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Citymesh

# THE DAWN OF 5G – ALTERING THE HEALTHCARE DNA

TRACK 3: DIGITAL TRANSFORMATION  
ENABLES HEALTHCARE RE-INTEGRATION  
INTO SOCIETY

**16:20 - 16:50**



**#T5THC**

05  
09  
2019

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# Path to

# 5G

A dark blue icon representing a 5G signal, consisting of three curved lines radiating from the right side of the "5G" text.

**THE DAWN OF 5G – ALTERING THE HEALTHCARE DNA**

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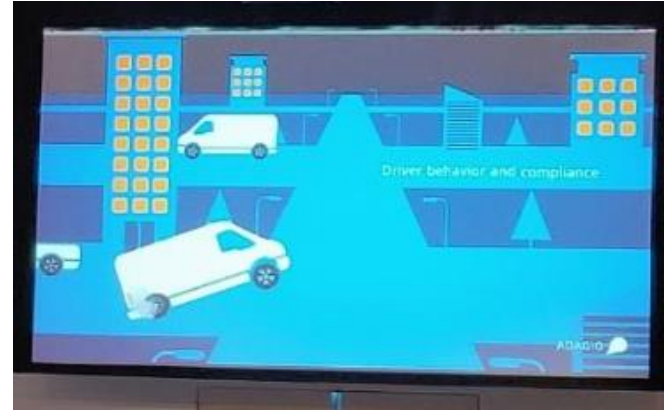


