

5G

A strategic pillar for innovation

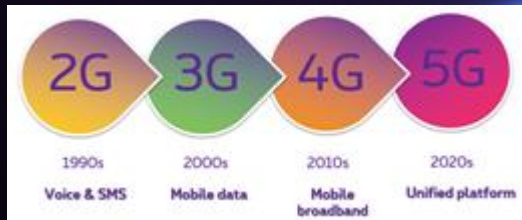
An aerial photograph of a city, likely Bruges, Belgium, at sunset. The sky is a mix of orange, pink, and purple. In the center of the image, the letters '5G' are rendered in a glowing, neon-like font with purple and blue light trails. The city's architecture, including several prominent church spires, is visible in the foreground and middle ground.

5G

Frederic Renette
5G Private Network Business Development

From evolution

5G



... to revolution



**Enhanced mobile
broadband**

**Low latency &
ultra reliability**



**Massive
connectivity**

Network slicing



Mobile Private Network

Transformation by
connecting people and
things in a secure and
reliable way

5G





Mobile Private Network (MPN)

Your network, your devices and your data

Data stream stays inside the private network

High data security,
Exclusive controlled access

High Performance : guaranteed latency,
bandwidth, QoS

Reliability & stability

Scalability

Starting local, expanding nationwide

Network efficiency

Beamforming, energy consumption

Multiple purpose : Verticals - Industries

Multiple fields of applications

5G is built around technology Mega-trends

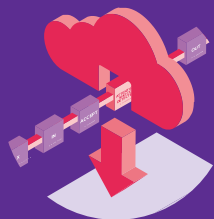
Digital empowered workforce

Increase mobility and improve flexibility & efficiency



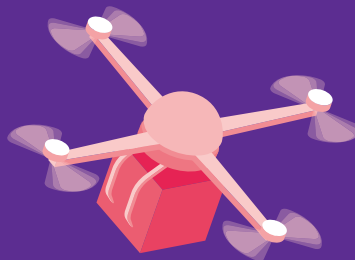
Automation & robotization

Reduce cost and the occurrence of errors with predefined operations of storing and moving goods



IoT

Enable faster innovation in Supply Chain 4.0



Drones

Execute fast last mile delivery and in-warehouse operational efficiency

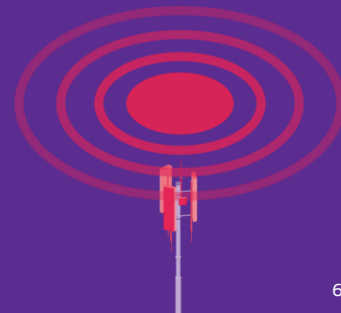
AI, Big data, Edge Cloud

Manage large information flows to make quick decisions



5G networks

Accelerate the exchange of information & real-time data (automated guided vehicles, AI, drones, ...)



