

WEBINAR

# Edge IoT platforms webinar 1: Verticals and use cases driving real growth in 2023



Tuesday 21 February – 4PM GMT | 11AM ET | 8AM PT



PARTNERS



# Agenda

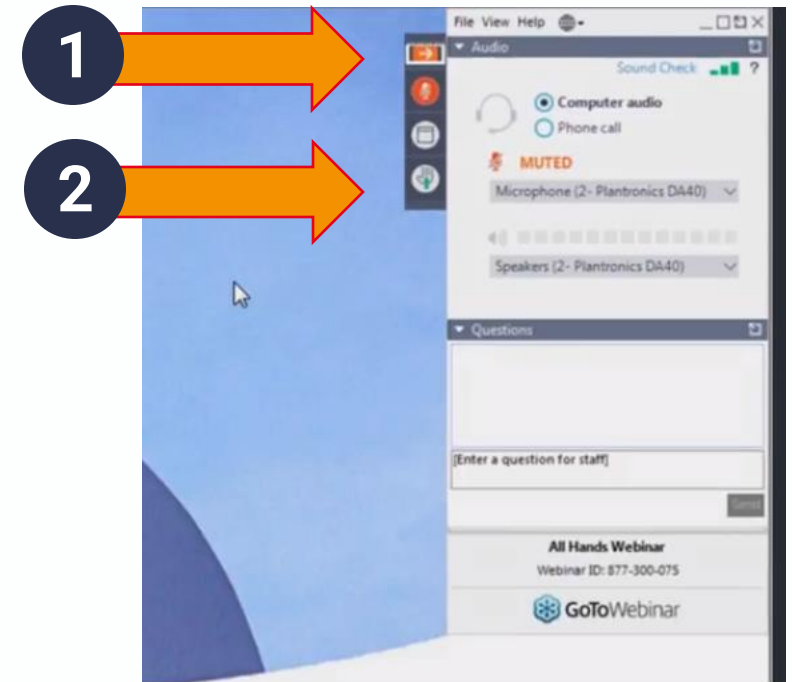
1	Introductions		16:00 – 16:05
2	STL Partners: Verticals and use cases combining IoT and edge	Joe Hurman	16:05 – 16:25
3	Volt Active Data: Automated guided vehicles	David Rolfe	16:25 – 16:35
4	Panel discussion		16:35 – 16:55
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# GoToWebinar

- You're in listen only mode
- If you need us, please type a comment
- Feel free to type questions throughout the session for Q&A at the end
- We'll send you the slides and a recording shortly after the session - do share with colleagues
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UPCOMING WEBINAR SERIES

# STL Partners & Volt Active Data Edge IoT platforms webinar series



Edge IoT platforms – verticals & use cases enabling growth

Date & Time: 21 Feb, 4pm GMT



How to design, architect and implement a successful edge IoT platform

May 2023



Monetising edge IoT platforms: business models to maximise revenue

September 2023



Integrating edge IoT platforms with enterprise systems

November 2023



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# Our speakers



**DAVID ROLFE**

Head of Product Marketing

**Volt Active Data**



**DALIA ADIB**

Director, Consulting

**STL Partners**



**JOE HURMAN**

Senior Consultant

**STL Partners**

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# Verticals and use cases combining IoT and edge



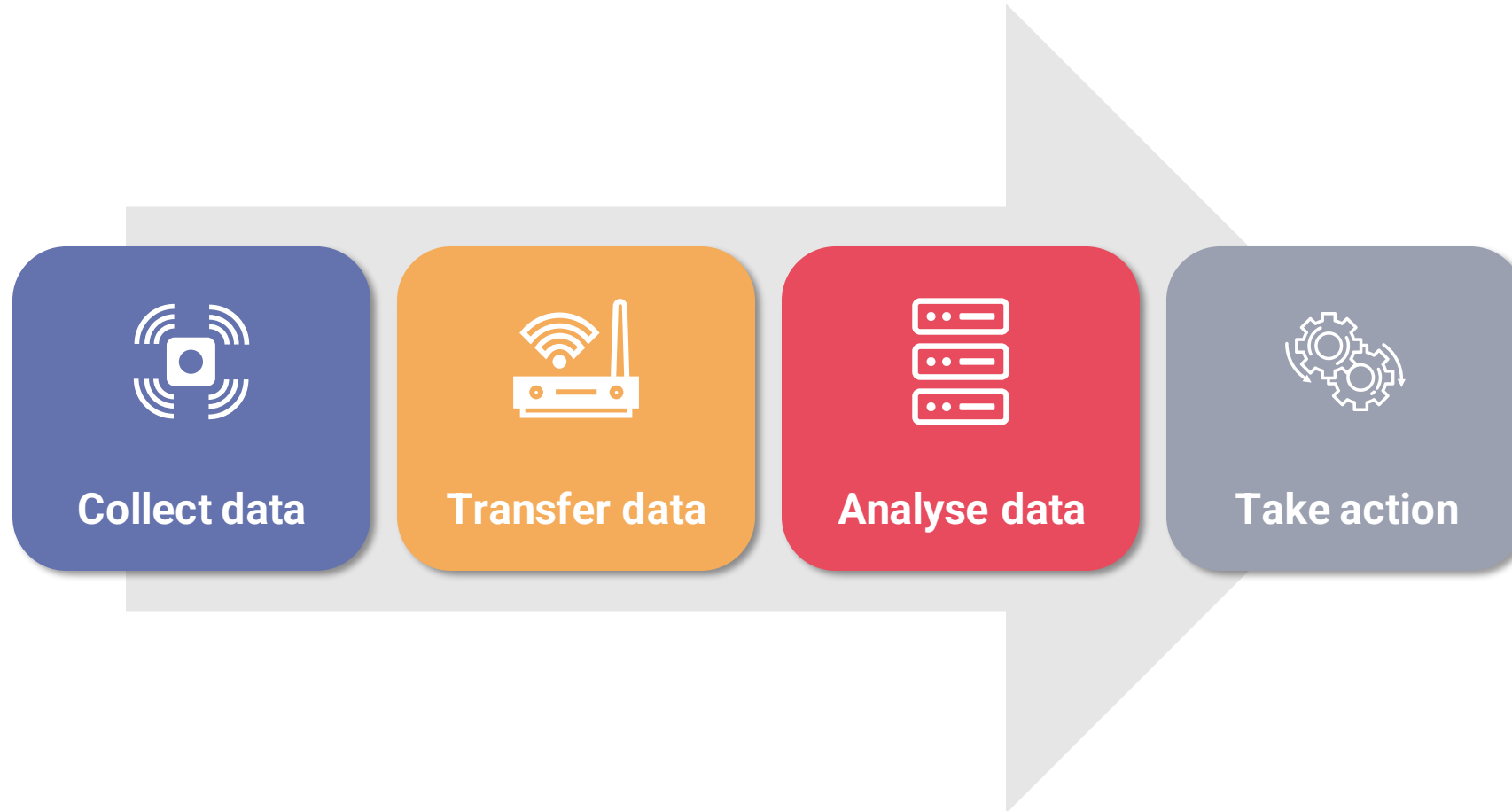
**JOE HURMAN**

Senior Consultant

**STL Partners**



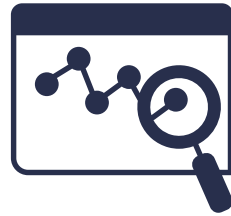
# IoT has traditionally been about collecting, aggregating and transferring data to a central location



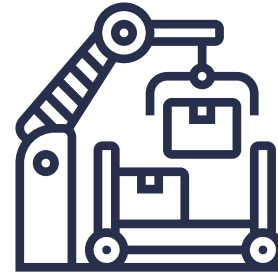
# Implementing IoT solutions can lead to a chain of positive outcomes for enterprises