## THE ROLE OF THE DIGITAL AND THE PHYSICIAN IN PREVENTION OF DISEASES



## THE ROLE OF HOSPITAL NETWORKS IN DIGITAL TRANSFORMATION: THE CASE OF ELECTRONIC PATIENT RECORDS

## HEALTHCARE IN THE ERA OF INTERNET OF THINGS AND MACHINE LEARNING



## D~~X~~REWIRING HEALTH!

### MOBILE HEALTH TECHNOLOGY, FROM BENCH TO BEDSIDE

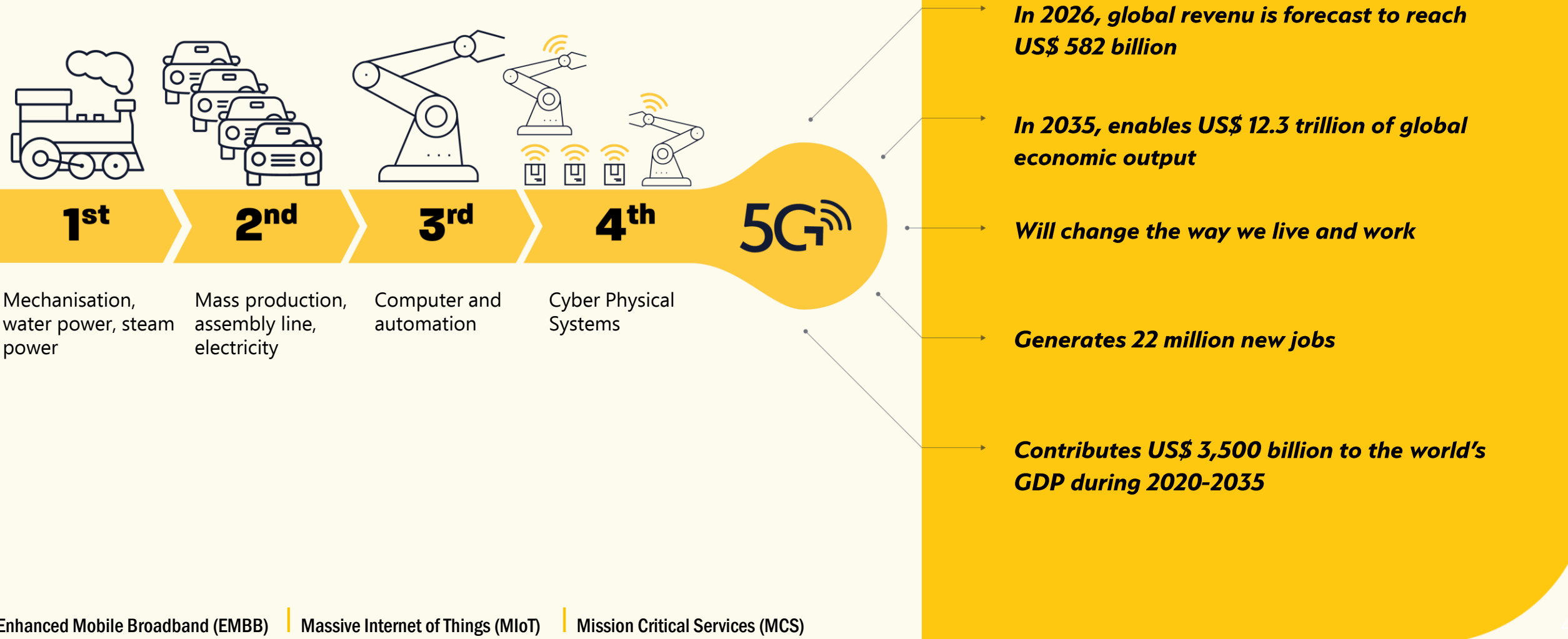
### CONNECTING THE DOTS – HOW DIGITALIZATION CAN DISRUPT DIABETES MANAGEMENT



## WHAT ARTIFICIAL INTELLIGENCE COULD MEAN FOR THE HEALTH CARE SECTOR

### THE HOSPITAL WITHOUT PATIENTS







## Factories of the Future

- 1 Time-critical process control
- 2 Non time-critical factory automation
- 3 Remote control
- 4 Intra/Inter-enterprise communication
- 5 Connected goods

## Energy

- 1 Grid access
- 2 Grid backhaul
- 3 Grid backbone

## e-HEALTH

- 1 Assets and interventions management in Hospital
- 2 Robotics
- 3 Remote monitoring
- 4 Smarter medication

