

# Intangible value-creation generated by Private 5G Network

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**5G Momentum  
2022**

# Top Drivers & Megatrends

Telecom Industry

5G 

- 5G as a Catalyst for platform **Strategy & Transformation**
- Intelligent **Digital Ecosystem**
- “Edge” High-impact in 5G platforms
- Composable Networks drive **Business Agility**

**1**  
 Creating **New Values**

**2**  
 Enhancing **Experience**

**3**  
 Shaping **Change**

- **Growth & Customer Centricity**
- **Enriched-anywhere operations**



- **Sustainability** impacts society
- Accelerating **Purpose-Driven Innovation**
- Tech-strategy is **Role Agnostic**
- **Hyperautomation** Drives Business Outcomes



# Evolution to Digital Infrastructure

Intense, Ubiquitous, Distributed and Sustainable

**Industrial Operational Excellence**

138,000 Sites  
13 countries

**Connectivity for everybody**

4500 nodes and  
1200 small cells

**Connectivity to assets**

45.000 km of  
Optical Fiber

**Distributed data processing**

84 Edge Data Center

**Sustainability**

Always environmental  
focus

**Innovation**

Forward-looking  
initiatives

**Leveraging on joint capabilities**  
Engineering, Asset Management and Financing



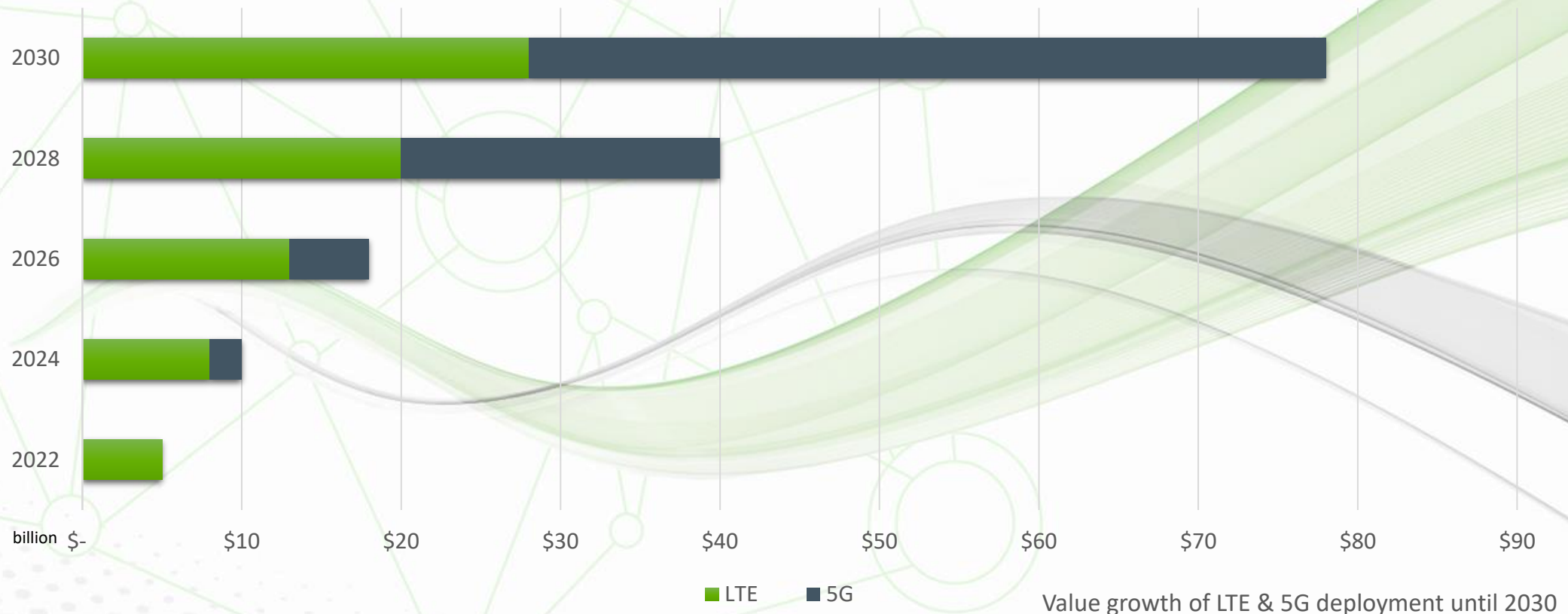
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By 2025, enterprise use of 5G services in **Industry-specific** applications will enter **early mainstream adoption**.