Broaden raw data  
collection



Generate business  
insights

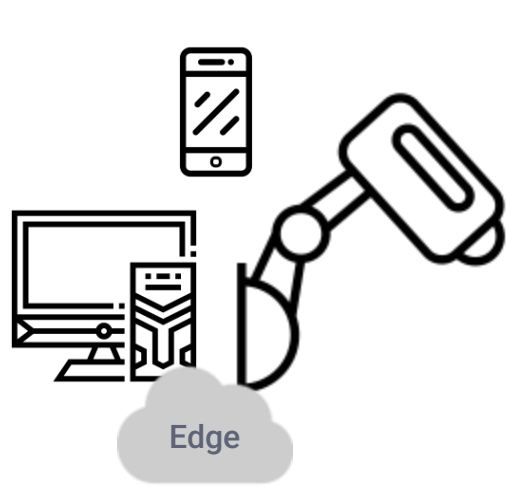


Enable automated  
processes

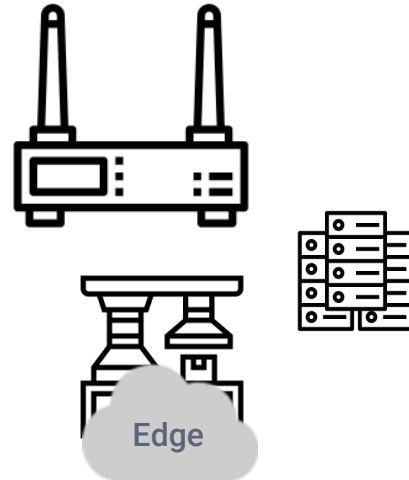


Improve efficiency &  
customer experience

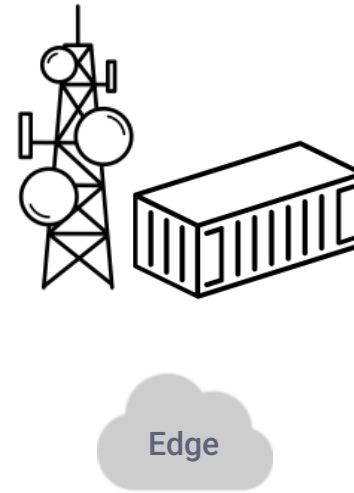
# Edge computing can be located at several points between the source of data collection and cloud



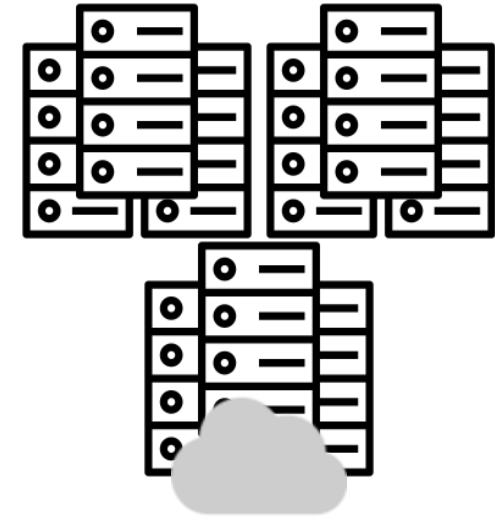
Device edge



On-prem edge

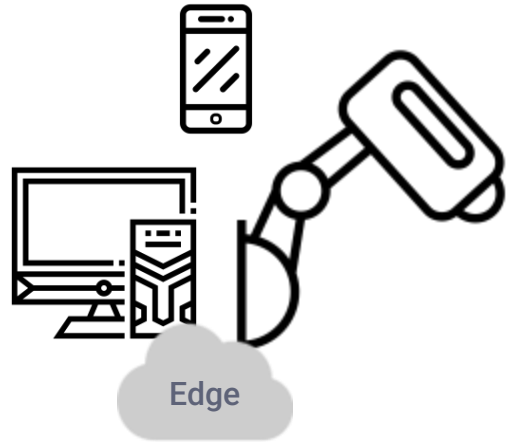


Network Edge

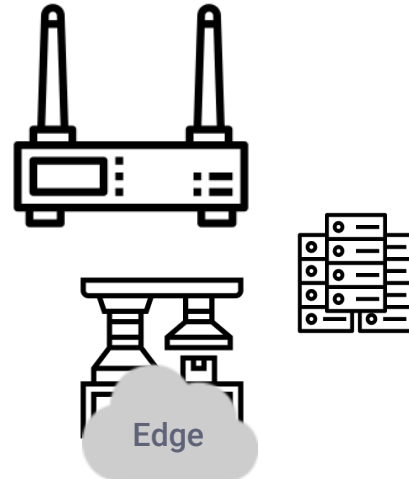


Cloud

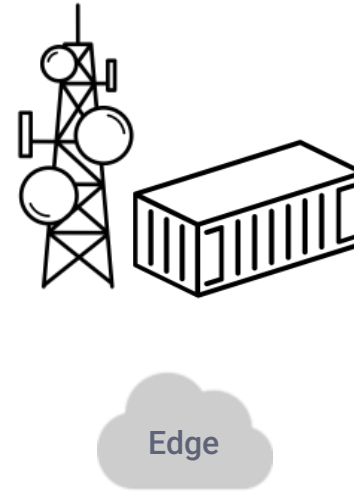
# There are varying benefits across the different types of edge



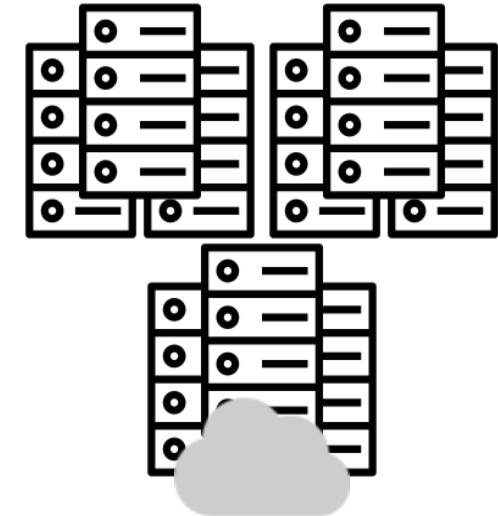
Device edge



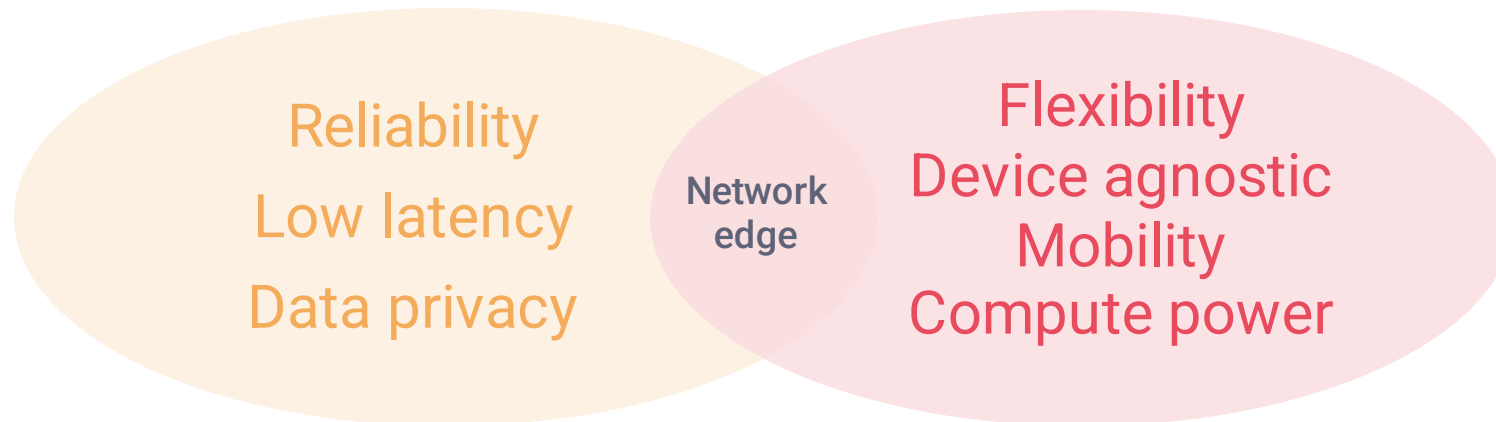
On-prem edge



Network edge



Cloud



# The role of edge within IoT is to mitigate challenges related to transferring and analysing data



## Challenges:

- Latency introduced
- High data transfer costs



## Challenges:

- Data localisation regulation
- Security challenges



## Edge benefit:

- Latency reduced
- Streamlined data transfer

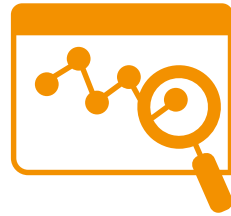
## Edge benefit:

- Data stored locally
- Control over security

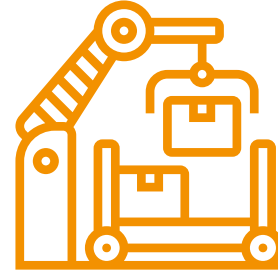
# The value of integrating edge computing into IoT can be realised across the stages of this process