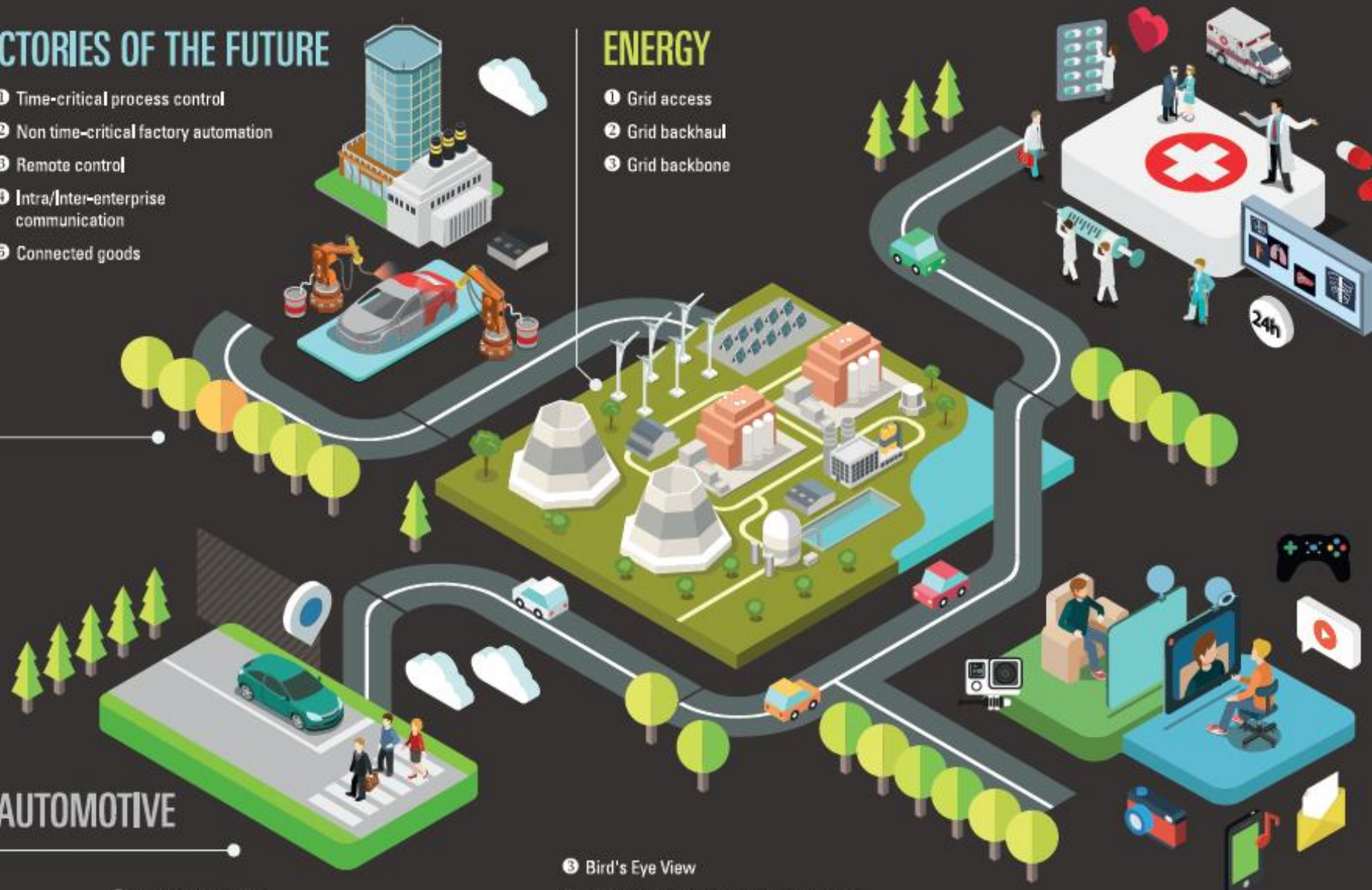
## MEDIA & ENTERTAINMENT

- 1 Ultra High Fidelity Media
- 2 On-site Live Event Experience
- 3 User/Machine Generated Content
- 4 Immersive and Integrated Media
- 5 Cooperative Media Production
- 6 Collaborative Gaming

## AUTOMOTIVE

- 1 Automated driving
- 2 Share My View

- 3 Bird's Eye View
- 4 Digitalization of Transport and Logistics
- 5 Information Society on the road