# Private 5G in the Industry

The growth of industries ascends with the increasing deployment of 5G

“The value-percentage of private 5G deployments will **outrun** private LTE deployments in 2029”



# Dedicated Edge Connectivity solutions for Industry 5.0



World-leading group of Lifting Businesses™



Boosting **5G** research to **automated** and digitalised solutions for factories and ports



The World's Leading 5G Motorsports Circuit



Fast built-in **real-time data communication** enabled by **uninterrupted connectivity** to manage site more efficiently



Manufacturing of custom-made machine tooling for the future industry



First **5G Private Wireless Network OpenLab** fully dedicated to the Manufacturing and Biopharma industries.



Largest chemical company in the world



Boosting **automated and safer operations** while **maximizing coverage** in the field with Private 5G Networks



Largest town in the county of Hampshire, England



Developing the local business community and creating a **'living lab'** to test **next-generation mobile apps** with 5G technology.

# Dedicated solutions for Industry 5.0

BASF's Tarragona site is the largest chemical production centre in Southern Europe now connected through an industrial private network with **Edge services on premise**



**BASF**

The Chemical Company

**MÁSMÓV!L**

- Automated guiding system for vehicles with artificial vision system for real-time recognition
- Augmented-reality system for remote maintenance
- Private communications for workers

**edzcom cellnex**  
a company of cellnex driving telecom connectivity

# Railways across Europe are partnered with Cellnex

Cellnex, your industrial partner for the 5G connectivity in Railways

- Densification of existing MNO network to cover white spots
- Seamless connectivity in specific high- passenger rail corridors
- Installation of new high-capacity antennas and 5G equipment to meet client expectations in data demand 1Gb/s – Gigabit Train
- Enabler for Rail Digitalization, Performance & Business Applications

UK - BML – LONDON TO BRIGHTON



France SGP L16/L17



Spain METROCALL  
FGC , L9 TMB



ProRail  
Netherlands



Italy



# 5G real-time monitoring and autonomous drone surveillance

Logistics project: private 5G network for **Bristol Port** to explore Open RAN and Edge technologies



- Real-time monitoring of goods
- Autonomous drone surveillance for the port
- Smart Junctions for traffic control



**5GMED**

# 5G Mobility Lab: Innovation Centre

Cellnex is actively participating in the definition of the future mobility ecosystem

5G Mobility Lab

Highways, Rural or urban settings

Castellolí Connected Circuit

5GMed Cross Border Corridor

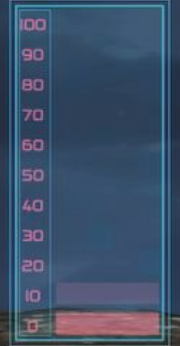
- Innovative testing spaces for the development of sustainable and connected mobility and the autonomous vehicle.
- Castellolí connected circuit offers a complete solution for testing connected vehicles in a controlled, safe and sustainable scenario.
- 5GMed project will **design a common roads/railways 5G infrastructure architecture**