Broaden raw data  
collection



**Generate business  
insights**



**Enable automated  
processes**



**Improve efficiency &  
customer experience**

# Edge computing can lead to bottom line benefits, for both costs and revenues

## Improving efficiencies



Reducing waste  
and defects



Increasing asset  
lifetime



Minimising time /  
maintenance &  
repair costs



Run operations  
more efficiently  
(automation)

## Improve customer experience

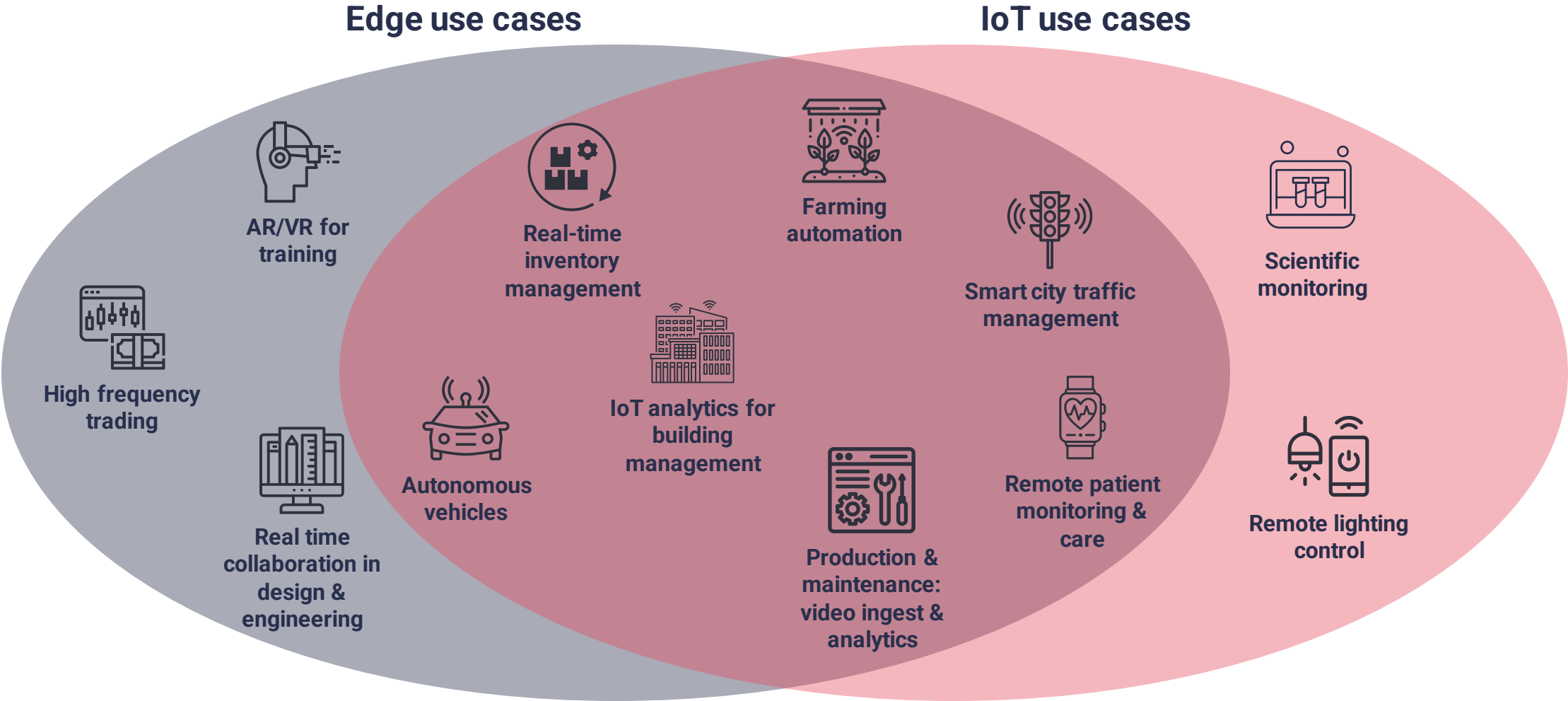


New immersive  
experiences



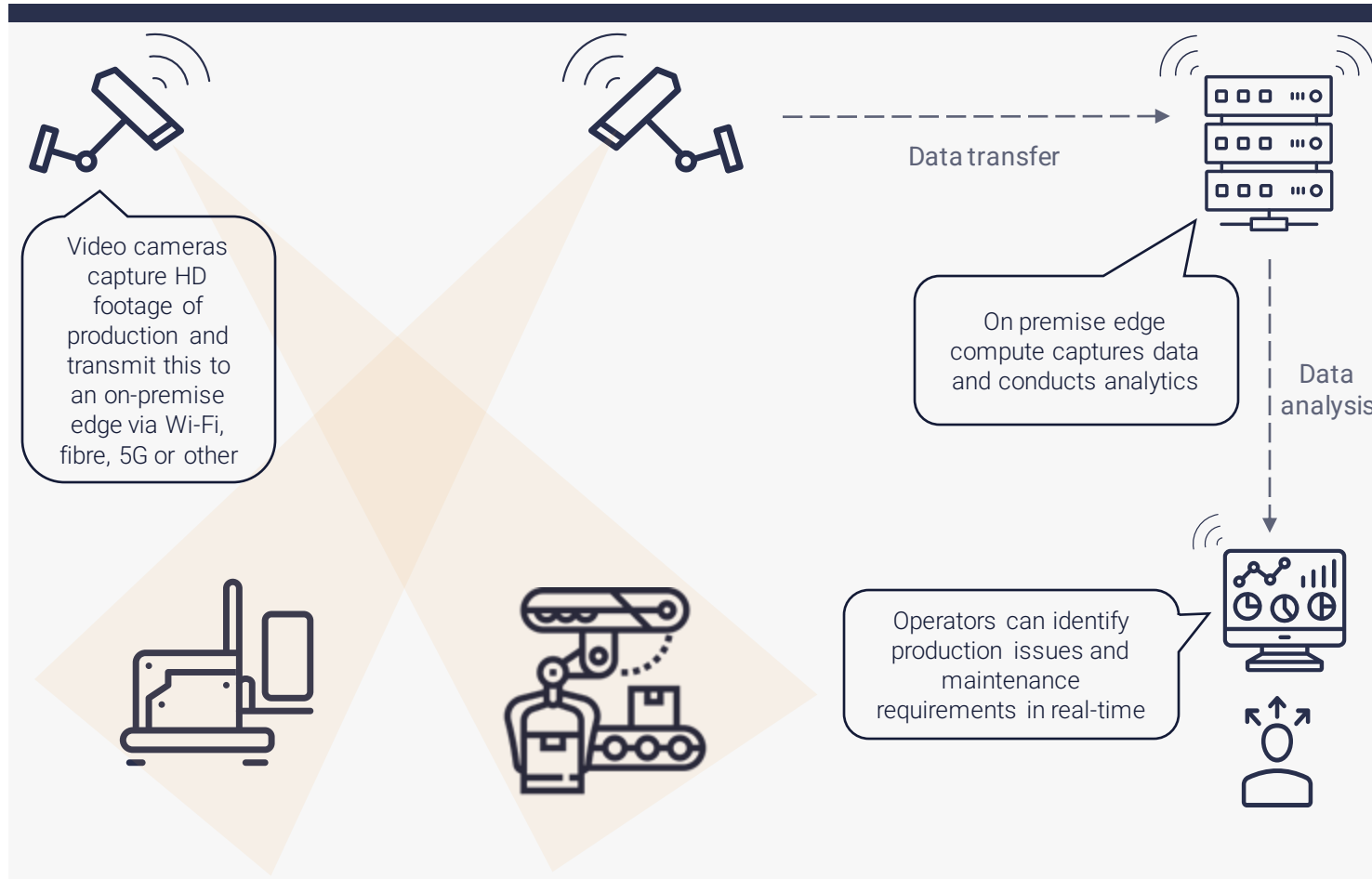
Greater supply  
chain visibility

# Many IoT use cases could benefit from integration with edge compute





# Real-time detection of production line faults can improve production efficiency and enable predictive analytics



## Why edge?

- Real-time detection on fast production lines
- Reduced camera replacement costs
- Minimise data backhaul costs

