



**MWCC<sup>TM</sup>**  
Barcelona

# 5G IoT for Manufacturing at MWC Barcelona 2022

## Manufacturing Summit Session 1

Advanced Analytics & Robotics for 5G IoT in Manufacturing

Industry City Stage,  
Hall 4, Fira Gran Via

**28 February 2022**



**INDUSTRY CITY**



# Lan Guan

Strategy & Consulting Senior Managing Director – Applied Intelligence,  
Solutions.AI Lead, Accenture

**INDUSTRY CITY**

**#MWC22**



# Wisdom unleashed on the shop floor

AI & Robotics in Manufacturing

Presented by Lan Guan,  
Senior Managing Director – Applied Intelligence,  
Solutions.AI Lead

 **accenture**

**MWC Barcelona  
Booth no. 4B100**



# How AI & robotics are transforming a century-old craft



Jiumu 5G Smart Industrial Park in Yongchun, Quanzhou, which entered operation in 2020, is the first 5G smart ceramic factory in Fujian and the world.

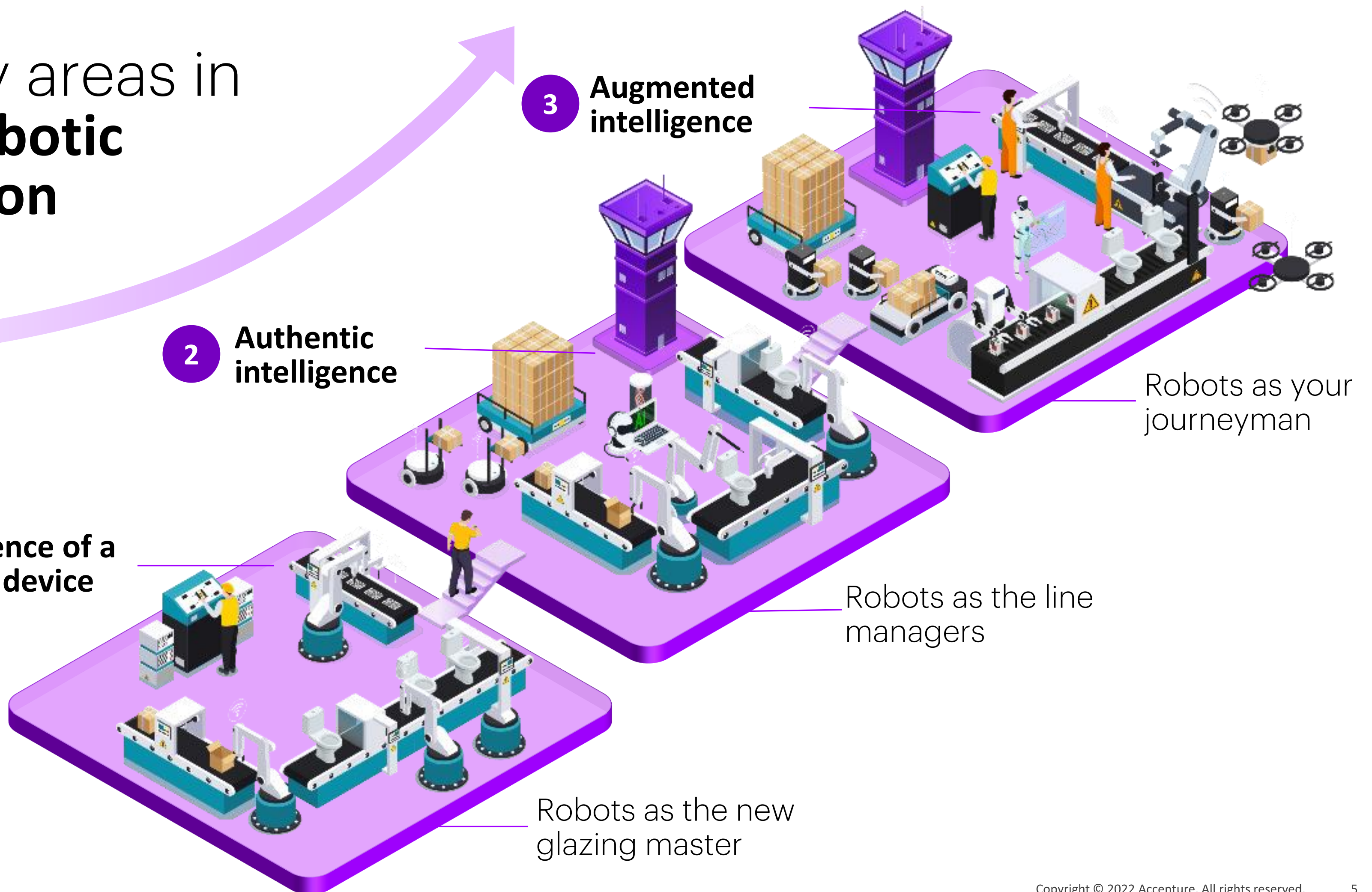


# Priority areas in **AI & robotic evolution**

**1** Intelligence of a  
single device

**2** Authentic  
intelligence

**3** Augmented  
intelligence





# Common “Gotchas”

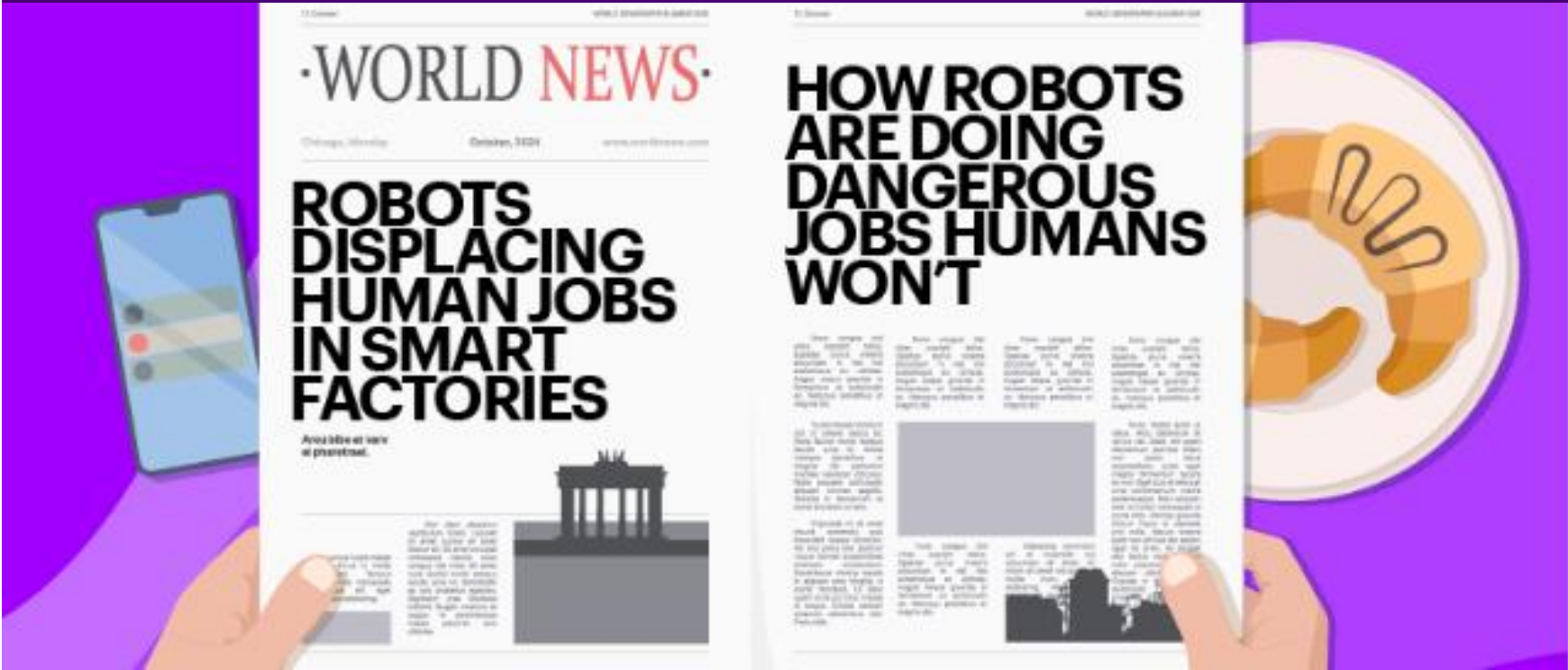
## Big data or small data?



## Algorithmic architecture?



## More jobs or less jobs?



## Too early for ESG?







# What does the future bring?





# Thank you

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# Jacob Groote

EVP Innovation & Partnerships, KPN

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# Industry 4.0 & 5G

## Human Machine Interaction

How 5G leverages I 4.0 investments

**Jacob Groote**

EVP Innovation & Partnerships

Mobile World Congress 2022, Barcelona





# Business first, technology second

Many sectors benefit from the first 5G services



Health:

## **National: 'green for blue'**

### **Application Priority**

- Network priority for smart traffic lights that prioritize an ambulance
- Nationwide availability
- Essential for mission critical and emergency applications



Public:

## **Johan Cruyff Arena**

### **Guaranteed Bandwidth** (slicing)

- Offers a stable experience when using (streaming) applications
- Essential when using AR/VR applications and mobile workplace solutions



Manufacturing:

