



MWCTM
Barcelona

5G IoT for Manufacturing at MWC Barcelona 2022

Manufacturing Summit Session 2

Private & Dedicated Networks for Industry 4.0

Industry City Stage,
Hall 4, Fira Gran Via

28 February 2022



INDUSTRY CITY

Elise Neel

Senior VP New Business Incubation, Verizon

INDUSTRYCITY

#MWC22

Private and Dedicated Networks to Drive Industry 4.0

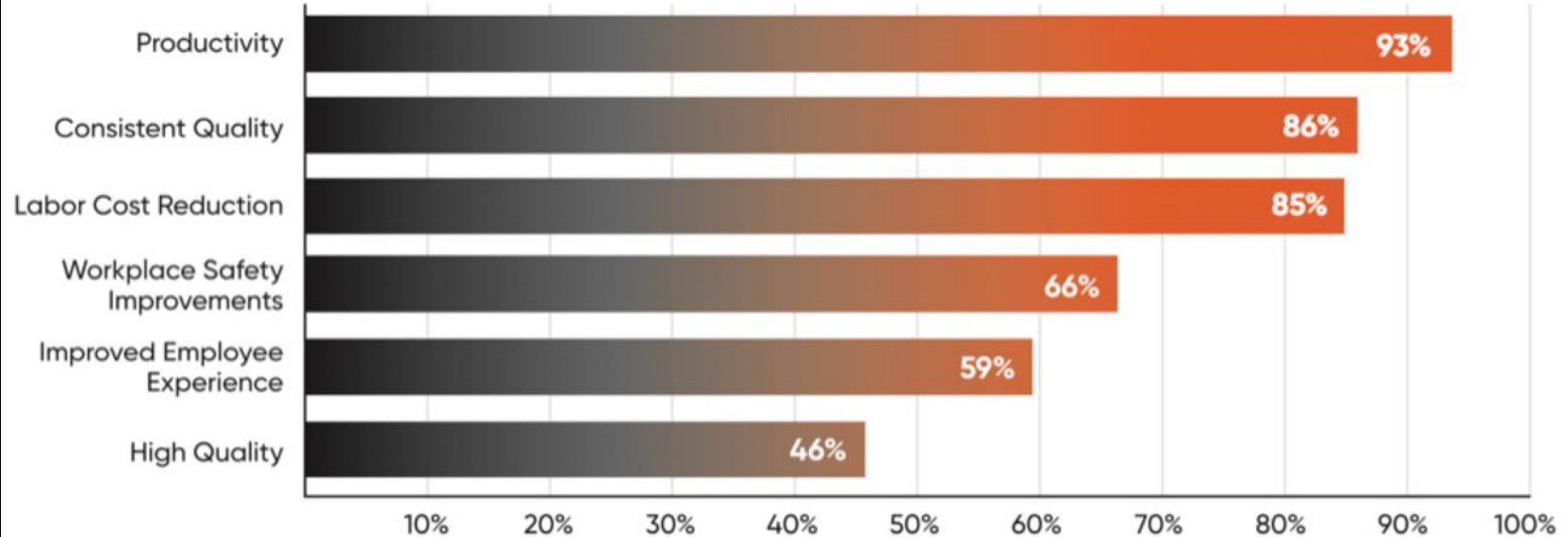


**Digital transformation
isn't a buzzword.**

**It's an operational
requirement.**

Benefits of Technologies that Enable I4.0 Outcomes

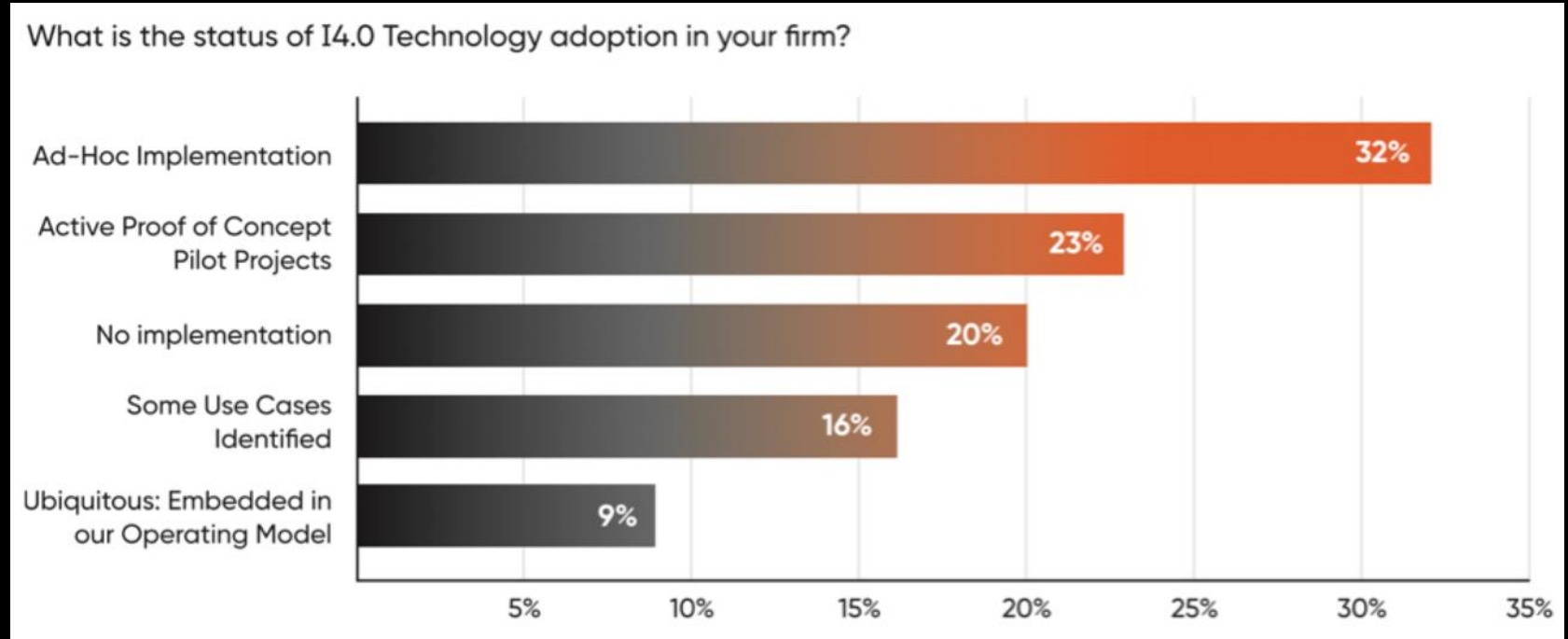
I4.0 Technologies offer the following potential benefits (check all that apply).



Source: 2021 Labor & Industry 4.0 Technology Adoption Study, CGS Advisors

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The Status of I4.0 Technology Adoption



Source: 2021 Labor & Industry 4.0 Technology Adoption Study, CGS Advisors

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Customer Pain Points

Manufacturers face many challenges in accelerating their digitization efforts.



**Varied
hardware**



**Legacy & proprietary
apps/protocols**



**Fragmented
data sources**



**High network
reliability**



**Massive connections
& scalability**



Source: ABI Research, "5G and Edge Networks In Manufacturing"



Building for Industry 4.0 Customers



**Verizon 5G
Network**

+



**Verizon 5G
Edge**

+



**Use-Case-Specific
Software**



Private or Dedicated 5G Networks

Bring a custom-tailored 5G experience to indoor or outdoor facilities where high-speed, high-capacity, low-latency connectivity is crucial.