## Benefits

- Reduced human error
- Enable predictive analytics
- Reduce further defect risk

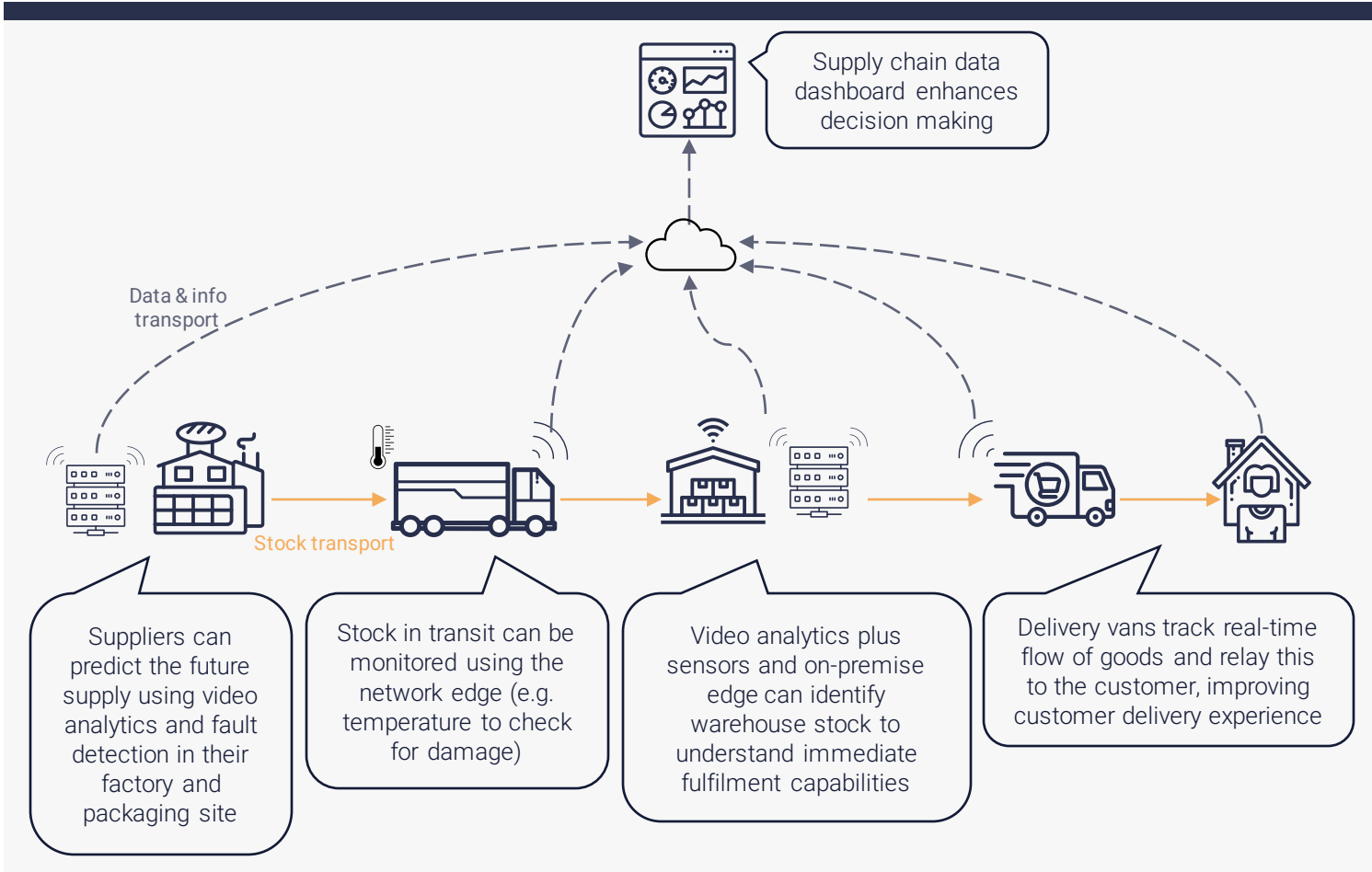
## Challenges

- Connectivity performance
- Vendor ecosystem collaboration

## Verticals

- Manufacturing
- Logistics
- Construction
- Mining
- Transport
- Utilities

# Combining edge and IoT for inventory management can reduce waste and improve customer experience



**Why edge?**

- Low latency prevents bottlenecks and faults in fast production lines
- Scale incompatible with cloud costs
- Security – sensitive data

**Benefits**

- Increased supply chain efficiency
- Faster order fulfilment
- Improved customer experience

**Challenges**

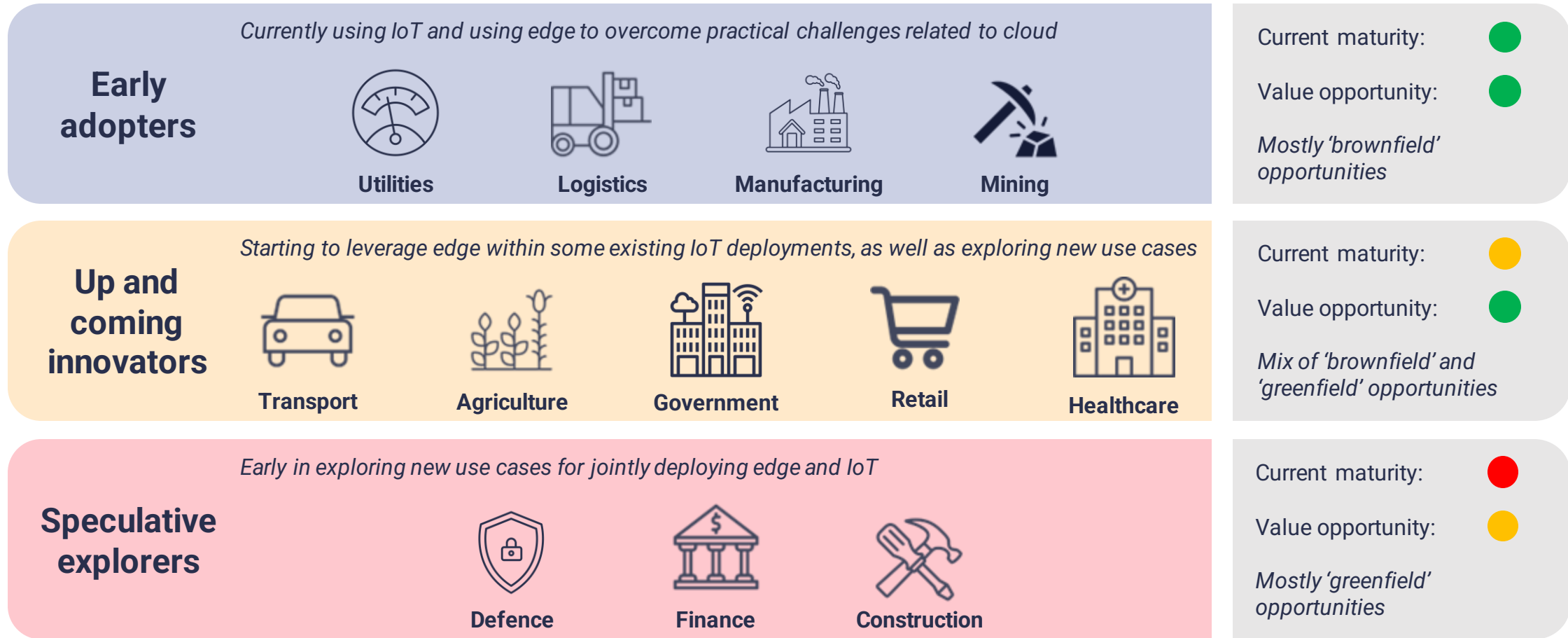
- Network edge availability
- Device availability
- Orchestration complexity

