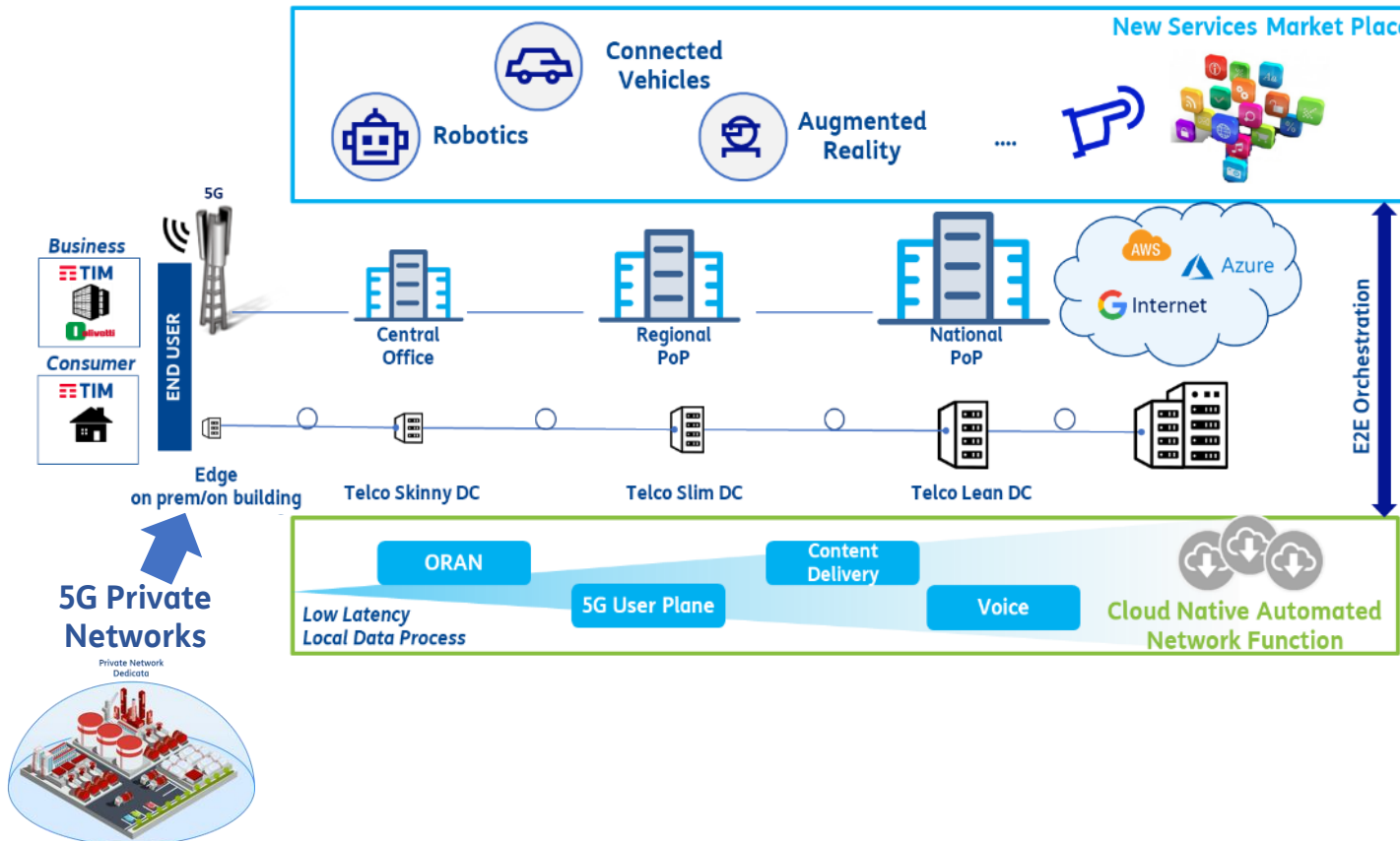
Thanks to the cloudification of its elements, the network itself becomes a platform (Network as a Service)



A capillary Cloud EDGE network



A Data Centers network that goes from the national peering to the customer's home in a seamless EDGE continuum



