

# 5G Robotics for industrial facilities supervision

MWC 2022

Transformation is now



01

5G Technologies



02

5G & Robotics



03

Live demo



# 5G IS A SET OF TECHNOLOGIES WORKING TOGETHER



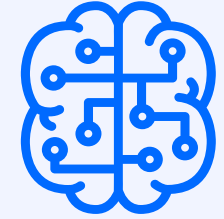
5G NETWORK



EDGE COMPUTING



NETWORK SLICING



INTELLIGENT  
NETWORKS

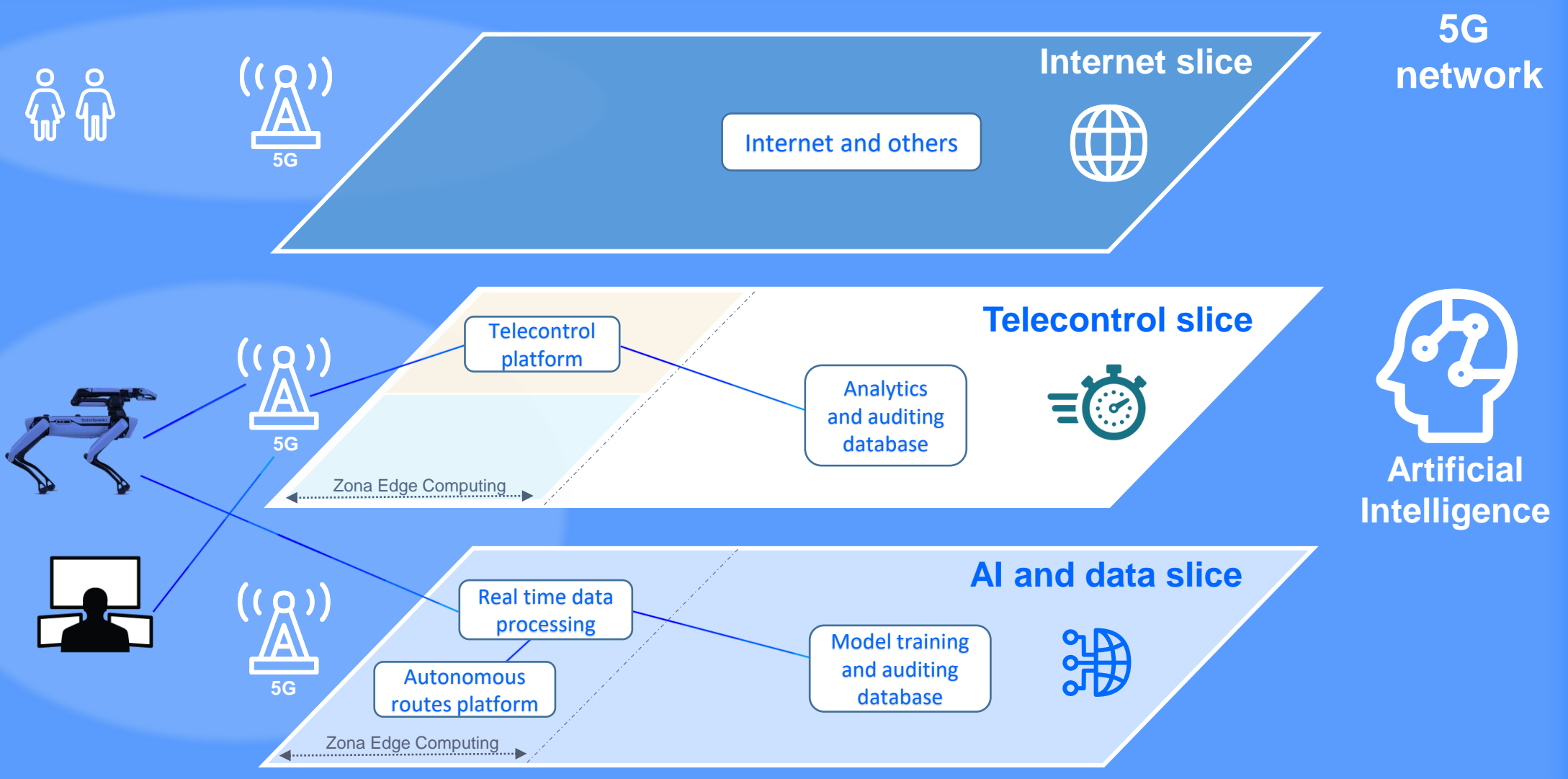
A new radio for a  
new era

When speed of  
light is too slow

When each device  
has different  
demands

Able to manage  
complexity while  
assuring QoS

WITH CYBERSECURITY AS A KEY ENABLER

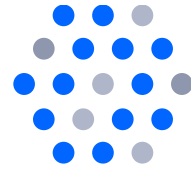


# 5G AS A KEY DRIVER FOR NEW ROBOTICS

 Telecontrolled mobile robots



uRLL Telecontrol



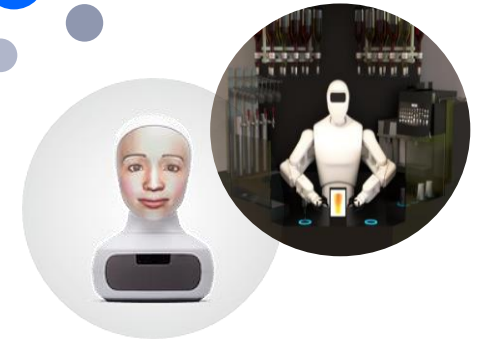
Multi-robot systems



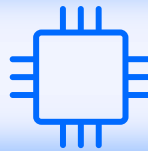
Low-latency robot orchestration layer



CoBots



Enhanced  
functionality over  
Edge/cloud



Sensor data capture  
& processing



Route  
optimization



AI add-on's



# VERSATILITY FOR INDUSTRIAL FACILITIES



## Industry 4.0

- Dynamic sensing for industrial site (predictive) maintenance
- Remote inspections
- Routine operations at hazardous locations (toxic gases, radioactivity, etc.)
- 3D digital twin capture
- Ultra precise manufacturing



## Surveillance

### Complementing surveillance teams:

- Augmented surveillance
- Semi and autonomous rounds
- Remote inspection in hazardous situations/locations
- Air and terrestrial coordinated surveillance



## Logistics

- Packet placement and picking at warehouses
- Autonomous inventorying and searching
- Automated quality control
- Classification prior to shipment
- Last mile delivery (via road/air)

**5G** is key for robot's real time reactions to dynamic environments or unforeseen events



# It's demo time !

alisyys

 **Telefónica**  
Ingeniería de Seguridad

 **Telefónica**



**Yesterday it was unthinkable, today it is 5G**