**Verticals**

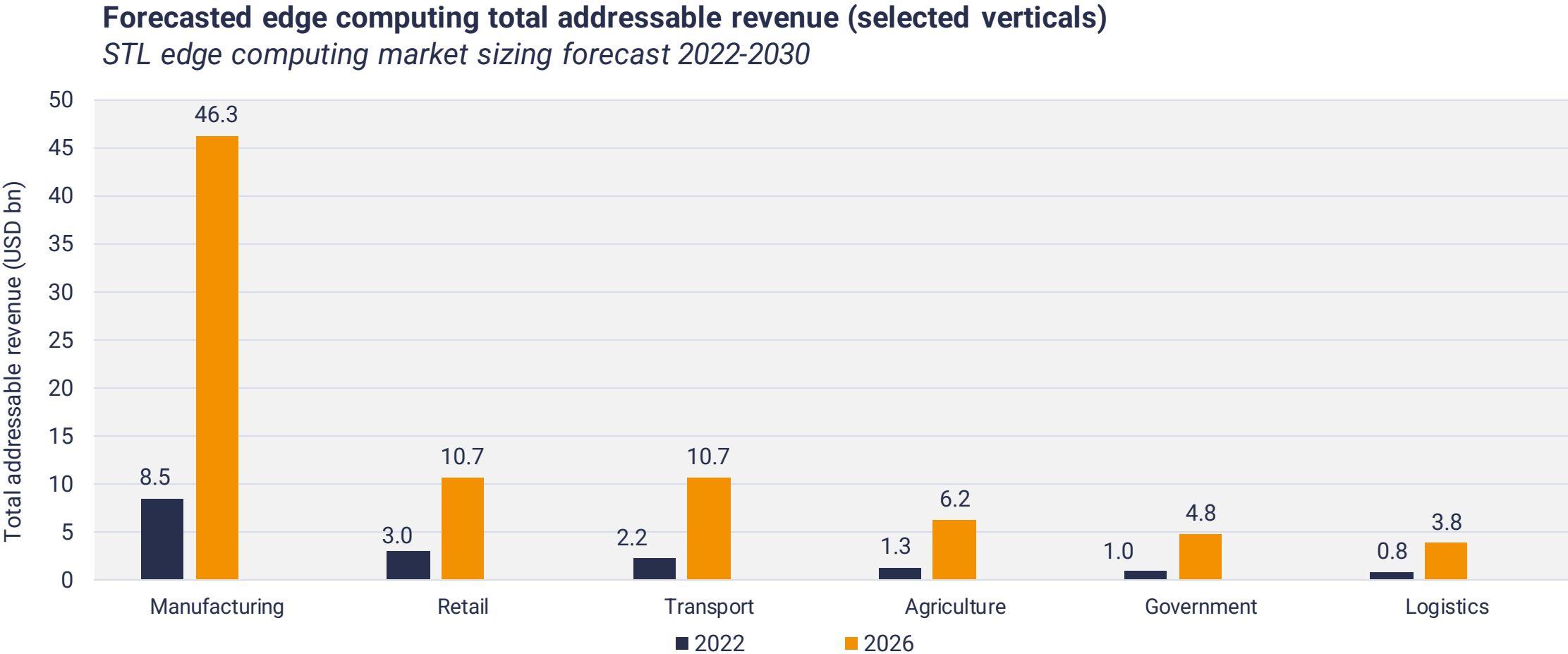
- Logistics
- Retail
- Healthcare
- Manufacturing

**Poll: Which vertical do you think will have deployed the most mature edge IoT platforms by 2026?**

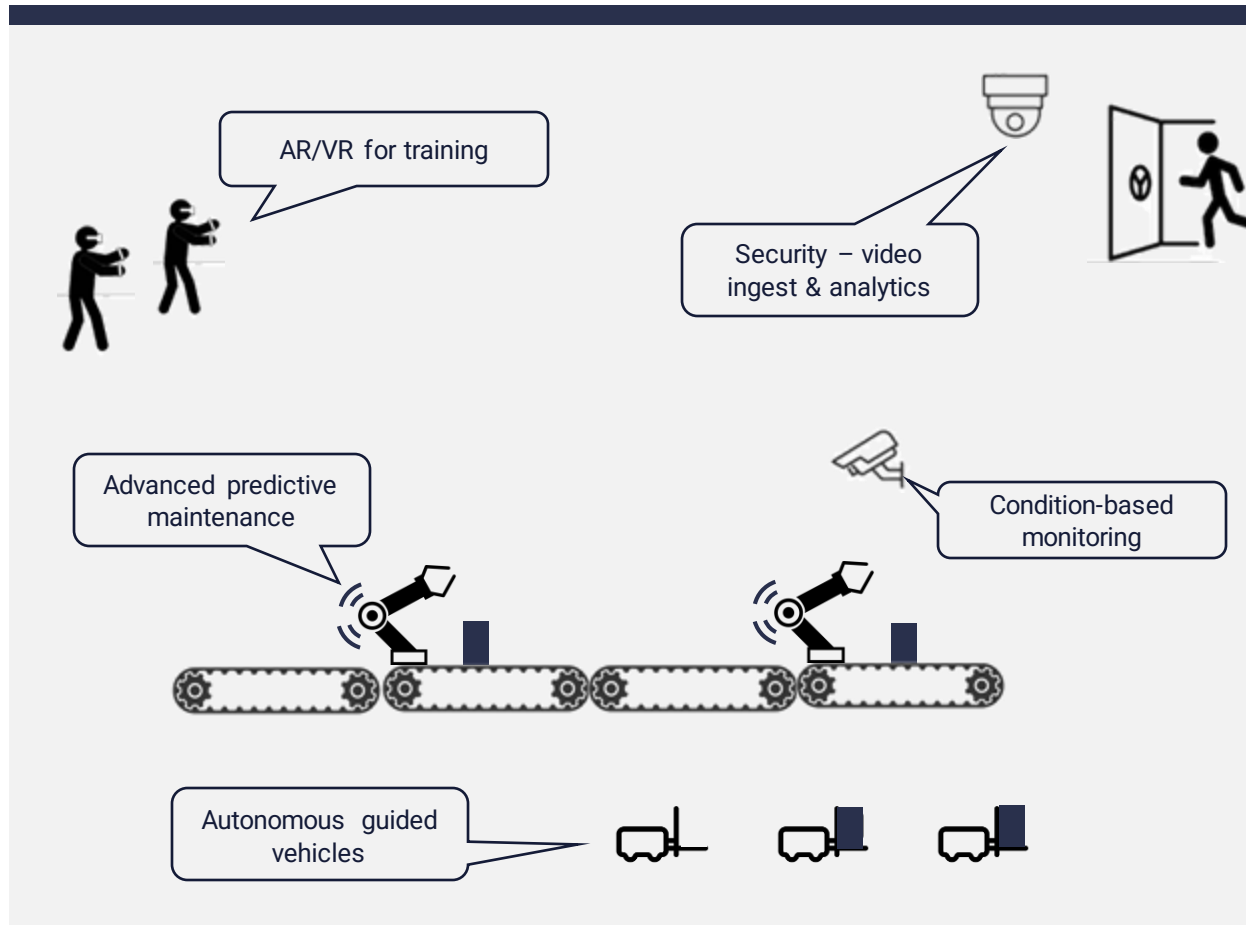
# Different industries will have different approaches to implementing edge in conjunction with IoT



