

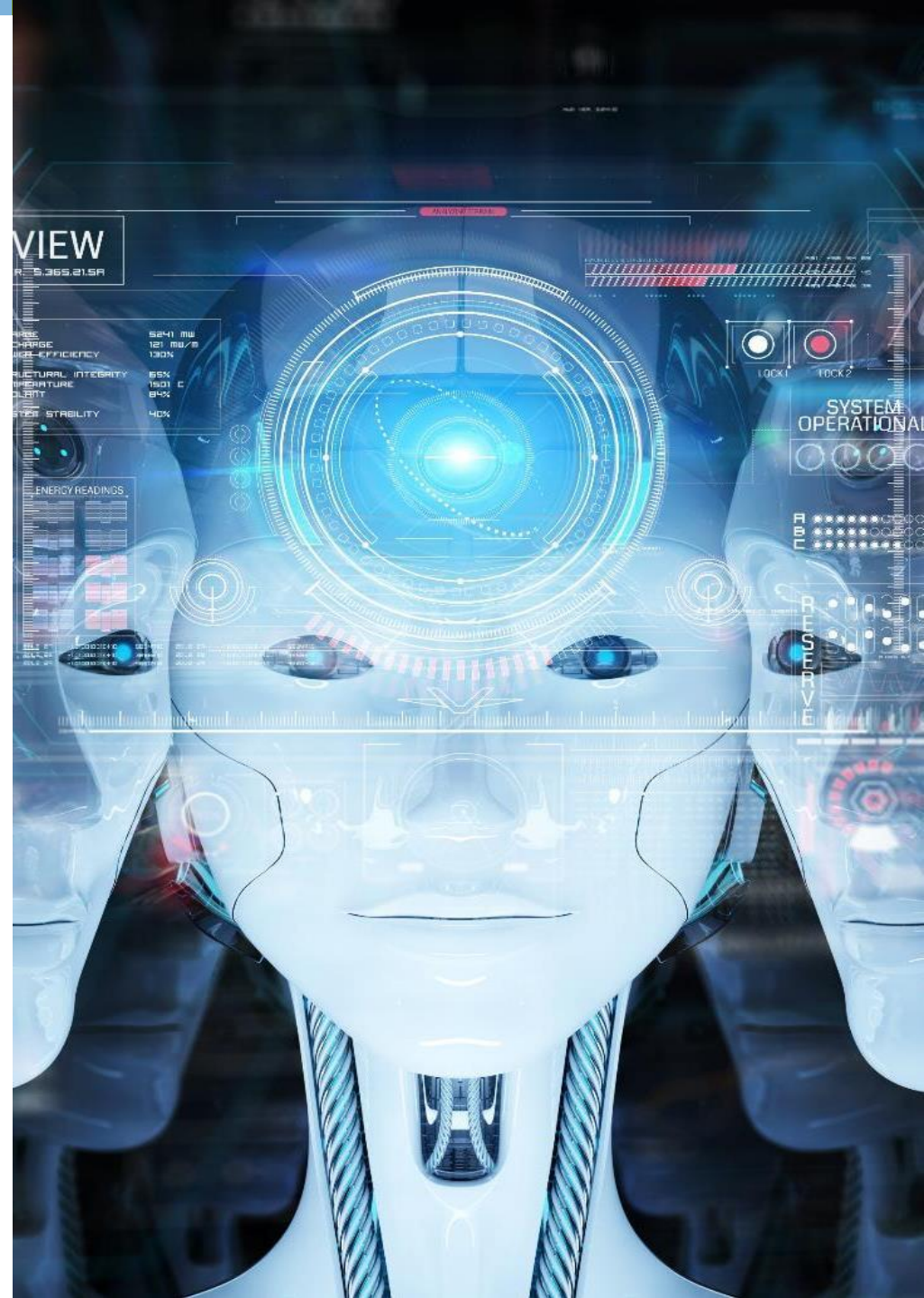
# Intelligence at the Edge

Patrick Pype  
Director Strategic Partnerships NXP Semiconductors  
IoT and Edge Computing II, December 7-8, 2020



SECURE CONNECTIONS  
FOR A SMARTER WORLD

*In cooperation with*  **ARTEMIS**  
Industry Association





## A POSITION OF STRENGTH TO BETTER SERVE OUR 26,000+ CUSTOMERS

We accelerate breakthroughs that advance the world  
through our semiconductor technology leadership

