

**Leticia Lopez
Domingo**

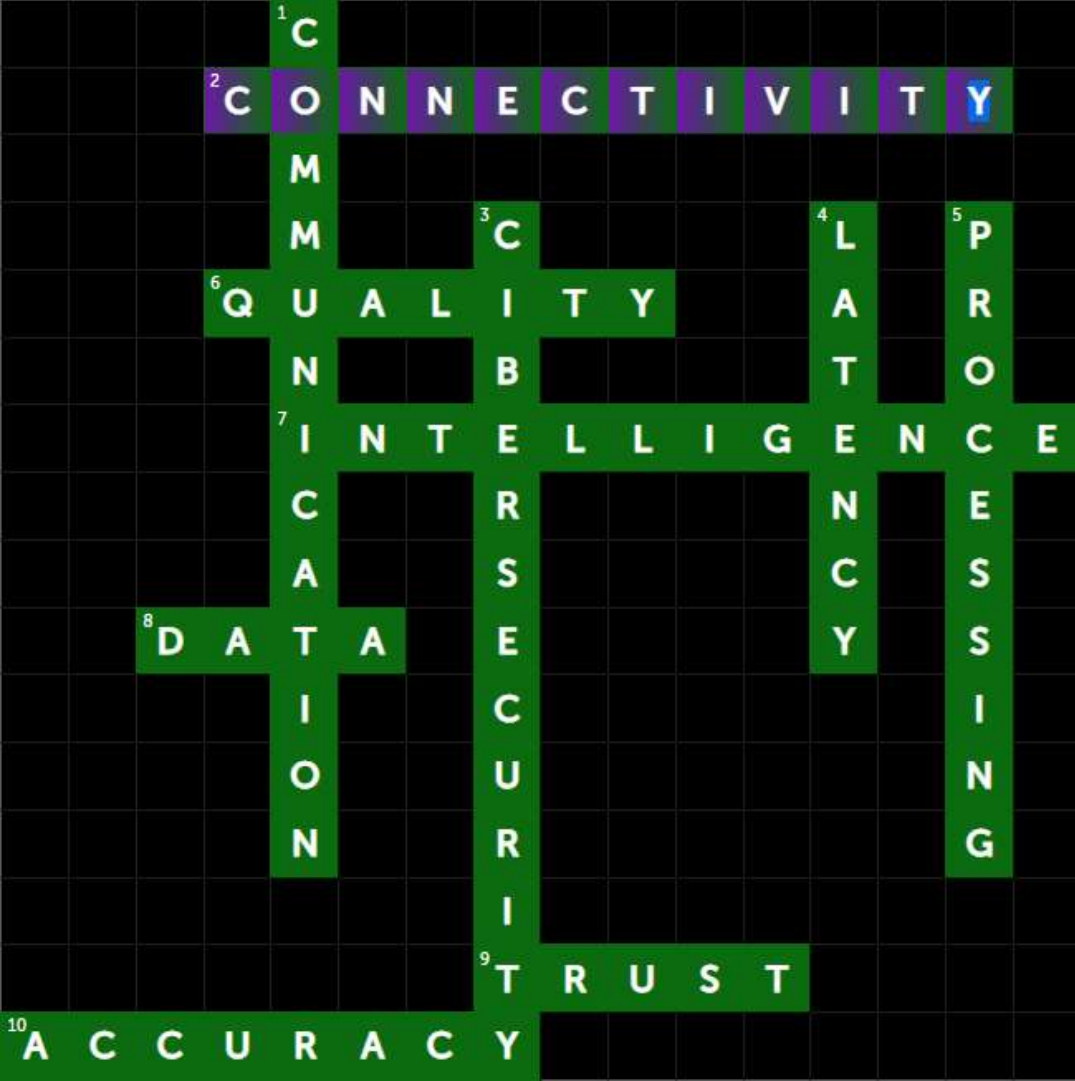
Technology Innovation
Expert Telefonica





Driving the Smart Mobility Revolution





Smart Mobility

Safe
Efficient
Sustainable

Technological Pillars for Future Mobility

NETWORK CAPABILITIES



5G NETWORK



C-V2X



NETWORK SLICING

2024



EDGE COMPUTING

ENABLERS



APP ONBOARDING
(AV, IA, ML)