# Sustainable Smart Cities



EXTRACTION COORDINATES	63	3/15/23
EXTRACTION COORDINATES	35	3/10/23
EXTRACTION COORDINATES	66	3/10/23



LOW LVL	■■■■■■■■■■
MEDIUM LVL	■■■■■■■■■■
HIGH LVL	■■■■■■■■■■

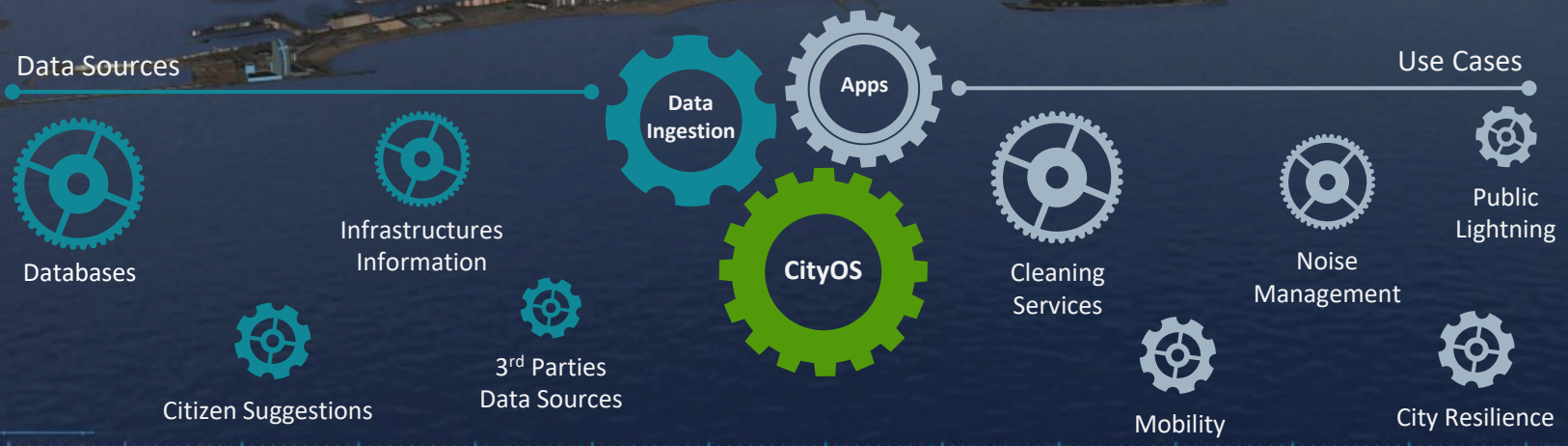


Connected Cities will direct impact environment and society for the sustainable growth of communities



Green energy and the use of new materials to build up new sites in hyper dense or very rural areas

SCANNING_DATA	
67a796dff084c06	642
7d5c8af95a45b6c	315
1b8f790c416a24f62	515
9538a09cbo3b7104	123
39e2ec23170d4cca	518
558aa528e358ce8b	192
3d85dd674aa2db48	545
90e00d521b7f43b1	133
7d5c8af95a45b6c	158
1b8f790c416a24f623	882
9538a09cbo3b7104	445
39e2ec23170d4cca	947
558aa528e358ce8b	665
3d85dd674aa2db48	521
90e00d521b7f43b23	847