**Dedicated
Bandwidth**

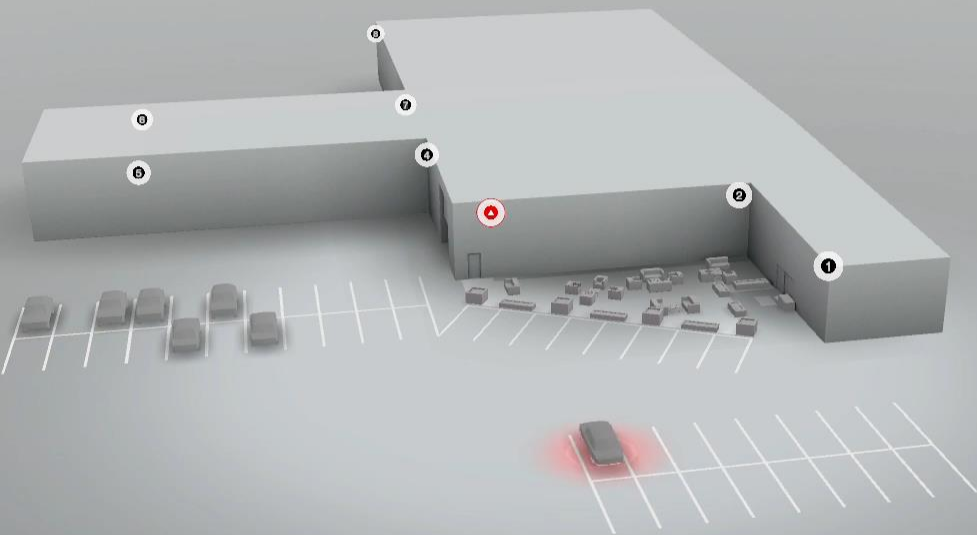
**Security
Needs**

**High-Quality
Connections**

**Consistent,
Always-on**



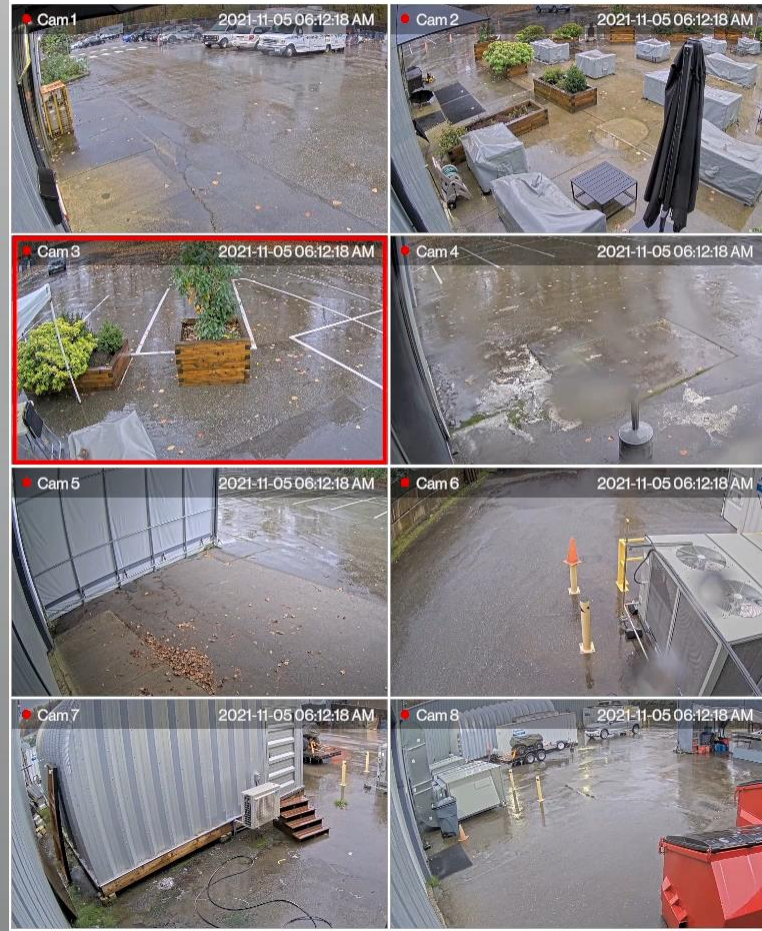
November 05 2021
06:12:18 AM
36.22183, -115.14707



Suspicious activity detected by camera 3.
Vehicle parked outside operating hours.
Redirecting to cloud for AI Analysis.

360°

Camera **1** AI Analysis Report



verizon✓

Catherine Gull

Consultant, Cellnex

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Evolution of Smart Manufacturing

enabled by Private Networks



2022

Cellnex/Edzcom



#1

independent telecom infrastructure
services provider in Europe

edzcom
a company of **cellnex**

EDZCOM, a Cellnex company, is a pioneer and European market leader in Edge Connectivity, solely dedicated to designing, building and operating private 4G and 5G networks