5G Co-creation

Some concrete examples

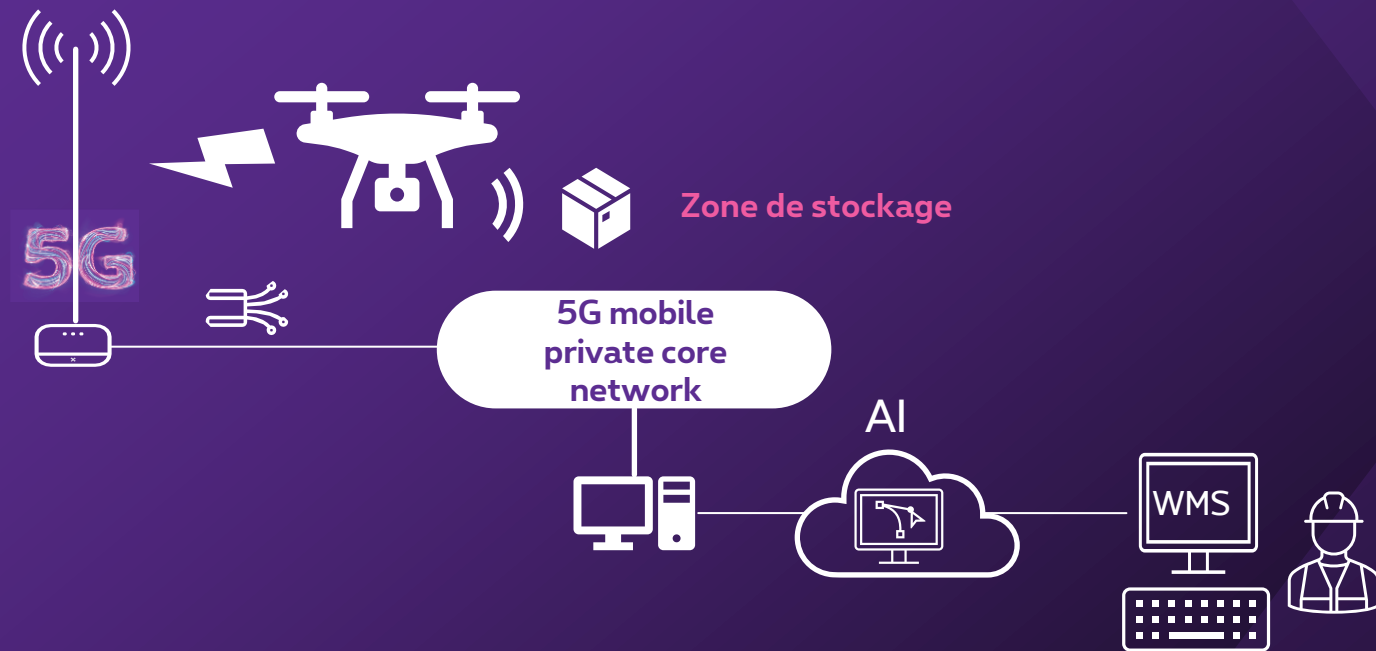


IMAGE RETINE

5G POC

ID2Move – GSA – Deltrian - Proximus ADA – Proximus NXT

5G “suitcase” – IMAGE RETINE

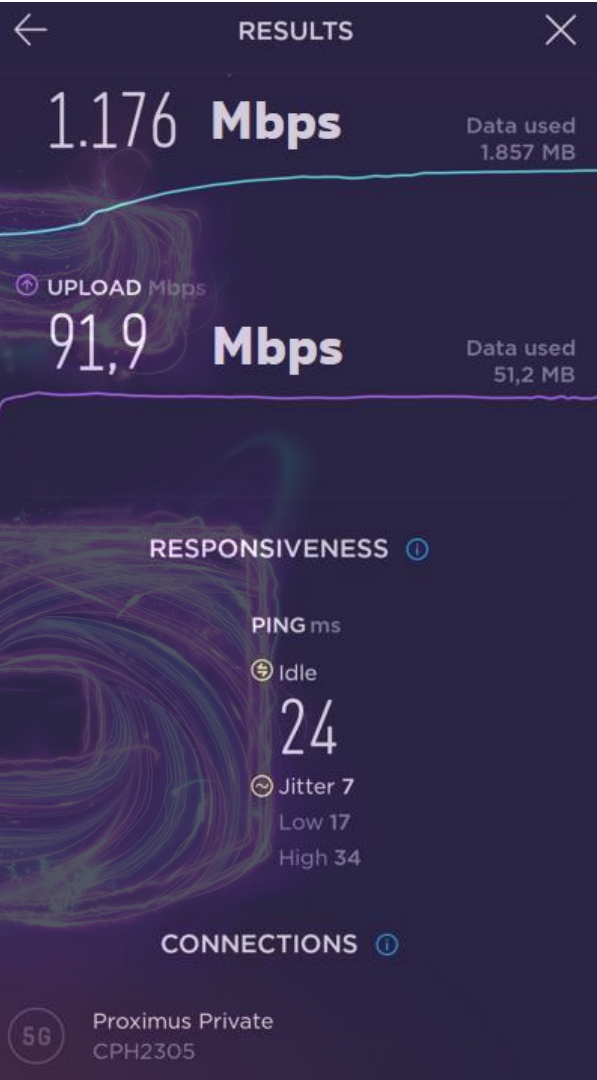




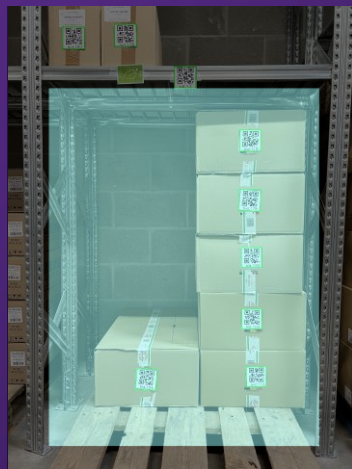
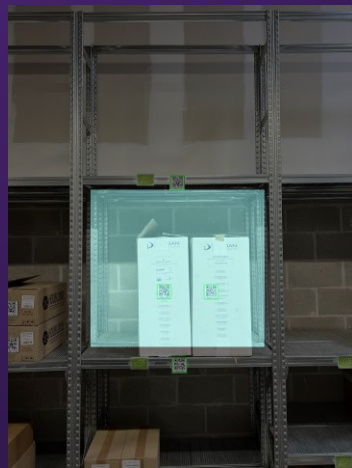