PRECISE
POSITIONING



PKI

USE CASES



V2X



ROAD HEALTH



REMOTE DRIVING



AUTONOMOUS CAR



5G Connected Tunnel

First step towards the road of the future

Challenge: To provide intelligence to the road and to facilitate assisted driving, improving the information available to the driver to make decisions and, therefore, improve road safety.



APP ONBOARDING
(AV, IA, ML)



5G NETWORK



C-V2X



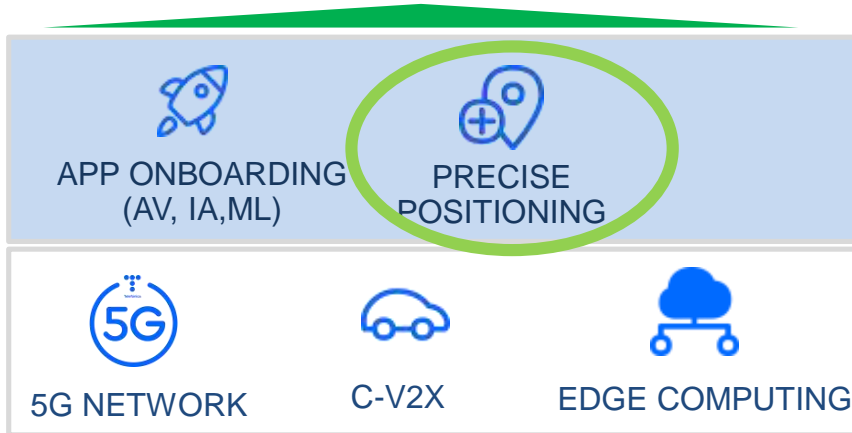
EDGE COMPUTING



5G Connected Cranes

Safety solutions for industrial and port traffic

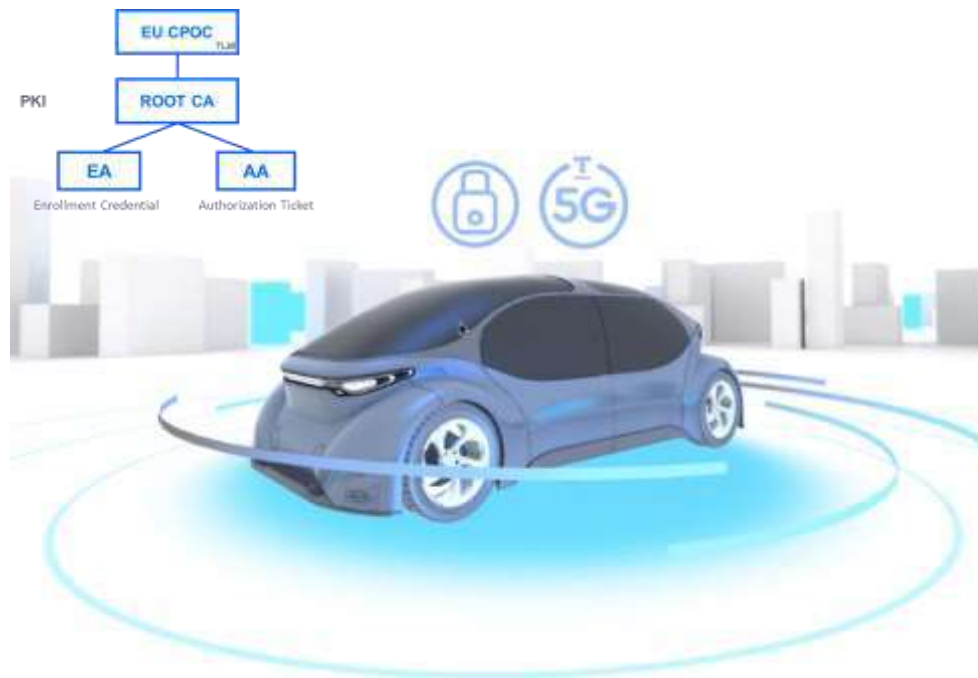
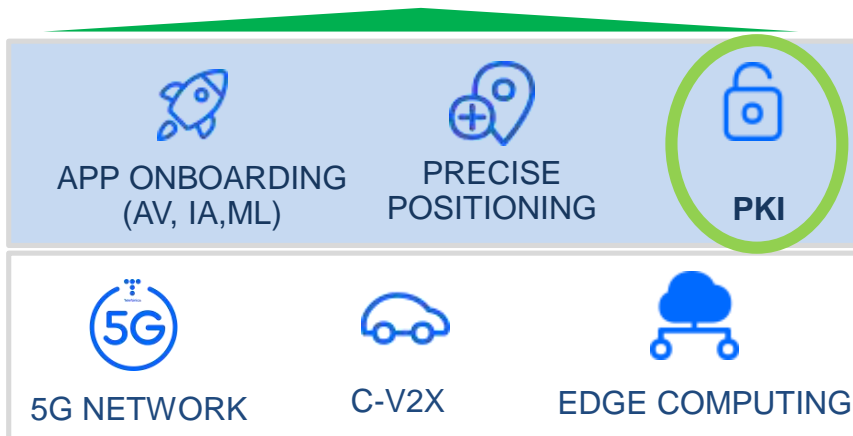
Challenge: To adapt networked vehicle technology to industrial settings, providing an accurate localization and integrating ambulatory staff (providing them with a smartphone app connected to the V2X ecosystem).



5G Cybersecurity in Connected Mobility

Key step to create a trustable mobility ecosystem.

Challenge: To deploy a Certification Authority recognized by the European Commission linked to the 5G network for vehicular communications and compliant with the requirements of the C-ITS standard.





2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
------	------	------	------	------	------	------	------	------	------	------

5G NSA	5G SA	Network Slicing		Network Slicing – UC 2 (Connected Mobility)						