130k

Sites for wireless
telecommunications
infrastructure in Europe

13

Covered countries in
Europe and expanding

40

Private 4G/5G deployed

16

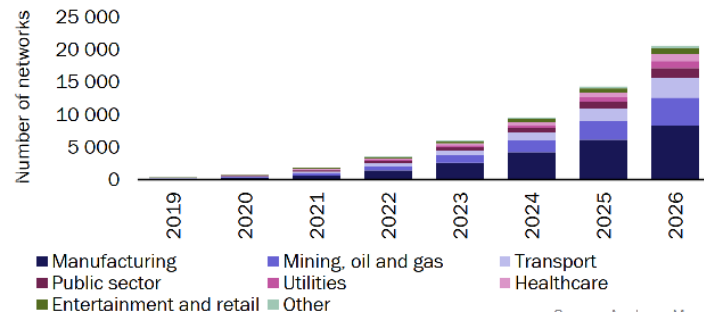
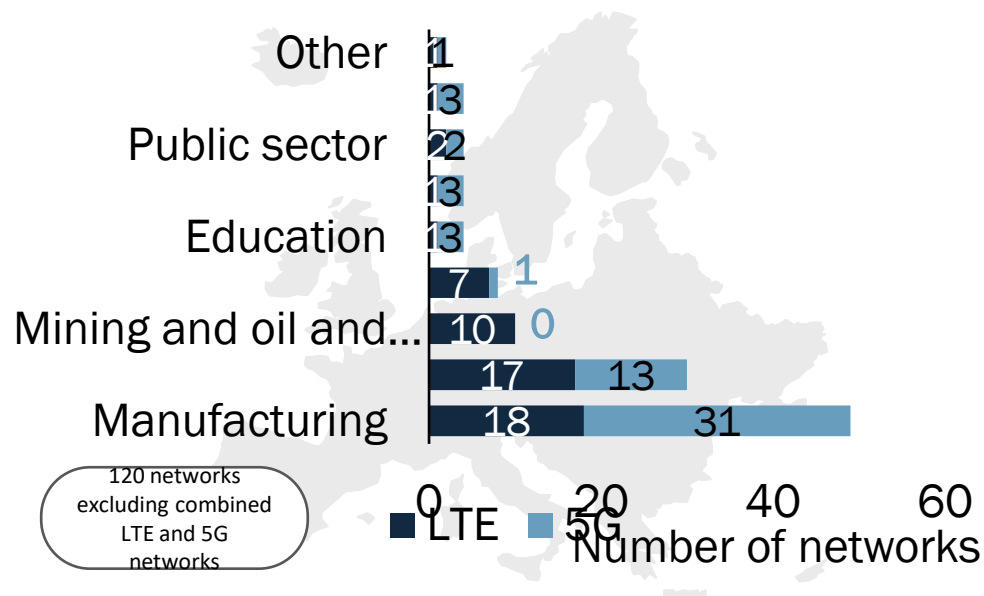
Years of experience in
mission critical
communications

8

Years of experience and
market leaders in Edge
Connectivity

Private 5G in the Manufacturing Industry

early adopter of 5G technology in Europe



Number of private LTE/5G networks per industry

Key Challenges



Maintenance



Security



Sustainability



Worker Safety



Massive data



Automation

Key drivers for 5G Private Networks

- 1** **Industrial transformation** is underway; COVID and a changing work force has accelerated the process.
- 2** **Mix of use cases** – legacy, automation, mobility, demand for flexibility
- 3** New spectrum regimes are **facilitating the adoption of private 5G networks.**

Comparison

Private Networks as the cornerstone of Digitalisation



LEVEL OF AUTONOMY

- High

- Very limited

- High

SECURITY

- Weak air-interface protection

- Low

- High

MOBILITY

- Non-seamless handovers

- Variable performance

- Seamless

RELIABILITY

- Has limitations

- Best effort

- Very high (tailored)

CAPACITY / SPECTRUM

- Shared, unlicensed

- Shared, licensed

- Dedicated, licensed

COVERAGE

- Indoor centric

- Generic

- Customer specific

Boosting 5G research into Automated &

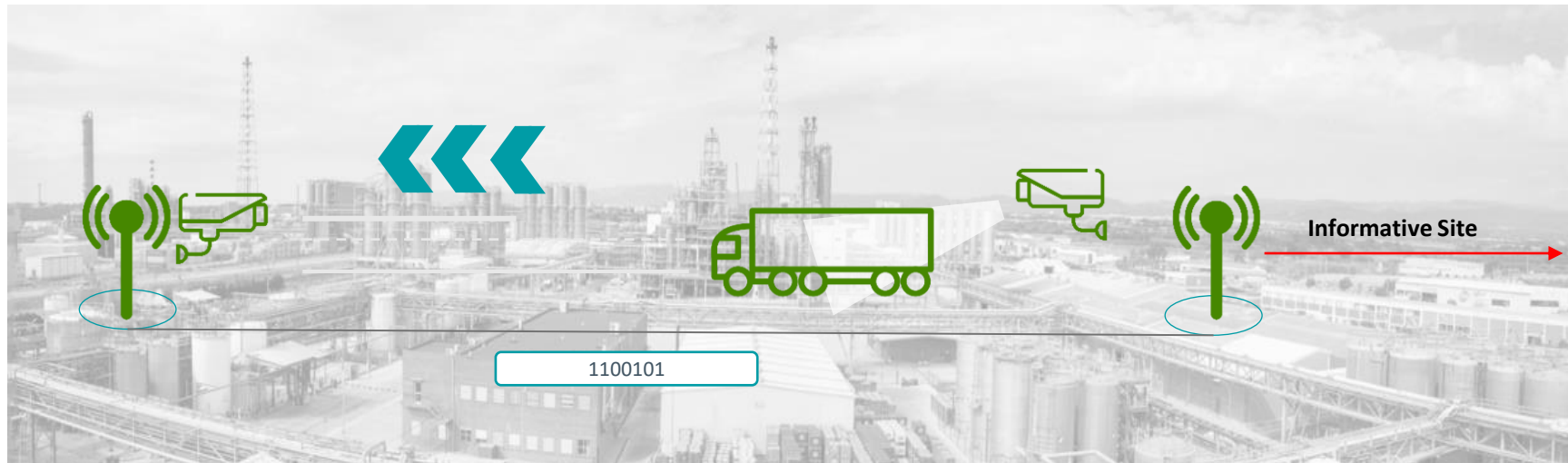
Digitalised solutions for factories and ports