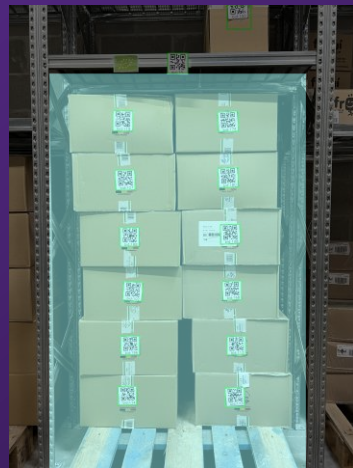
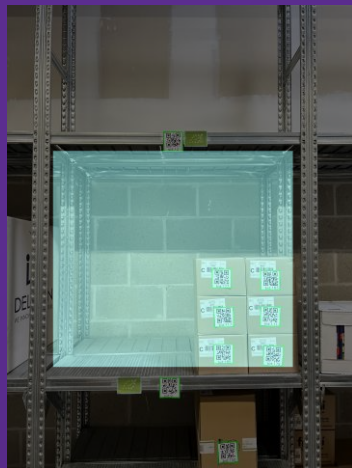
Enhanced mobile
broadband :
download speed
> 1 Gbps

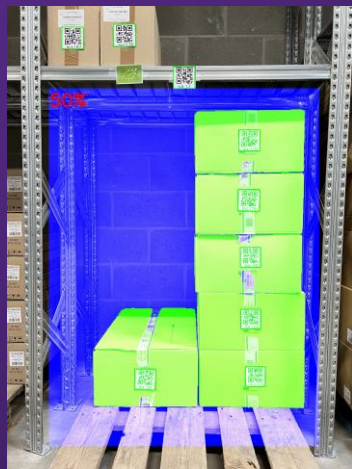
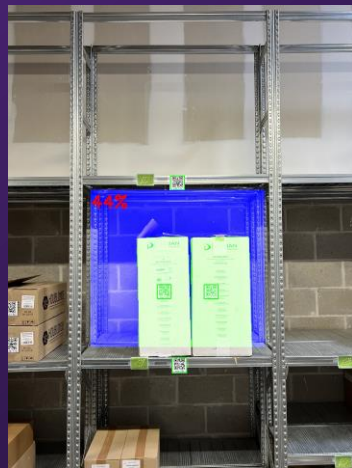
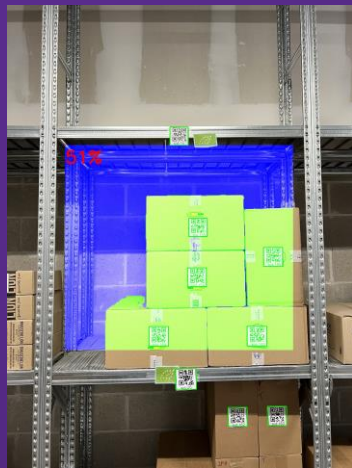
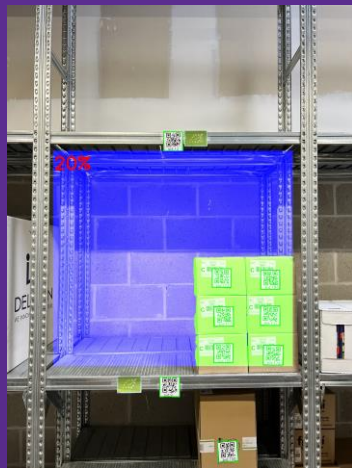