# Success Story - Tampere

## How We Empower City Evolvment



**Better sensors**  
For health & environment



**Better cameras**  
For surveillance & monitoring



**Manage Traffic**  
For increased safety



**Create revenue opportunities**  
For business-focused and consumer-focused services



**Boost critical communication**  
Accelerate emergency response



**Reinvent people's experience**  
Autonomous buses, AR/VR tourism



# Building a hybrid connectivity platform

By using existing light infrastructure

1

Lighting grid

2

Digital Hub

3

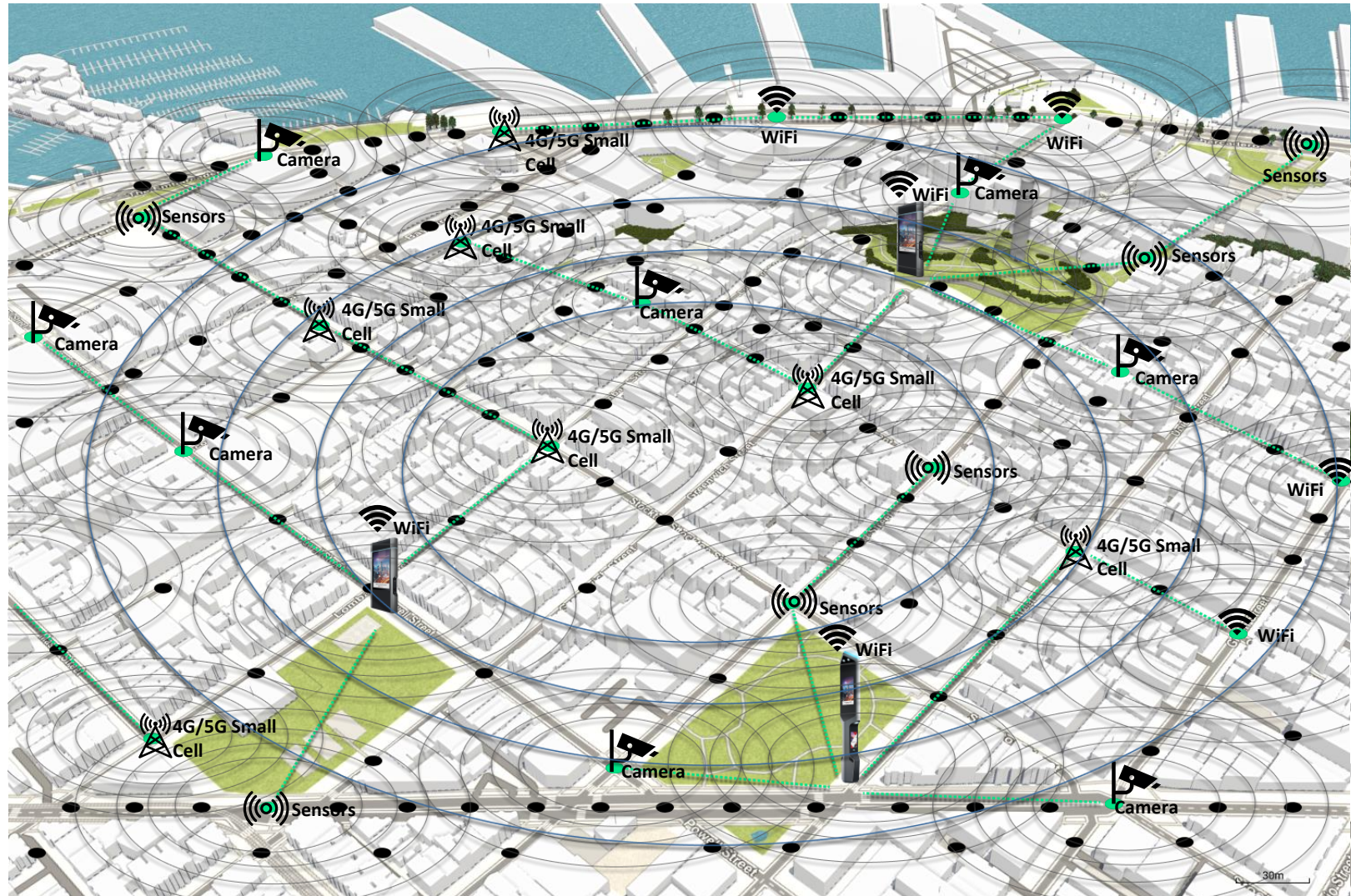
Upgrade lamp post

4

Activate lamp post

5

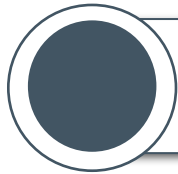
Create wireless meshed network



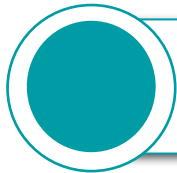
# Key takeaways



**Manufacturing and Transport** will continue to lead adoption of private networks.



The Mining, Oil & Gas sector will account for **30% of total capex and opex** generated by private LTE/5G networks in 2026.



The **increasing demand** for wide-area private network services



Demand for private wireless **spectrum** will increase



# Thank you

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