# We anticipate edge revenues to increase dramatically over the next three years



# Manufacturers are seeking to improve plant productivity while securing a reliable & resilient network



## Edge benefits are closely aligned to key drivers in manufacturing



### Edge benefits

Latency	Reliability
Data localisation	Reduced backhaul costs

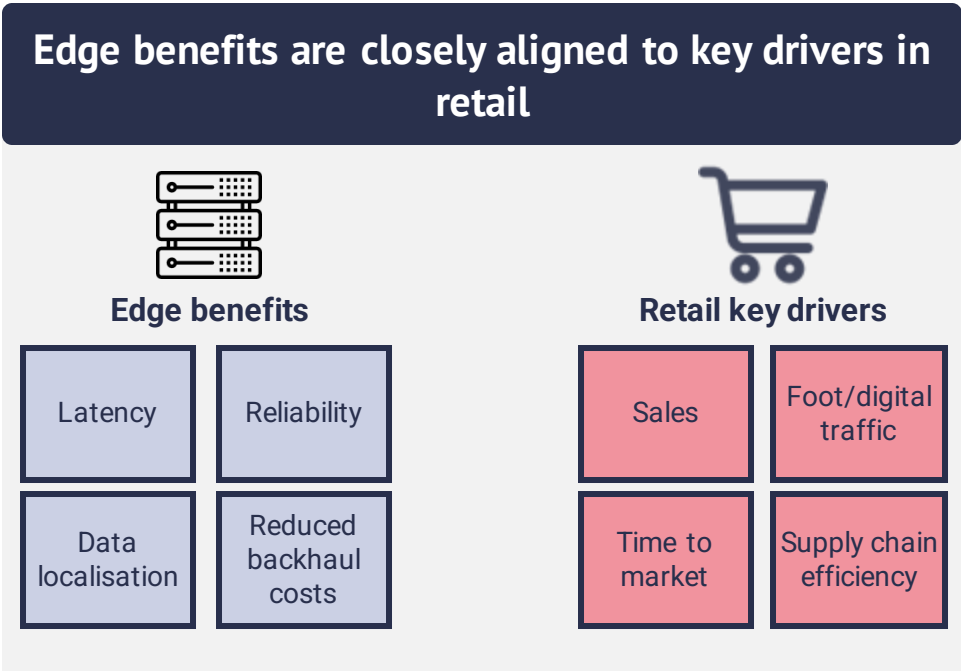
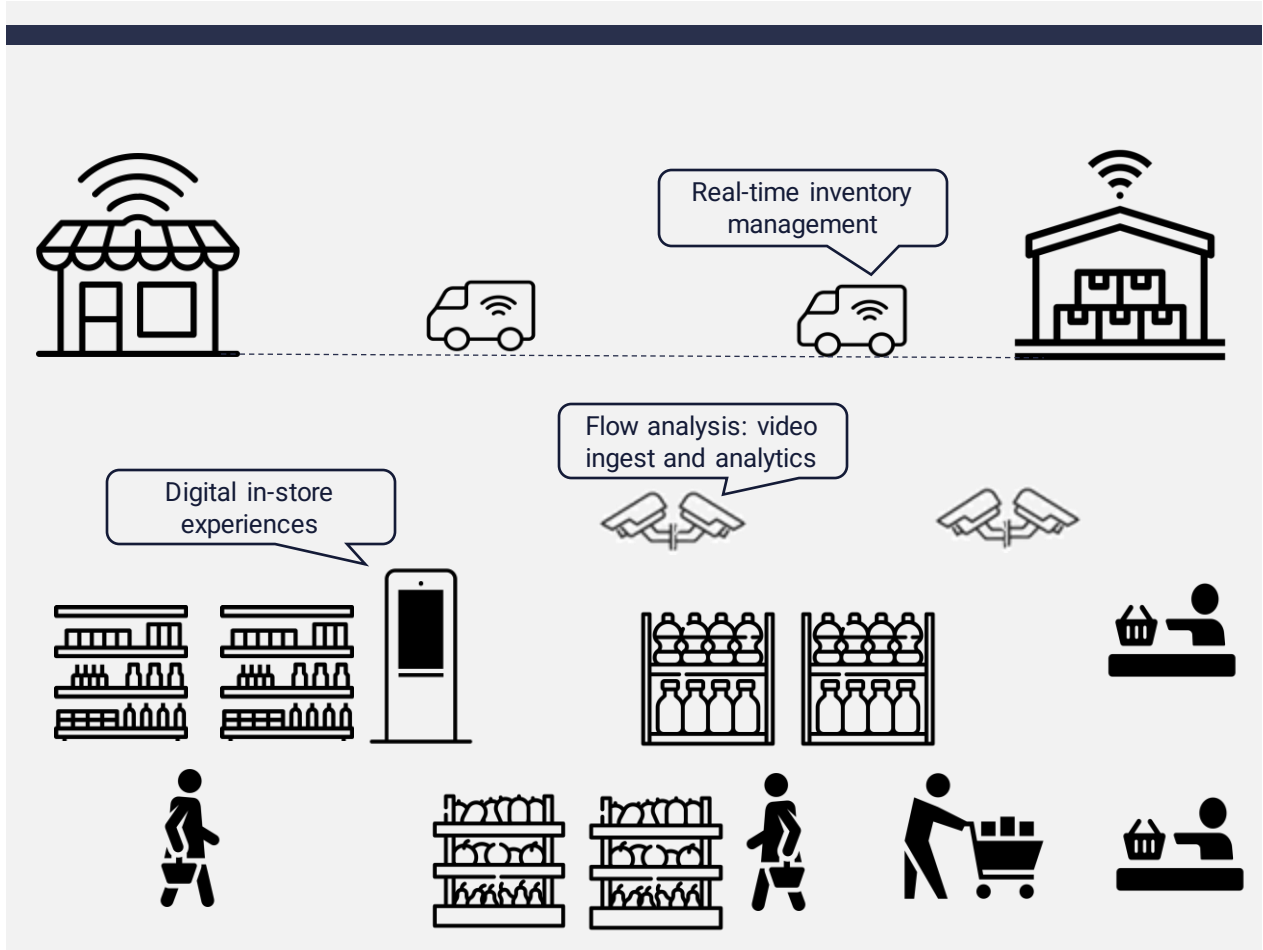


### Manufacturing key drivers

Downtime	Cycle time
Defect rate	Sustainability

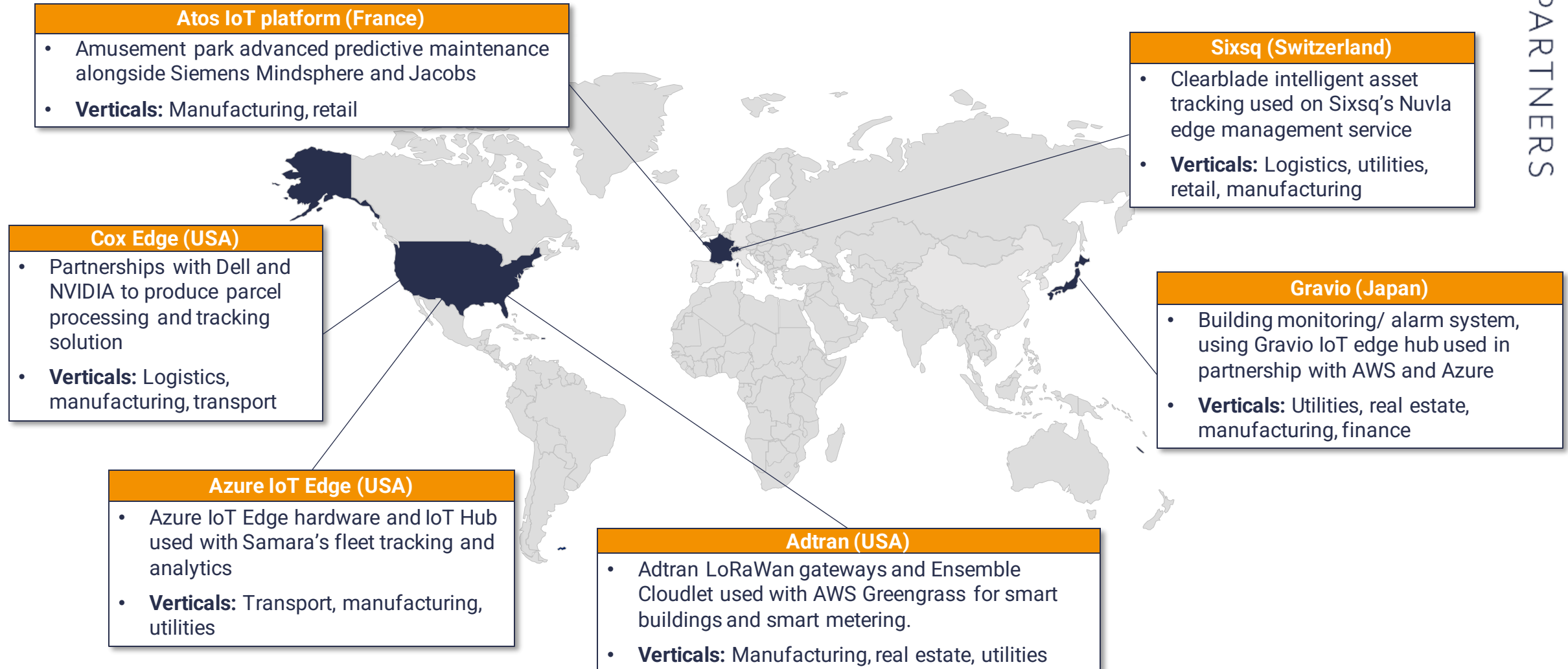
*"Manufacturing is divergent because multiple sub-verticals have realised positive ROI on previous IoT investments"*  
**CEO, Edge IoT platform**

# Retailers are leveraging edge and IoT to optimise supply chains and enhance in store customer experience post-covid



*"Retailers are often in densely populated areas with 5G readily available, which may accelerate [edge & IoT] adoption"*  
**Product Manager, Global MSP**

# Edge and IoT are starting to be deployed together across the world





# IoT and edge are continuing convergence towards a mixed future of distributed systems of data collection and analysis



Moving towards distributed networks of devices, which as a collective are able to:

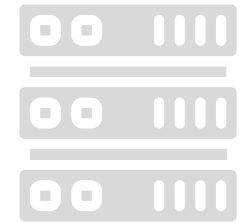
- **Collect, transfer and analyse** data
- **Take action** either through an automated or manual workflow

## Internet of things

## Edge computing

Edge computing has two crucial roles within these distributed networks:

- Facilitating **analysis** between data input and transferring this to the cloud
- Moving **analysis** closer to the edge to increase reliability/ speed and enable automated response



IoT and edge are continuing to convergence towards a mixed future of distributed platforms of data collection and analysis