KONECRANES®



Interconnecting Production

Buildings, tanks of silos, people, self-driving trucks & assets



100% Control for the customer

Bespoke OSS



Designed and built for the customer

to accommodate the use cases and the scope and specifics of client's site

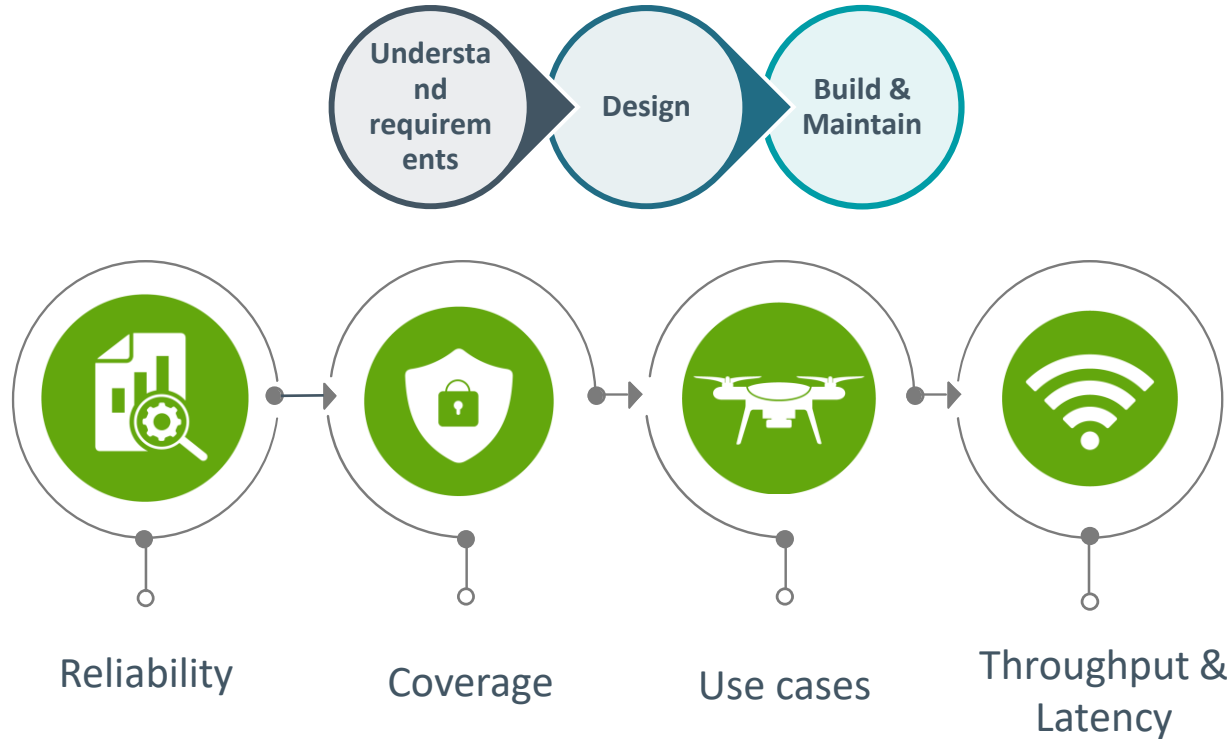
Controlled by the customer

with real-time visibility via dashboard

Build as you grow

Phase-by-phase investment and to expand capacity, coverage or robustness for future growth needs

Your Own Private Network





How can
we help?



Thank you

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