--------	-------	-----------------	--	---	--	--	--	--	--	--

700 MHz: coverage in Smart Roads										
3,5 MHz Refarming: complementary coverage (Smart Roads & Smart Cities)										

26 GHz:										
---------	--	--	--	--	--	--	--	--	--	--



4 MECs	10 MECs	Orquestator & Interoperability								
--------	---------	--------------------------------	--	--	--	--	--	--	--	--



C-V2X integration										
-------------------	--	--	--	--	--	--	--	--	--	--



Smartphone connectivity										
-------------------------	--	--	--	--	--	--	--	--	--	--



Road digitalization										
---------------------	--	--	--	--	--	--	--	--	--	--



Level 2/3			Level 4						Level 5	
-----------	--	--	---------	--	--	--	--	--	---------	--

V2X TRIALS										
------------	--	--	--	--	--	--	--	--	--	--

V2X TRIALS										
------------	--	--	--	--	--	--	--	--	--	--

COMMERCIAL: V2X – INDUSTRY										
-------------------------------	--	--	--	--	--	--	--	--	--	--

COMMERCIAL: V2X - ASSISTED DRIVING										
------------------------------------	--	--	--	--	--	--	--	--	--	--

COMMERCIAL: V2X: - COOPERATIVE DRIVING										
--	--	--	--	--	--	--	--	--	--	--

AUTONOMOUS CAR TRIALS										
-----------------------	--	--	--	--	--	--	--	--	--	--





Telefónica fully committed to the development of the Smart Mobility Revolution