EMPLOYEES IN  
**30+ COUNTRIES**

Headquartered in Eindhoven,  
Netherlands

**~29,000**  
EMPLOYEES

**9,000**  
Patent Families

**\$8.88B**  
Annual Revenue <sup>1</sup>

**60+**  
Year History

**11,000+**  
Engineers

<sup>1</sup> Posted revenue for 2019 – Please refer to the Financial Information page of the Investor Relations section of our website at [www.nxp.com/investor](http://www.nxp.com/investor) for additional information





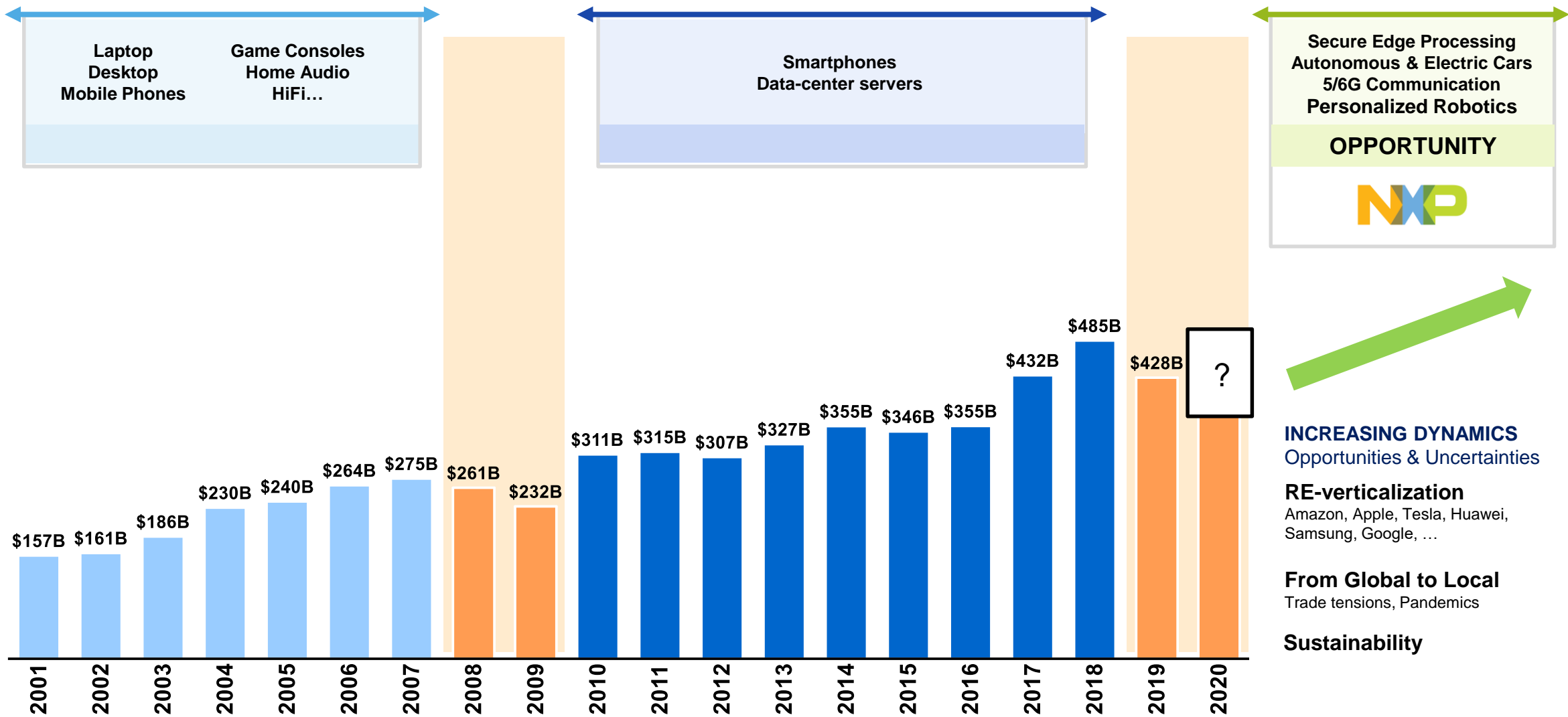
## “ON DEMAND” TO “AHEAD OF DEMAND”

- Societal expectations are high
- We have been trained to expect more and more from our devices
- We look to them to remove barriers: anticipating and opening a door, delivering medication, administering tests or delivering groceries
- Smart connected devices have come a long way, but there is more to go

From "IoT" to "AIoT"...