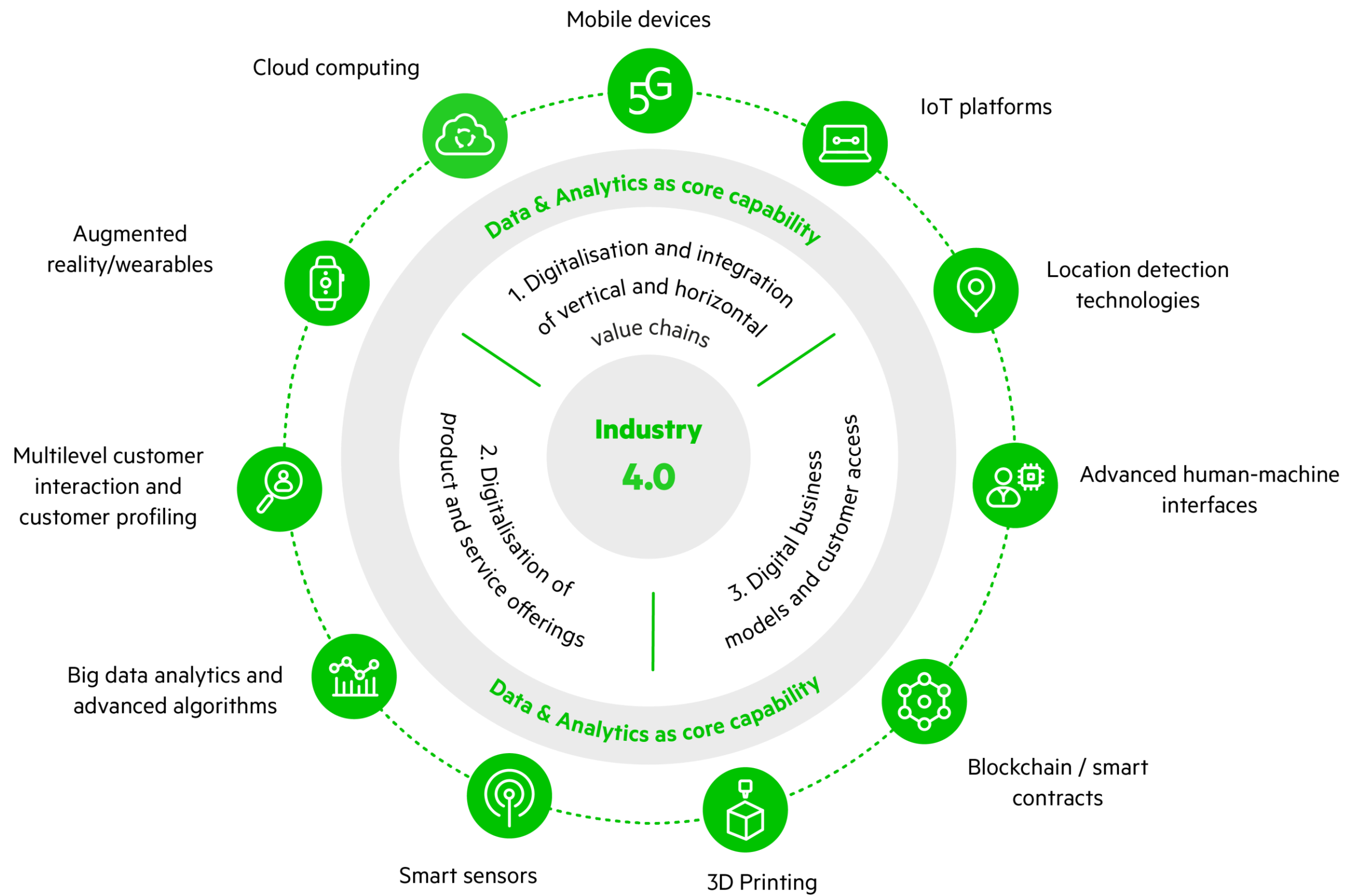
## **Shell**

### **Coverage on Demand**

- Allows continuous coverage indoor and outdoor
- Essential for digital workflow use cases and autonomous robots



# Investments in Industry 4.0 technology are growing rapidly and are enabled by 5G networks



Technology	CAGR
Robotics <sup>1</sup>	13,5 %
AR/VR <sup>2</sup>	50,4 %
Realtime Localization <sup>3</sup>	24,8 %
Digital Twin <sup>4</sup>	50,0 %

<sup>1</sup> Allied market research: robotics technology market Global Opportunity Analysis and Industry Forecast, 2020–2027

<sup>2</sup> Markets and Markets: Industrial Wearables Market - Global Forecast to 2024

<sup>3</sup> Markets and Markets: Real-time Location Systems Market (RTLS) - Global Forecast to 2026