- ✓ From the **Cloud Providers DCs** to the **On premise / On Device**
- ✓ **Able to scale up to the EDGE** on demand including Private Networks, to cope with specific requirements in terms of latency, performance, security
- ✓ **Network simplification**, automation and decommissioning
- ✓ Standardize interoperable **Global EDGE APIs** in an open platform
- ✓ **EDGE federated at European level** for cross-country services (e.g. Automotive)

Private Network - «Real» Market demand

Manufacturing

Remote control of machinery



Robot remote control
Industrial machine maintenance/monitoring

Cable replacement



Cable replacement

Localization



Robotic arms localization

AR/VR



Quality audit with VR

Remote Expert



Legacy services replacement

Wi-Fi replacement



Smart Utilities



IoT sensors data collection from different company's sites



Real time localization for worker safety



Connected moving workstation for Operators



Transportation



Connectivity for multiple sheds in a shipyard



Real time localization for forklifts and containers



Support for docking operations in port



Wi-Fi & TETRA network replacement



Priv

Requirements from the Field: some examples



- ✓ **Need:** Connection of more than **40 sheds** within a shipyard without digging

- ✓ **Need:** Wireless with **strong reliability requirements** on a large port area



Requirements from the Field: some examples



- ✓ **Need: quality audit process done remotely using XR viewers**

- ✓ **Need: for reliable connectivity in areas that present safety risks for workers safety**



Private Network - TIM Journey



EXOR

«Industrial digital platform»

- Industrial plant and product (HMI) monitoring
- Increase production process efficiency

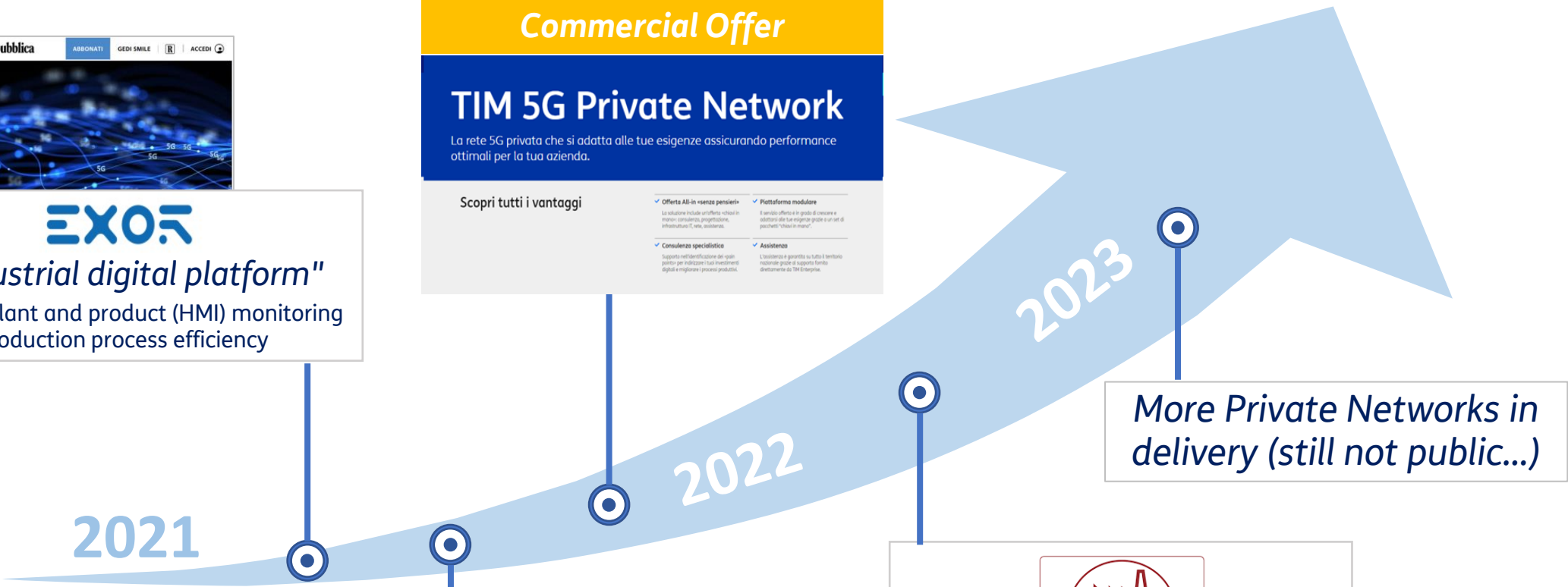
Commercial Offer

TIM 5G Private Network

La rete 5G privata che si adatta alle tue esigenze assicurando performance ottimali per la tua azienda.