...Artificial Intelligence of Things

# SEMICONDUCTOR MARKET - MASS APPLICATIONS DRIVING GROWTH



**INCREASING DYNAMICS**  
Opportunities & Uncertainties

**RE-verticalization**  
Amazon, Apple, Tesla, Huawei, Samsung, Google, ...

**From Global to Local**  
Trade tensions, Pandemics

**Sustainability**

Source: Omdia/IHS AMFT and CLT reports

# THE SEMICONDUCTOR ENGINEERING DILEMMA... AND THE OPPORTUNITY FOR EUROPE

**ROBUSTNESS,  
SAFETY & SECURITY**

**EU Digital Age**



**PERFORMANCE  
COMPLEXITY**



**EU Industry Competitiveness**

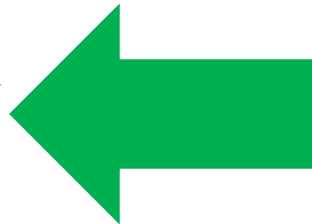


**EU Sovereignty**



**COST**

**ENERGY**

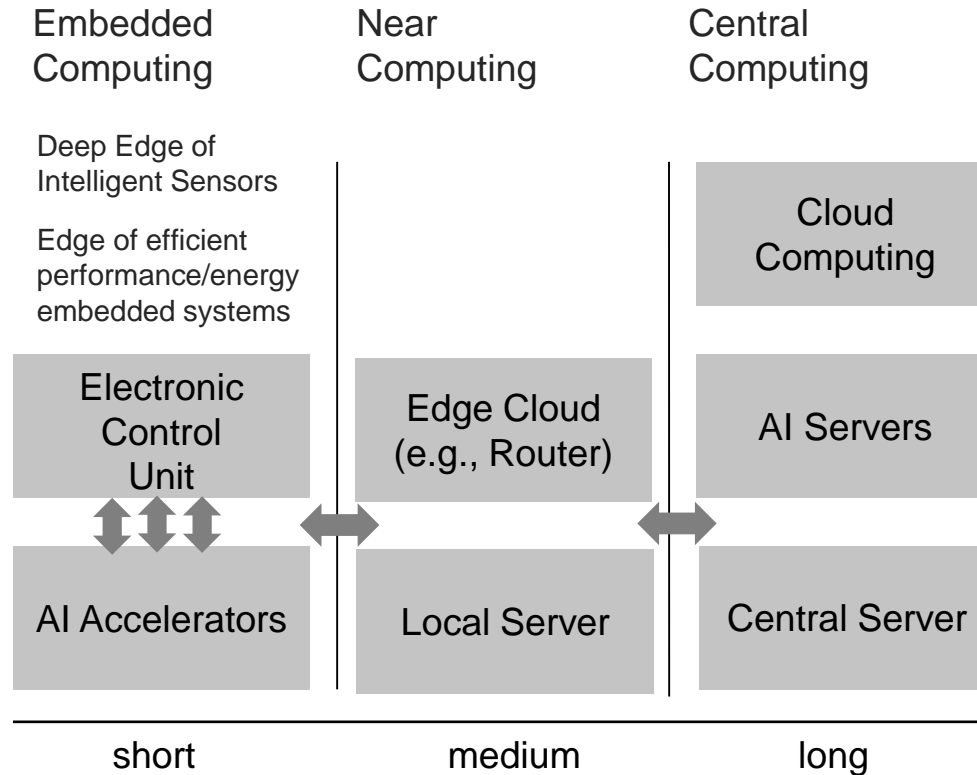


**EU Sustainability  
& Green Deal**

# THE CONTINUUM OF COMPUTING



**A battle is won by him  
who is firmly resolved  
to win it**  
*(Leo Tolstoy)*



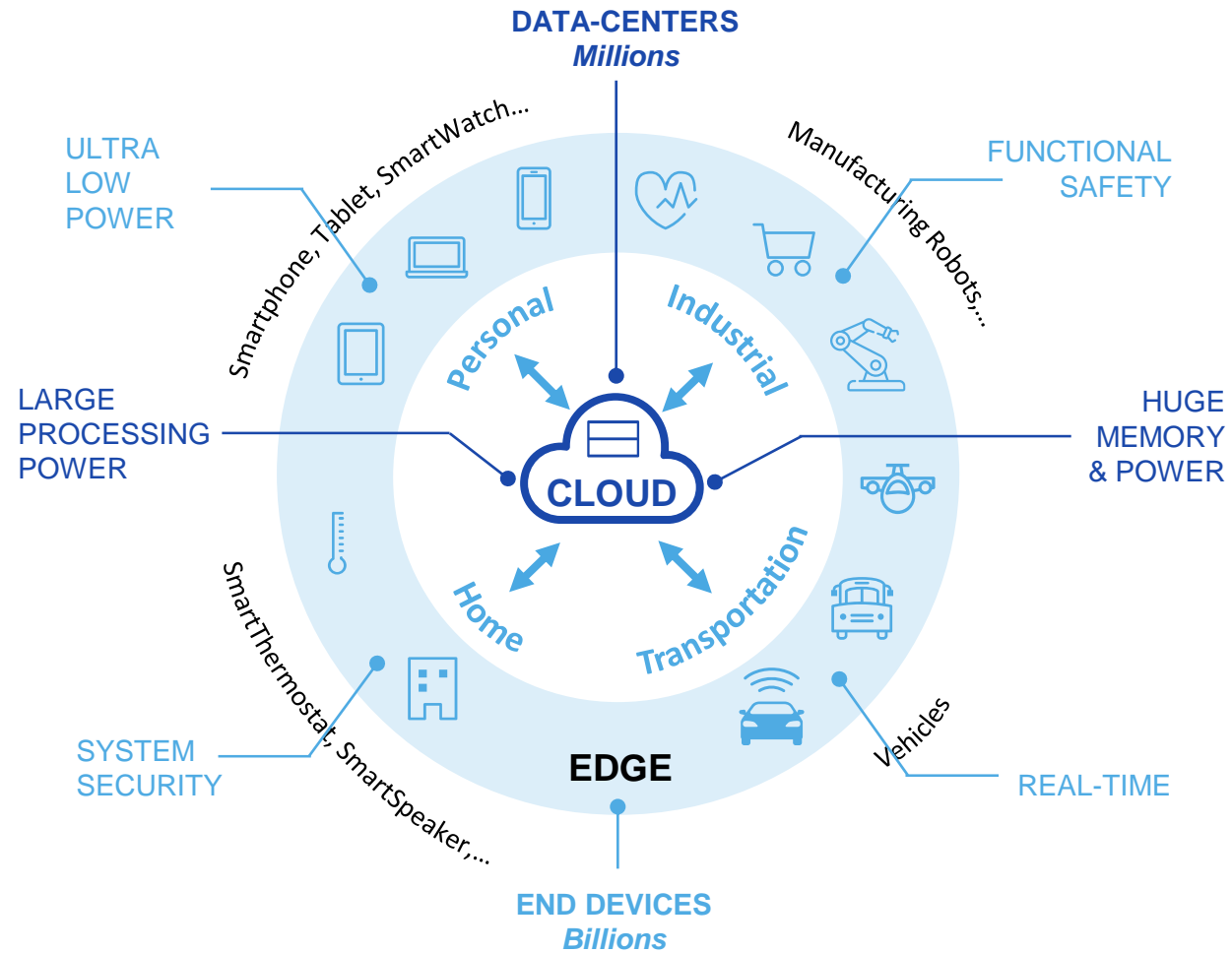
*(Source : Gerd Teepe, Strategic Research & Innovation Agenda 2021)*