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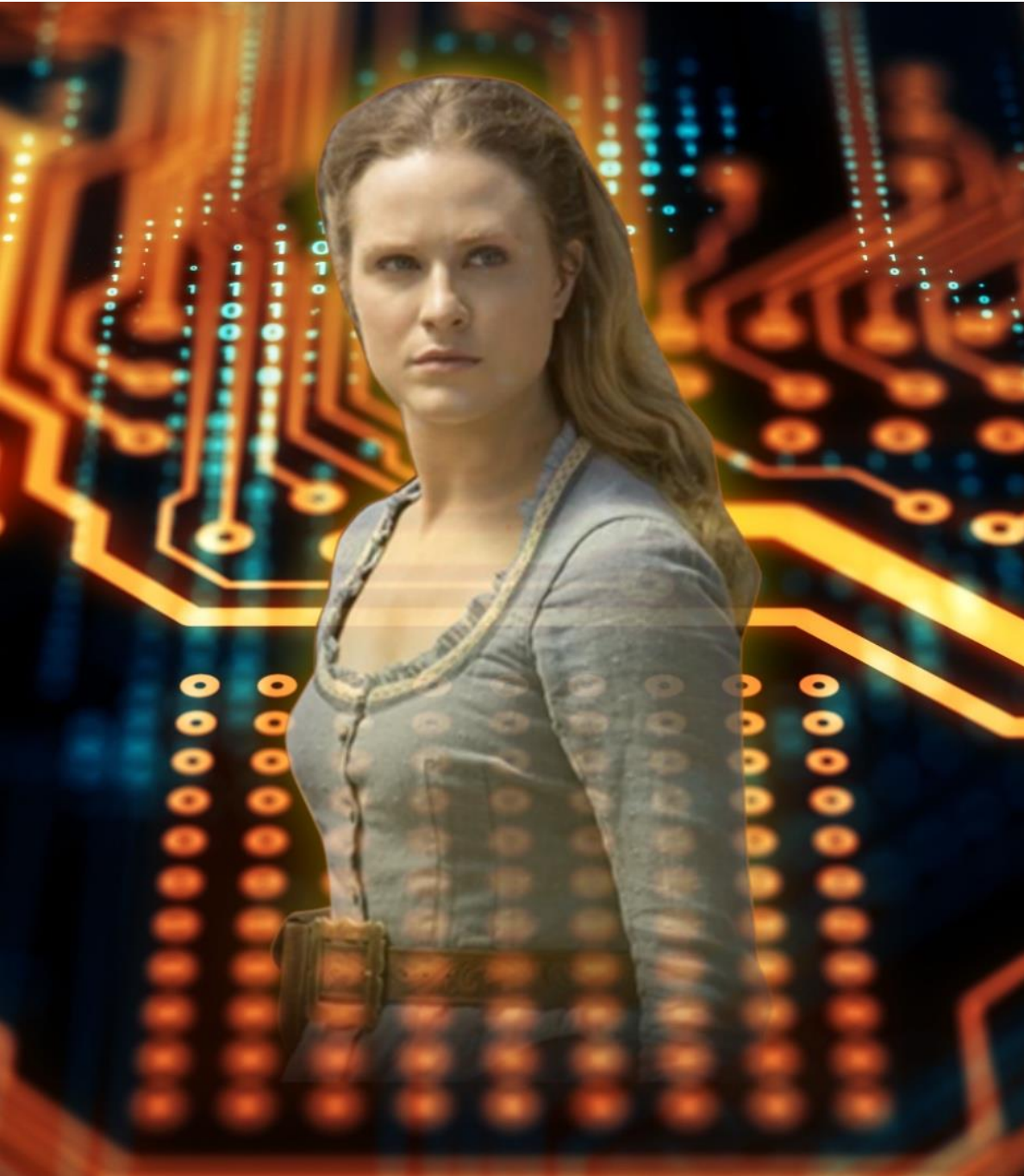
# Autonomous mobile robotics deep-dive



**DAVID ROLFE**

Head of Product Marketing

**Volt Active Data**



# AUTONOMOUS MOBILE ROBOTICS – PROMISE VERSUS REALITY

What you think you'll get:

- Each robot has significant on board processing power to perceive and understand its surroundings.
- Each robot can take decisions by itself, and is independently mobile. We give high level instructions to the robot, which figures out the rest...



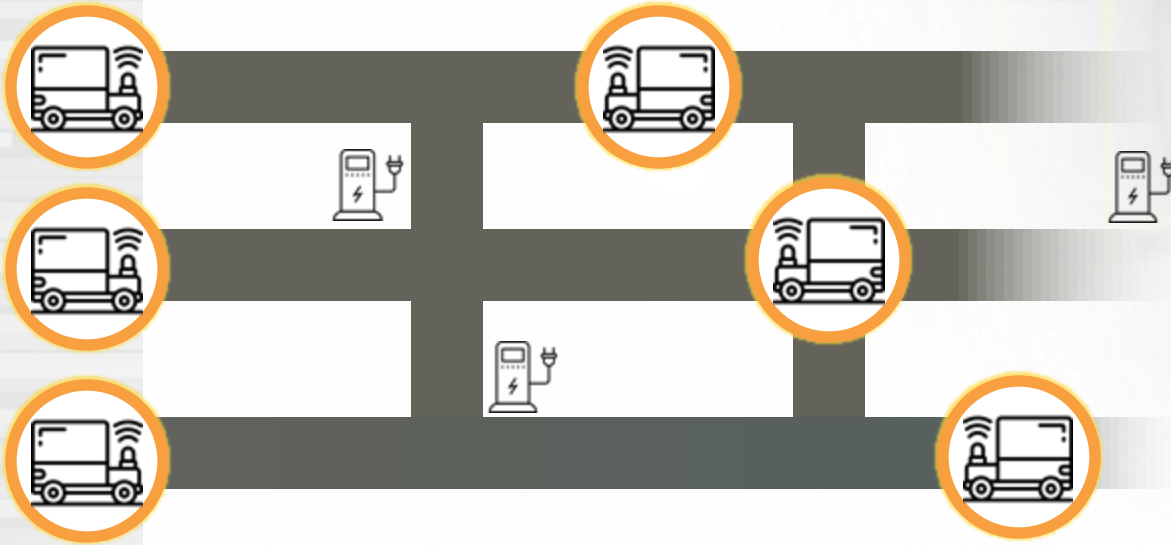
# AUTONOMOUS MOBILE ROBOTICS – PROMISE VERSUS REALITY

## What you actually need:

- Robot needs to be capable of moving by itself, but is controlled remotely. The robot is blind.
- CCTV is used to track the robots.
- An orchestration platform is used to determine high level goals, break them down into tasks, and then get the robots to carry them out.
- A human would struggle to operate one robot via CCTV. Software can manage dozens, easily.