## Requirements

### Capacity

> 10 Gbps peak rates  
100 Mbps whenever needed



### Connectivity

1.000.000  
devices per km<sup>2</sup>



### Latency

< 1 ms  
Radio latency



### Reliability

10 years on  
battery



# 5G

### New spectrum options

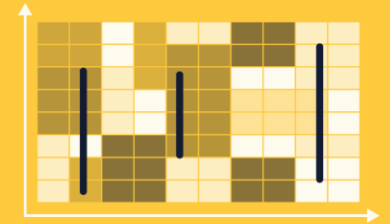


< 3 GHz, 3-6 GHz,  
cm/mmWave

### Massive MIMO & beamforming



### Flexible air interface



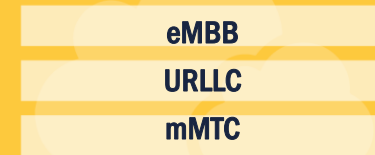
## New 5G technology building blocks

### Multi-connectivity



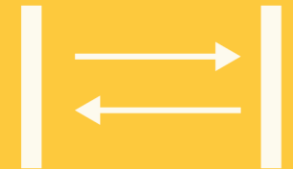
Aggregation &  
duplication

### Cloud native & network slicing

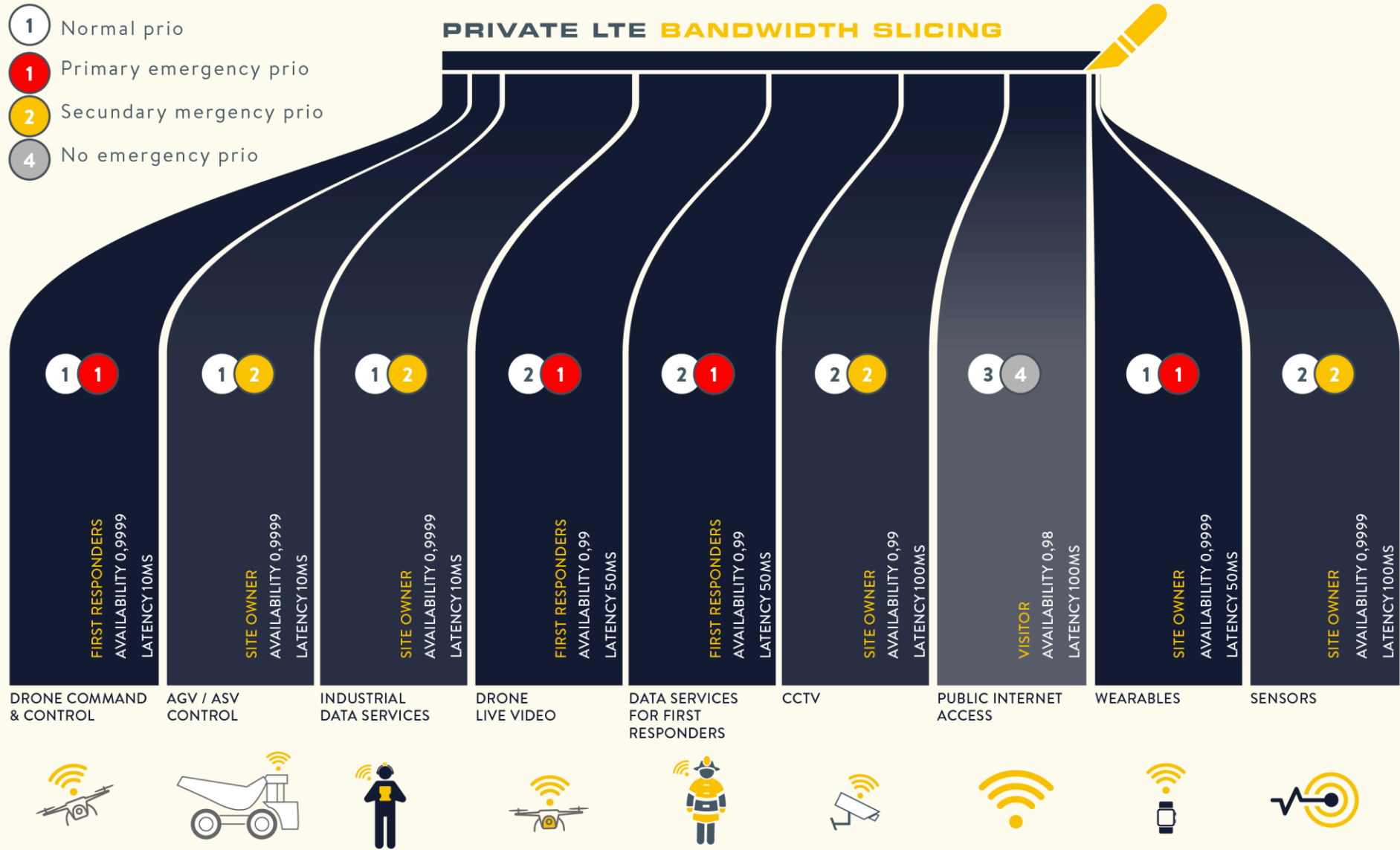


Centralized &  
distributed

### Connectionless communication



Efficient massive IoT



**5G Spectrum**  
**5G Technology & Software**  
**5G Standard**  
**5G End user devices**

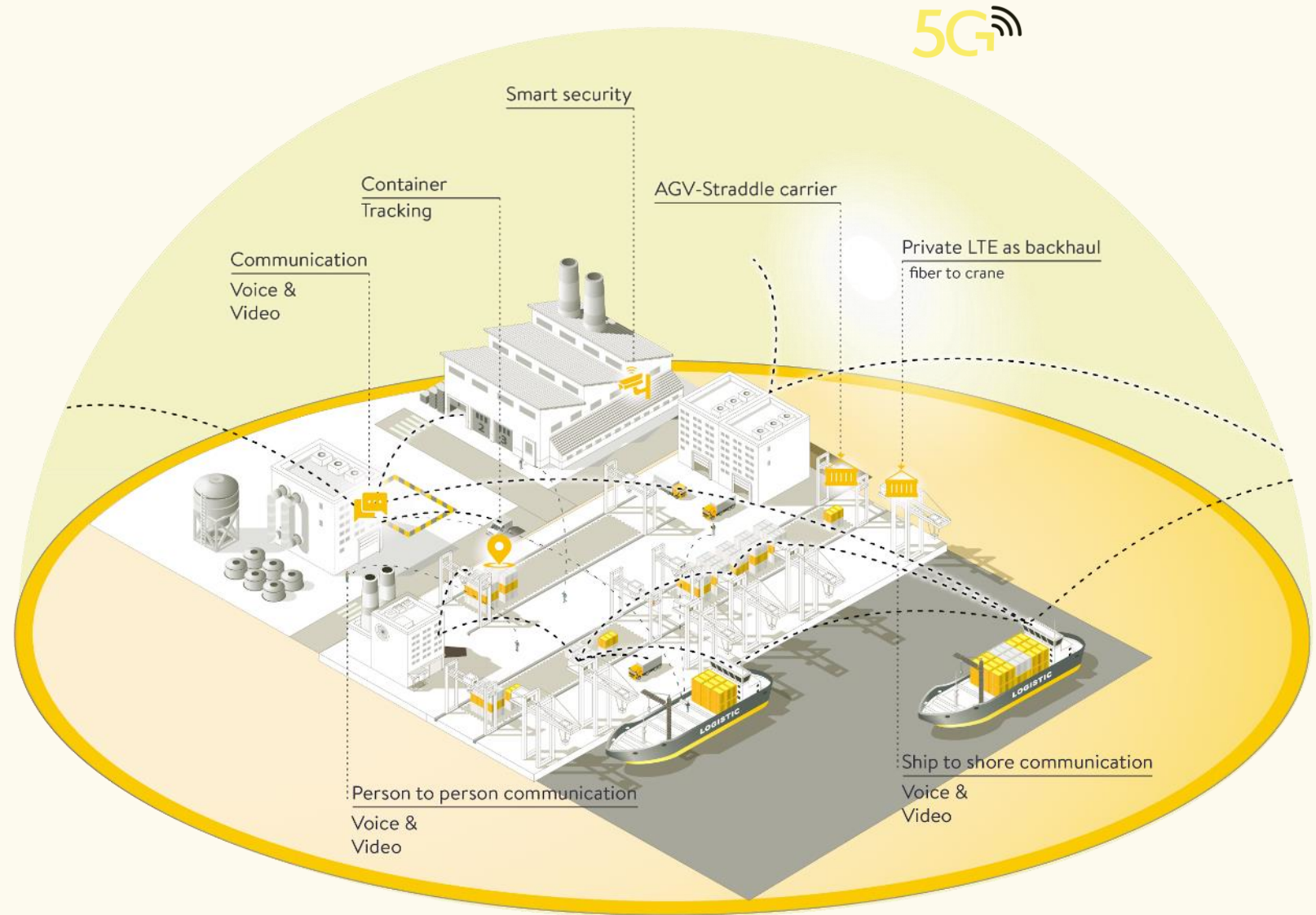