<sup>4</sup> Research and Markets - Digital Twin Market Research Report: Global Industry Analysis and Growth Forecast to 2030



# Human machine interaction is key for manufacturing

## Manufacturing investments enable human machine interaction:

- Human machine interaction is key in mitigating scarce (technical) workforce and optimizing operational efficiency
- Low-code machine platforms, AR, precise localization and digital twins are boosting new ways for people and machines to collaborate more intensively
- These technologies all benefit from 5G indoor networks and on prem edge computing

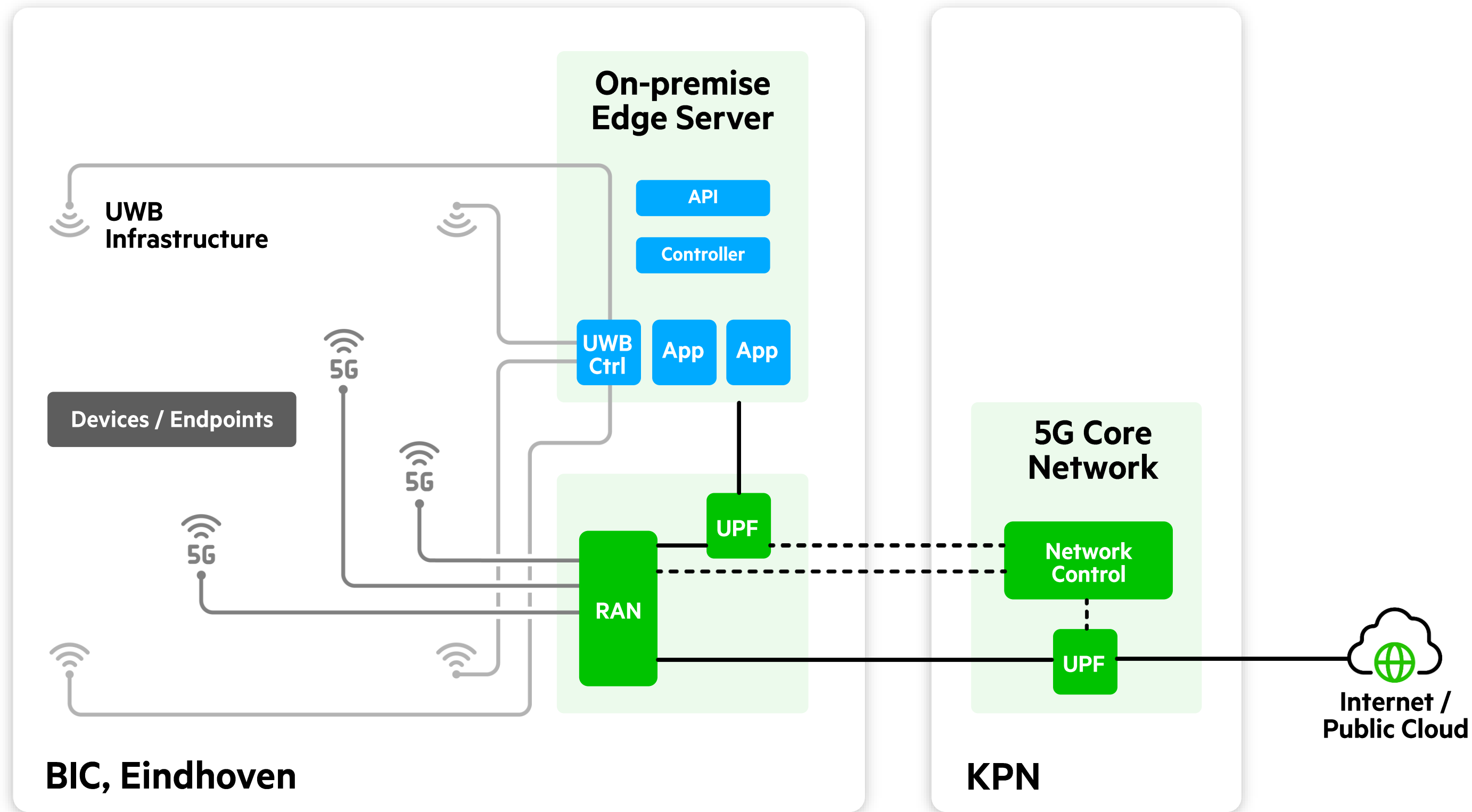








# Wireless factory setup in the KPN field lab





# Our 5G ecosystem is ready to leverage industry 4.0

Robotisation



Boost  
production



Automation



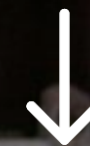
Reduce  
downtime



Virtualisation



Work together  
everywhere



5G enables these I 4.0 key investments by facilitating the underlying use cases with one mobile network



**kpn.** The network of the Netherlands





## **Moderator: Lan Guan**

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