# AUTONOMOUS MOBILE ROBOTICS

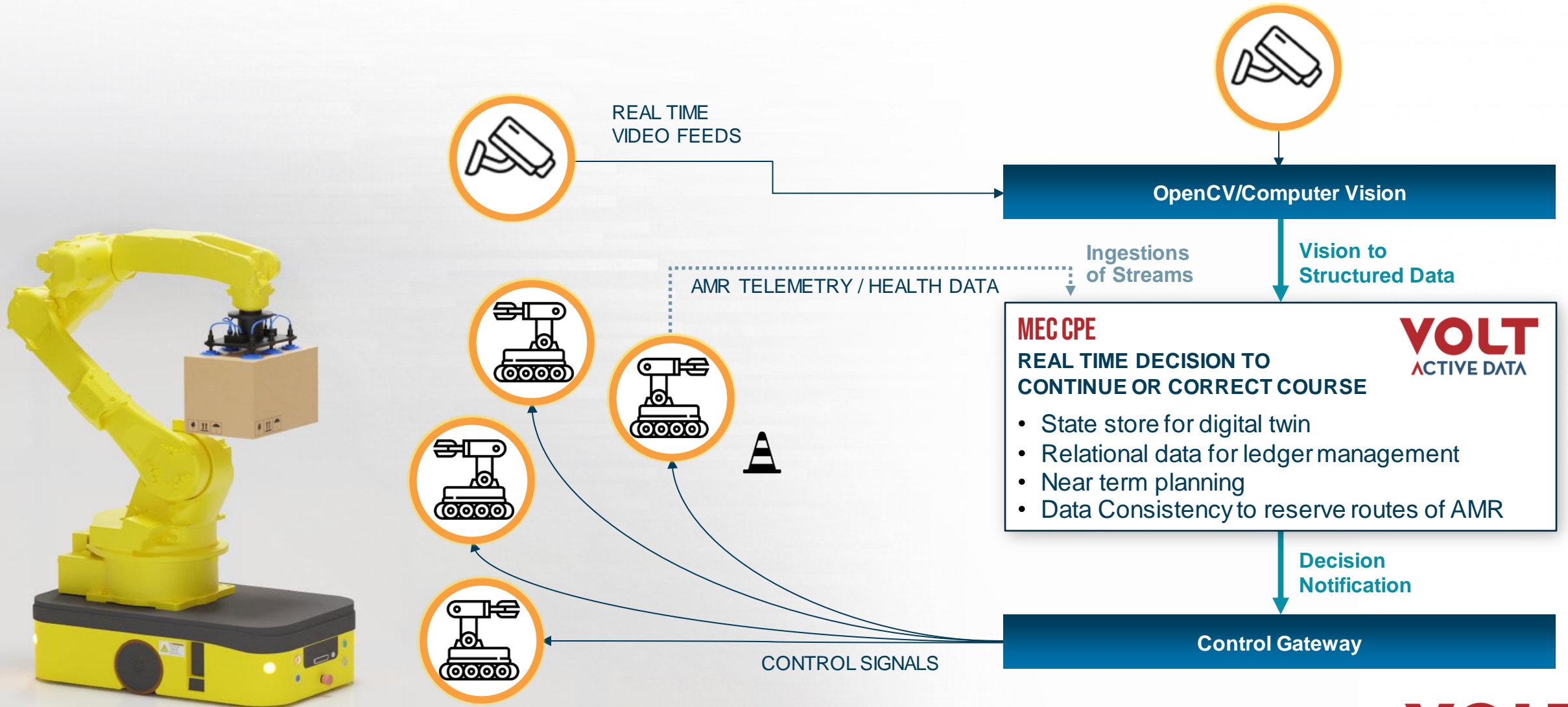


- Self View  
*(location, velocity, charge)*
- Situational Events  
*(other vehicles' movement, objects)*
- Fleet View  
*(awareness and control of the entire fleet within the factory)*

- Self Awareness
- Fleet Awareness
- Digital Twin Mapping in Volt,  
updated in real-time
- Local Context
- Map of physical world
- ML model of past events  
and decisions

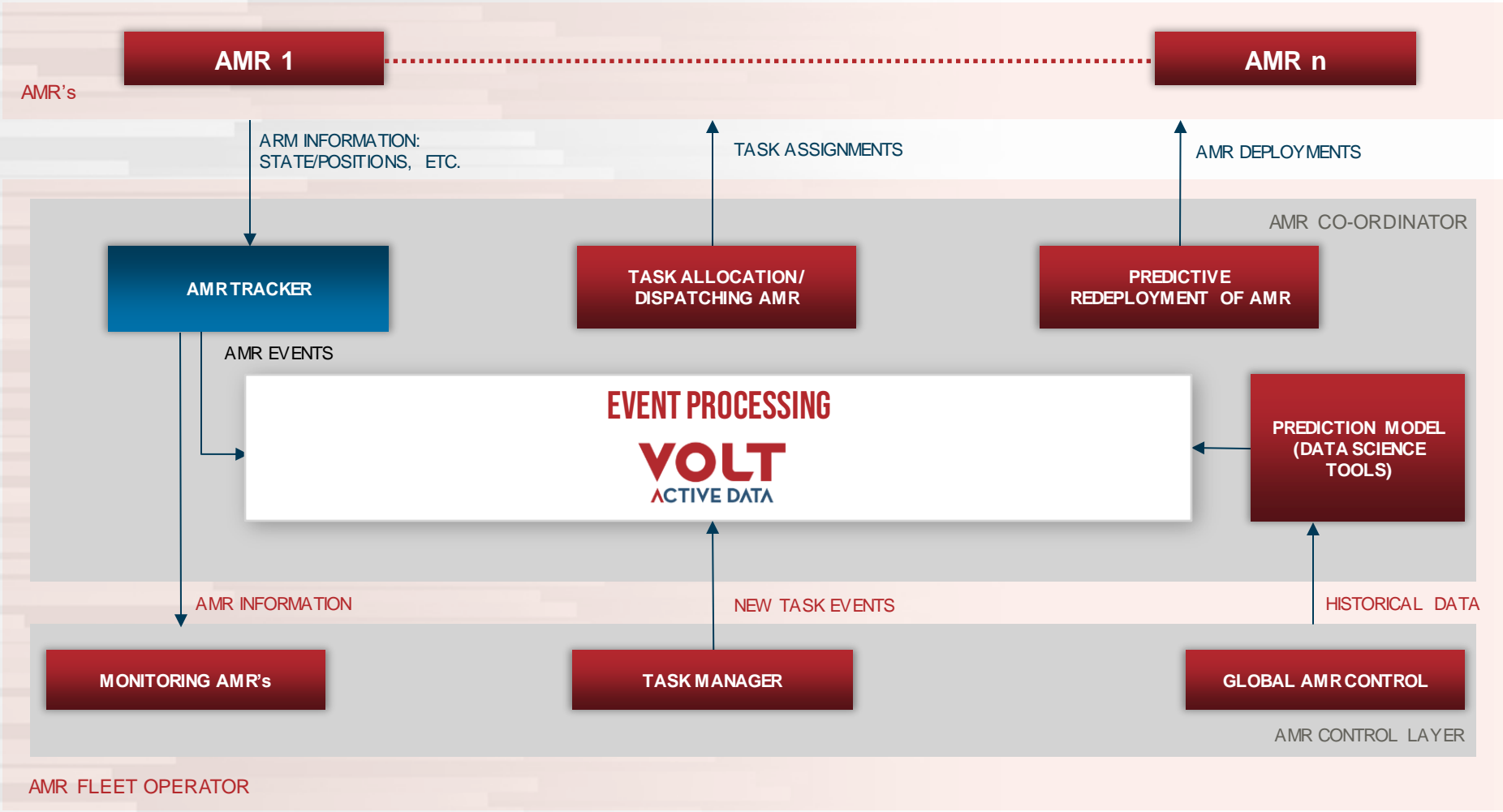
- Driving Decisions
- Charging Guidance
- Routing Heuristics

# REPRESENTATIVE SETUP OF AMR ON FACTORY FLOOR





# MICRO AMR FLEET MANAGEMENT ARCHITECTURE



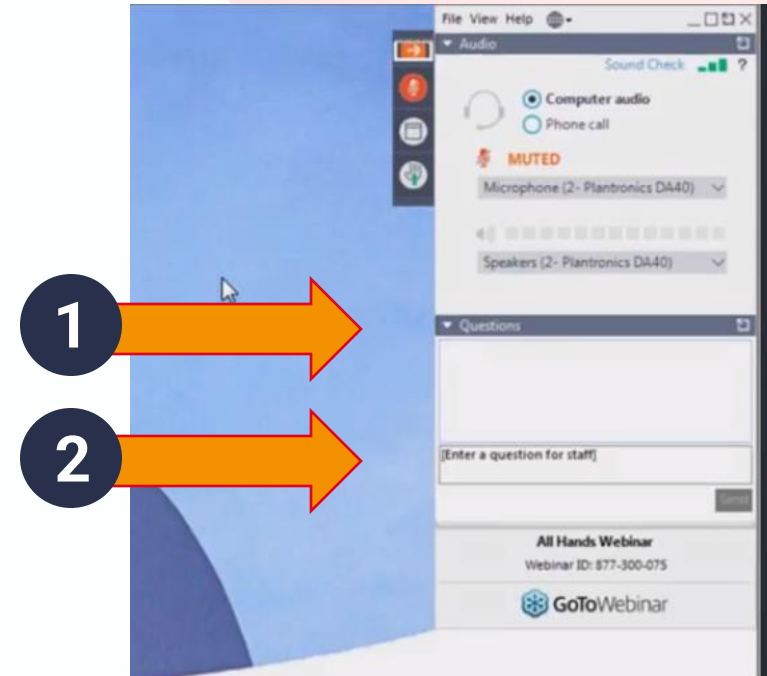


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# Q&A session

Please submit any questions using the GoToWebinar control panel



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# Thank you for joining!

All registrants will be receiving the link to the recording and slides shortly to watch back or to share with colleagues, plus a Q&A write-up in due course.

For any other questions, please contact:

- Joe Hurman, [joe.hurman@stlpartners.com](mailto:joe.hurman@stlpartners.com)
- David Rolfe, [drolfe@voltactivedata.com](mailto:drolfe@voltactivedata.com)