**We're the only company in Belgium...**  
**...with a 5G license**





**A private network where only you decide and control who/what may use this network**



# Your path to 5G starts today



**CITYMESH**



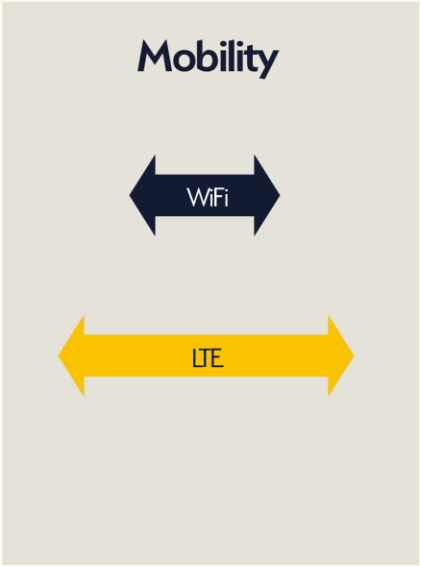
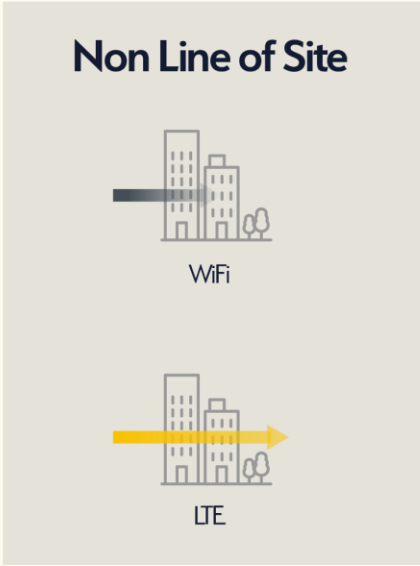
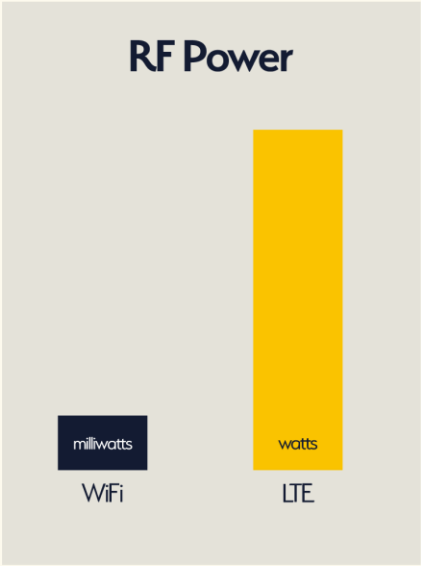
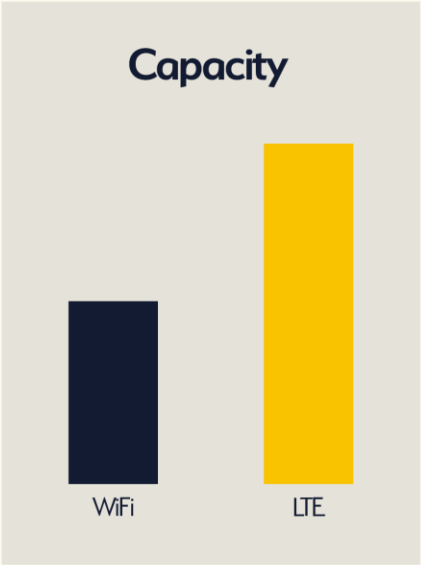
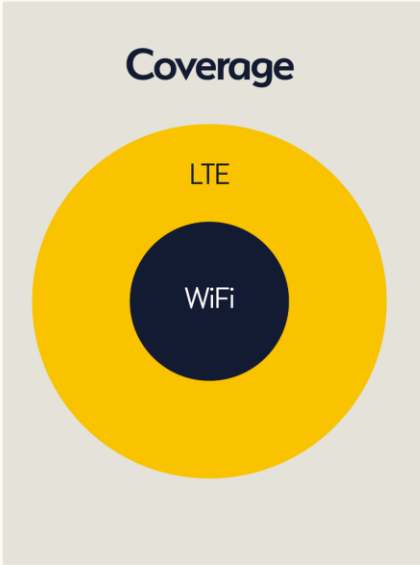
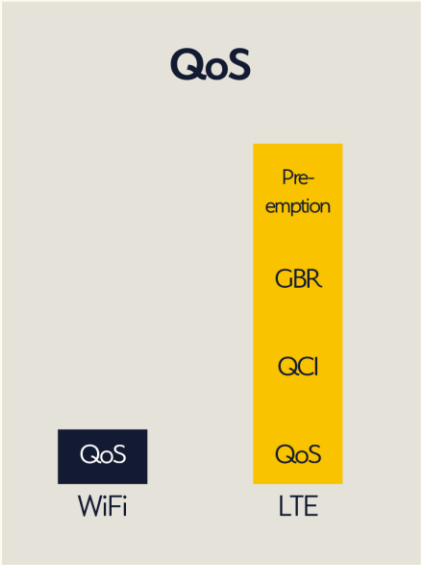
**NOKIA**

**Strong partnership**

Technology

Software

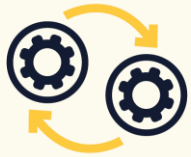
Security





**A private network where only you decide and control who/what may use this network**





## M2M

*Supply chain*  
*Digital Twin*  
*Wearables*  
*Alarm & Notification*



## H2M

*Telemedicine*  
*Wayfinding*  
*Remote Diagnosis*  
*Time tracking*



## Maintenance

*Track & trace*  
*Predictive mtc*  
*Monitoring*



## Robotics & Automation

*Robot Surgery*  
*Digital OR*  
*Medical Robots*  
*Lab Automation*



## IoT

*Air quality*  
*Parking*  
*Temp*  
*Sound*  
*Footfall analytics*



## AR / VR

*Video/Foto - EPD*  
*AR in Surgery*  
*VR for Rehab*  
*Smart Glasses*  
*CCTV - Sensoring*



## Drones

*Safety drones*  
*Security drones*  
*Transportation drones*  
*Anti-drone*



## Mobility

*First responders*  
*Mobile unit data transfer*  
*HIS/LIS/RIS*  
*Telehealth*



## AGV

*Shuttle bus*  
*Automated Delivery*  
*Automated cleaning*





**Highest mobile  
Broadband &  
lowest latency**



**Investment  
model in stead  
of consumption  
model**



**Ultra reliable  
Because of  
limited  
dependencies**




**Keeping data  
Local for better  
Security & Full  
slicing**

# Private 5G Advantages

# Citymesh enabled Private **5G READY** network in the North Sea







# Citymesh enabled private **5G ready** network for Terminal Operator at Port of Zeebrugge

**5G IS NOW**

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**Thank you**

**Take advantage of 5G...**  
**TODAY**

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