Scopri tutti i vantaggi

- ✔ **Offerta All-in senza pensieri**
La soluzione include un'offerta richiavi in modo: consulenza, progettazione, infrastruttura IT, rete, assistenza.
- ✔ **Consulenza specialistica**
Supporto nell'identificazione del miglior punto per installare i tuoi investimenti digitali e migliorare i processi produttivi.
- ✔ **Piattaforma modulare**
Il servizio offerto è in grado di ricevere e adattarsi alle tue esigenze grazie a un set di pacchetti "chilovi in mano".
- ✔ **Assistenza**
L'assistenza è garantita su tutto il territorio nazionale grazie al supporto fornito direttamente da TIM Enterprise.



2021

2022

2023

More Private Networks in delivery (still not public...)



bi-REX
Big Data Innovation & Research Excellence

"Test before invest"

- AR/VR smart maintenance
- AGV, Cobot
- Push To Talk + *Emergency services suite*

Reti private 5G di Tim, l'azienda salentina Ilmea tra le prime in Italia a dotarsene

ILMEA s.r.l.

Light carpentry production

- Smart maintenance & monitoring
- Production processes monitoring (Integration of digital MES)

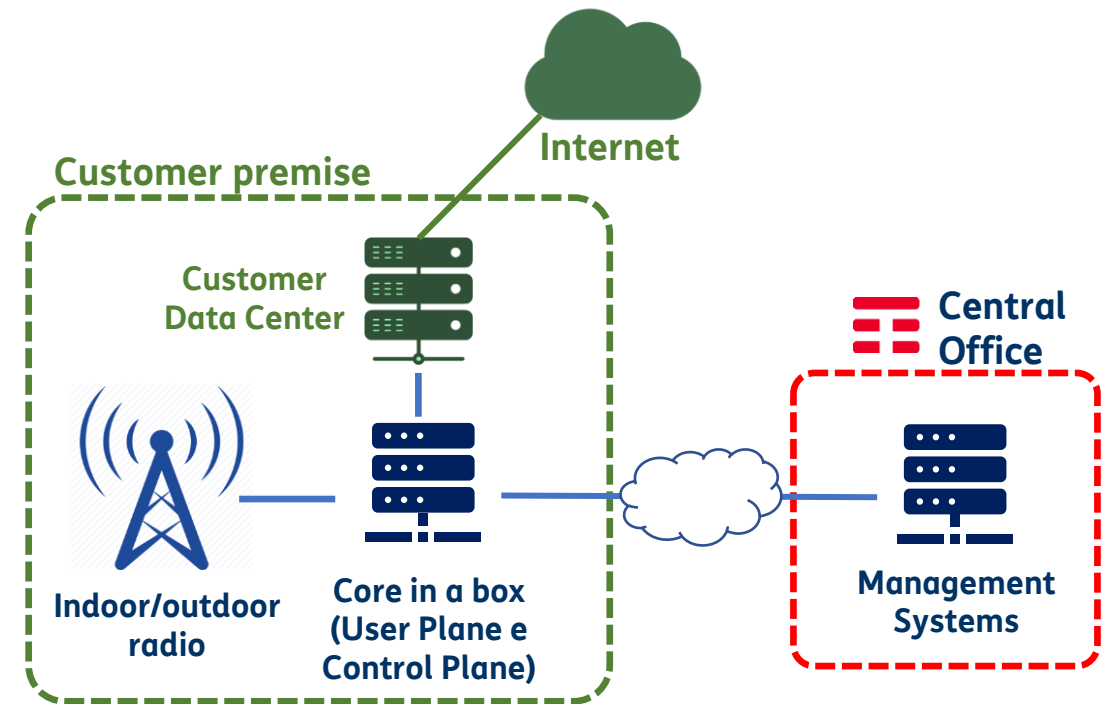


TIM 5G Private Network - Commercial Offer

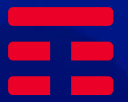
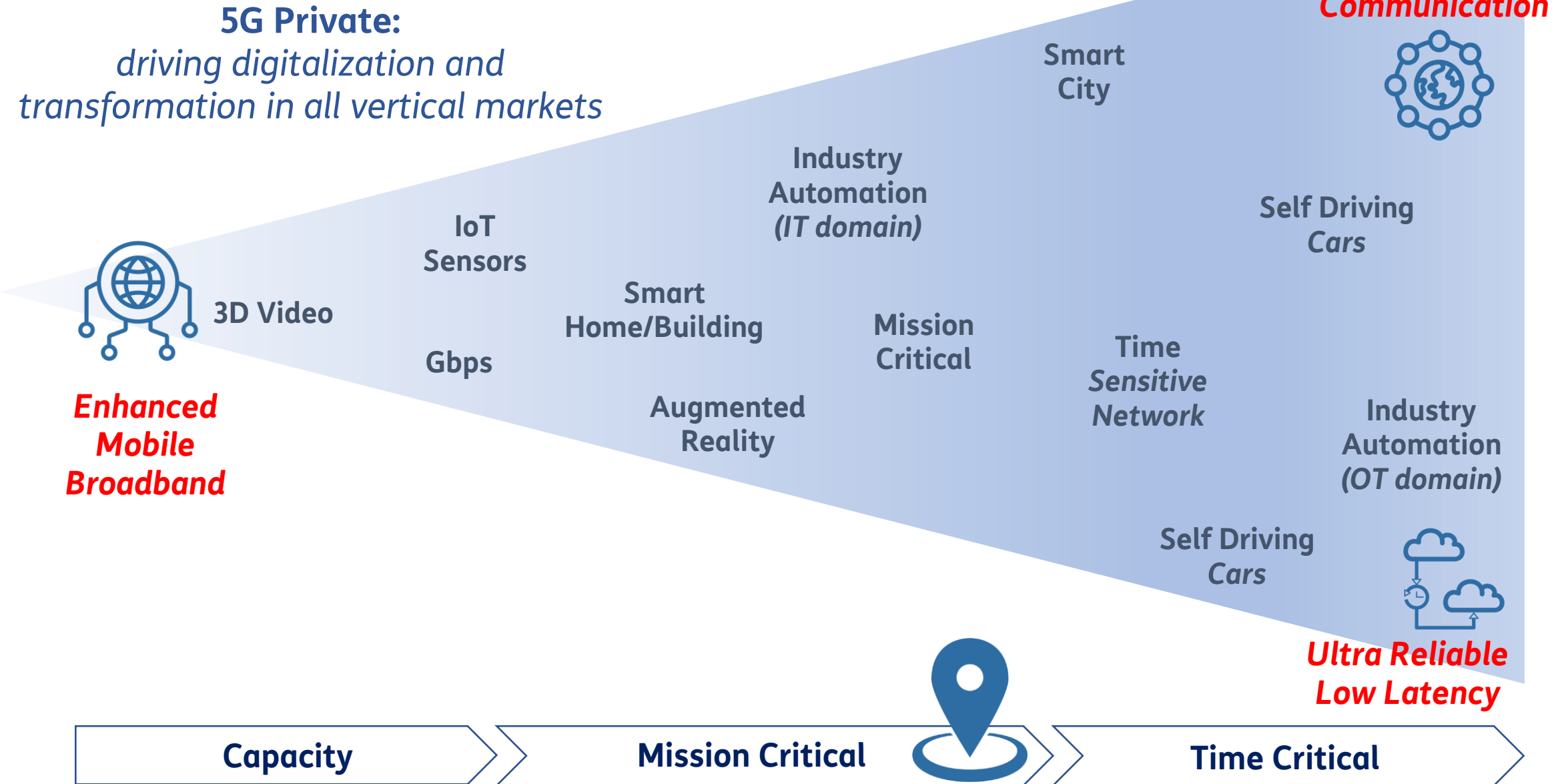
- ✓ **TIM 5G Private Network** creates a **private local 5G network** exclusively dedicated to the customer
- ✓ **5G coverage** is granted by dedicated network nodes installed at customer facility and providing **exclusive outdoor** and/or **indoor** coverage
- ✓ Dedicated PLMN-ID and **specific SIMs** with **traffic included**, specifically designed to maintain high security standards
- ✓ 5G NSA in high **availability** architecture
- ✓ **Dedicated 5G coverage** not dependent from national plans (5G NR 3,7 GHz, 26 GHz)