**Don't keep fighting  
battles that are  
already lost**  
*(David Nicholls)*

# NEW ERA OF ELECTRONIC DEVICES

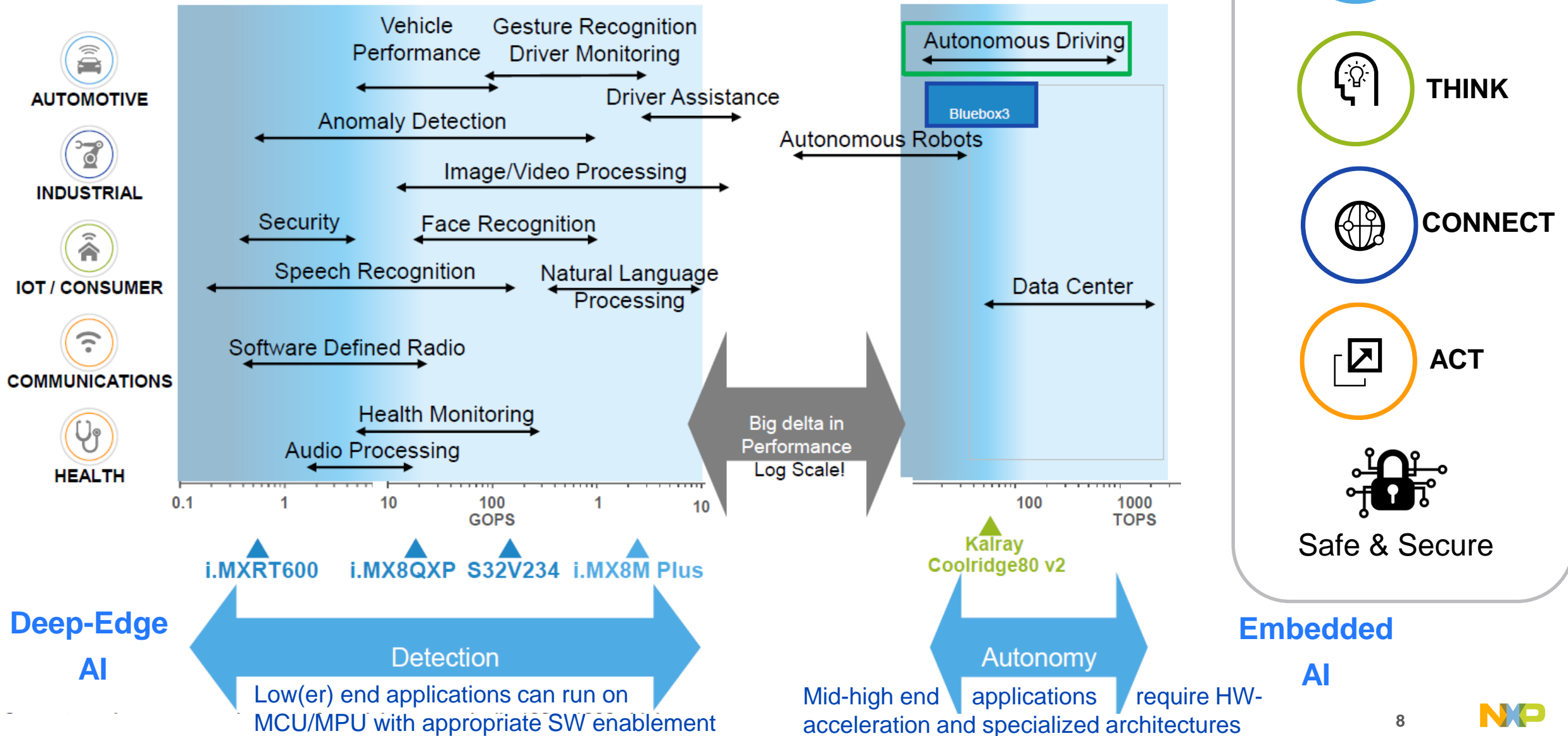
## RISE OF SECURE EDGE PROCESSING



**DATA COLLECTION, PROCESSING AND DECISIONS TAKEN AT THE EDGE,  
EDGE DEVICES SECURELY CONNECTED TO THE CLOUD**



# EDGE COMPUTING EXAMPLES & WORKLOADS





Last decade was about **BIG DATA**

Next decade will be about **RELEVANT DATA**

EDGE Processing is the enabler for this trend

- It is NOT about big storage & big compute
- Key success factors for EDGE devices are:
  - Efficient and scalable processing, power efficiency
  - Best-in-class sensing and connectivity
  - Robustness, Safety & Security
  - Efficient software ecosystem for
    - Development & OTA device management

EUROPE has leading industries & competency in the relevant technology sectors today

... **BUT** we have to (actively!) keep them



SECURE CONNECTIONS  
FOR A SMARTER WORLD