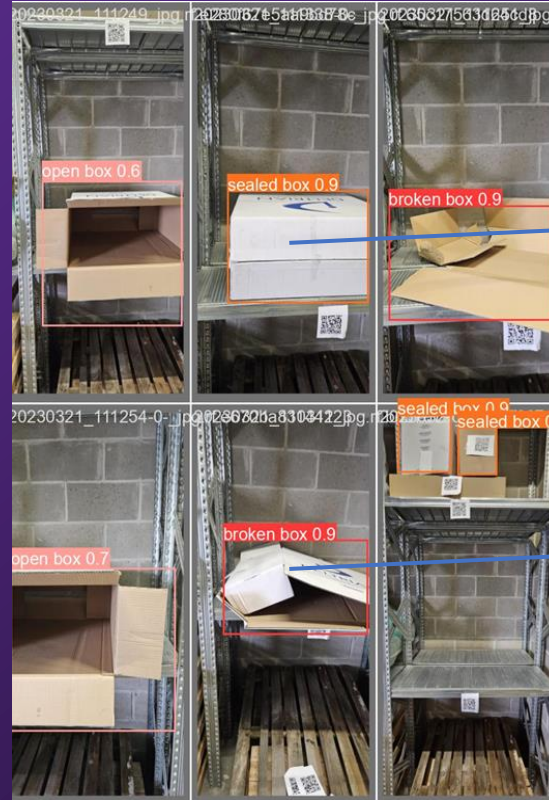
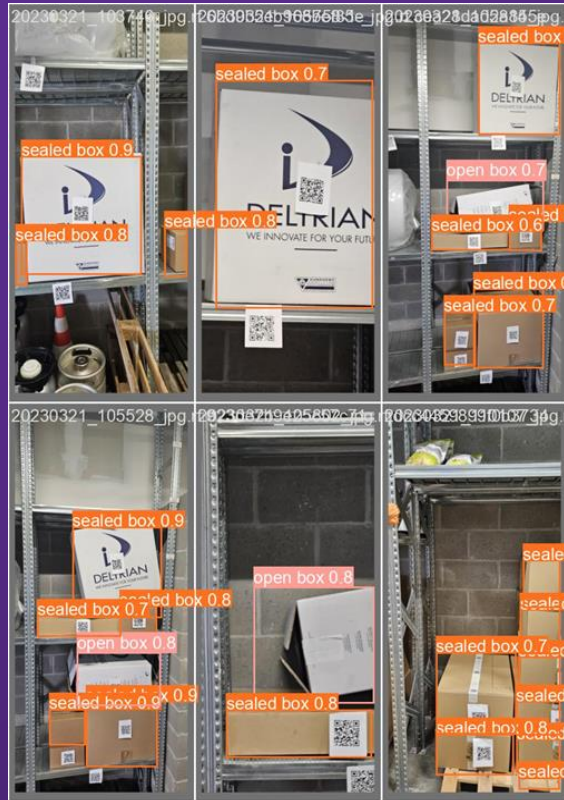
Low latency &
ultra reliability :
latency 12 ms
(ping value / 2)











Identify open /closed boxes.

Identify damaged goods

Drone use case

Port of Antwerp-Bruges



High
Bandwidth

Low
Latency

High
Reliability

Challenges

Monitor - Detect – Inspect
Coordinate - Support
Over a wide and difficult
to access area

Confidential

Solution

Drone missions
“As a service”



Why 5G?

- ✓ Port-wide, stable coverage
- ✓ Low latency for centralized, autonomous operations (AI)
- ✓ High resolution video streaming

Confidentiality

The



operating in the
Port of Antwerp

Examples of specific & potential use cases

Mapping/
surveying

Small
parcel
delivery

Quay
inspection

Oil spill /
pollution
detection

Inspection
for
maintenance

Maintenance
support

Leak
detection

Damage
detection

Navigation
support

Anti-thief
surveillance

Identification
of
unauthorised
people/
vehicles

Equipment
inspection

Use Case

AGV in Fabriek Logistiek



**FABRIEK
LOGISTIEK**



High
Bandwidth

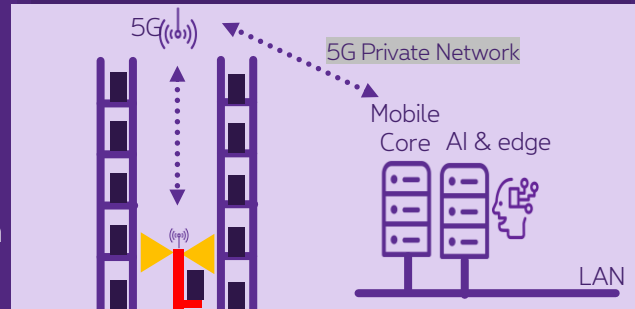
Low
Latency

High
Reliability

Challenges

- ✓ Faster transport of goods
- ✓ Centralized traffic control
- ✓ Collaborative operation
- ✓ Remote emergency stops & operation of gates

Solution



Why 5G?

- ✓ Stable, reliable & secure NW
- ✓ Deep indoor coverage
- ✓ No AP-handover delays (ProfiSafe)
- ✓ Low latency for centralized, autonomous operation (AI-driven)



Thank you