Target Customers

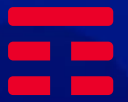
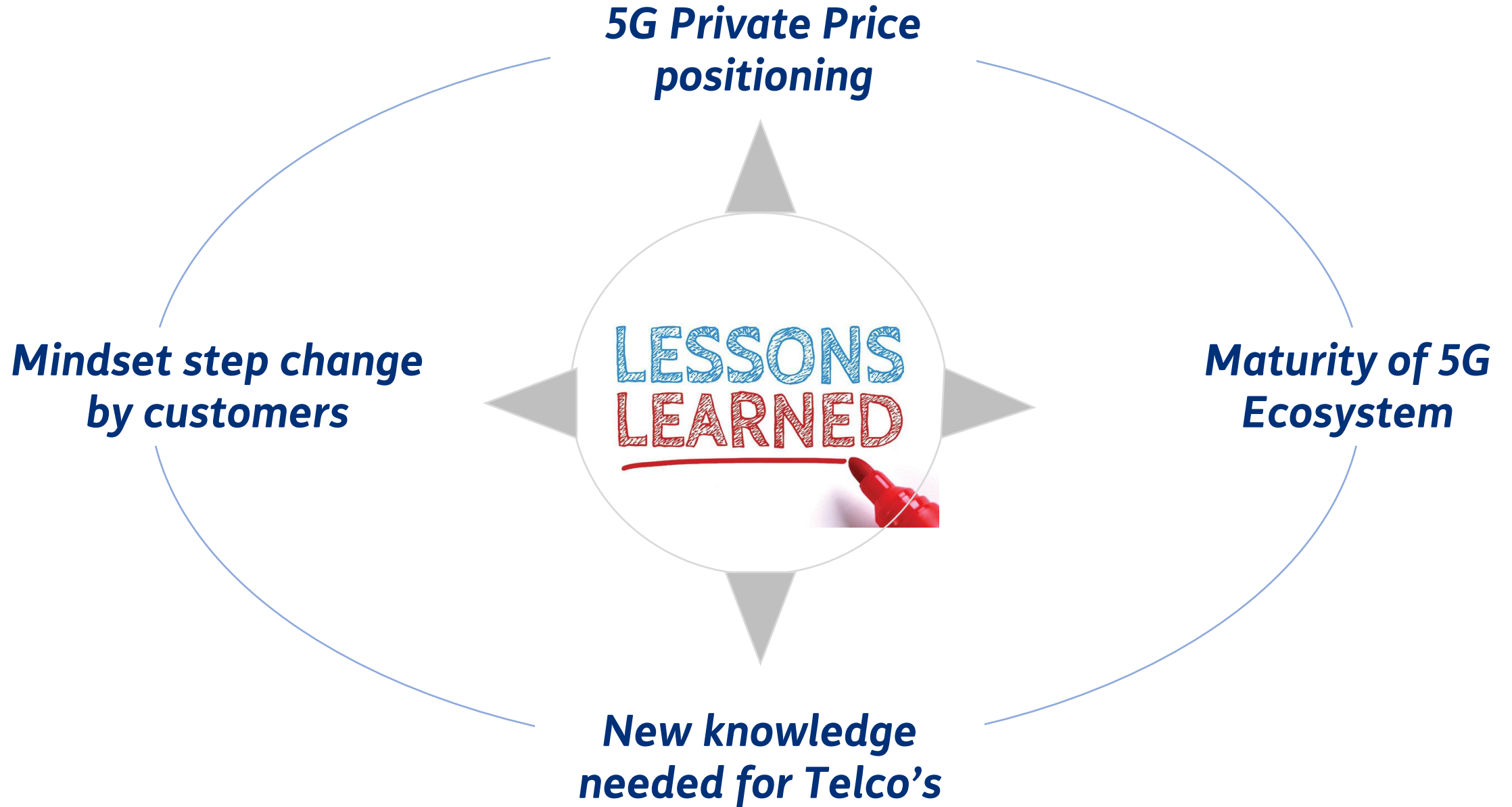
Company involved in the process of digital transformation or with Mission Critical and Real time application (industry 4.0, Automation, Port, Airports, Museum, Tourism,..)



TIM 5G Private Network - Evolutions



Easy? Not really...



THANKS

