

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

VOLT
ACTIVE DATA

Agenda

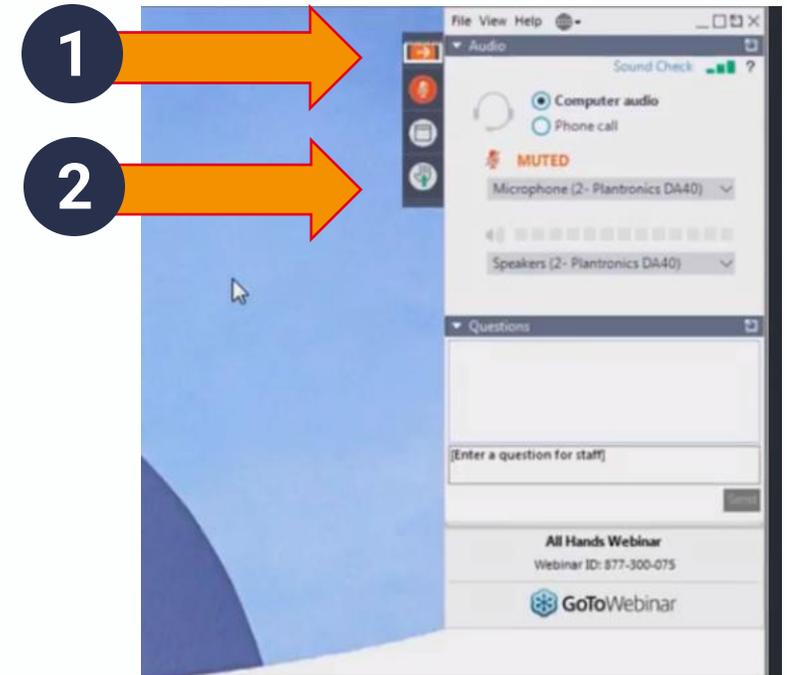
1	Introductions		16:00 – 16:05
2	STL Partners: Verticals and use cases combining IoT and edge	Joe Hurman	16:05 – 16:25
3	Volt Active Data: Automated guided vehicles	David Rolfe	16:25 – 16:35
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GoToWebinar

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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



Webinar 1 - Tuesday 21 February – 4PM GMT | 11AM ET | 8AM PT



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

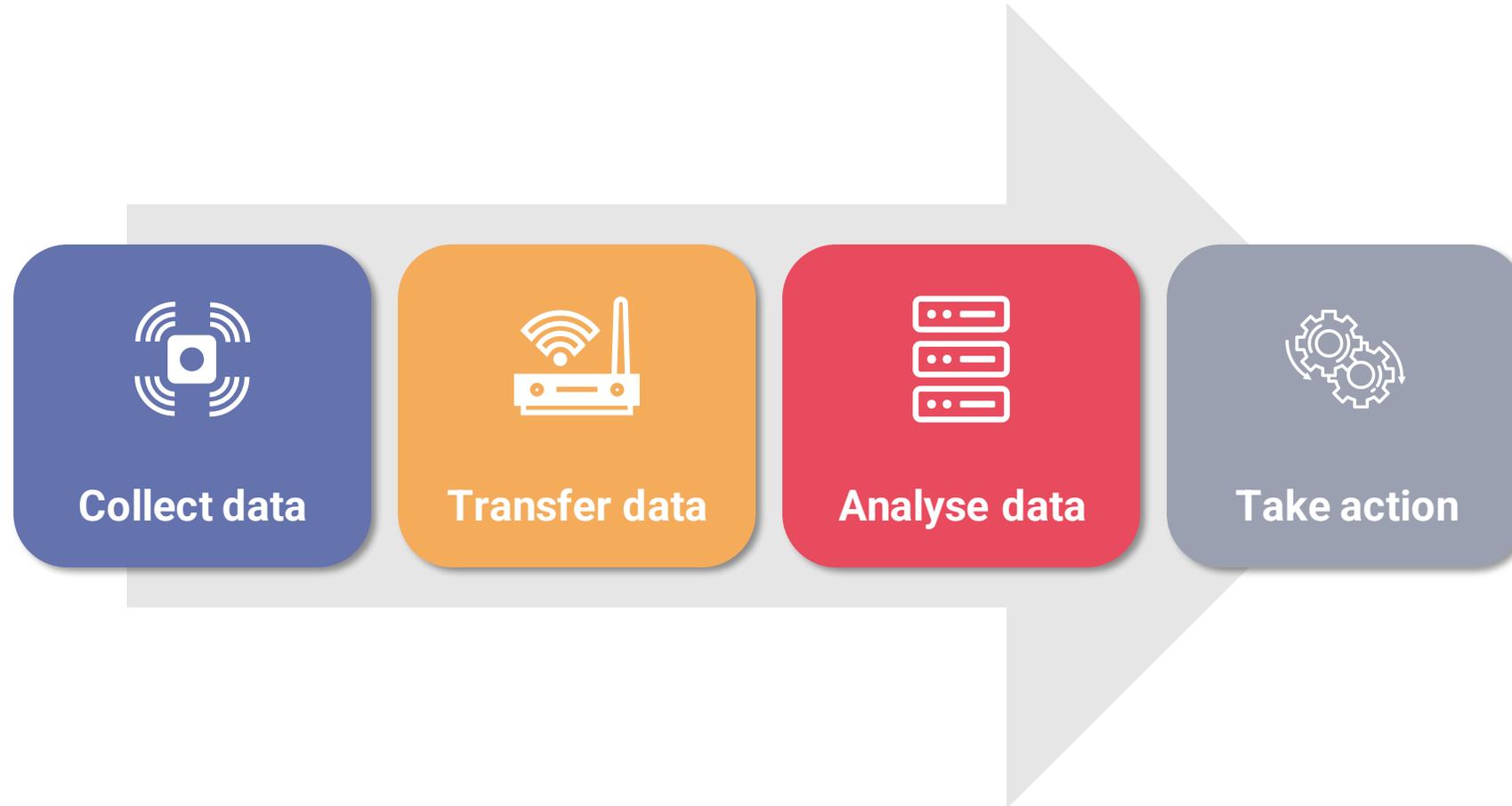


JOE HURMAN

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

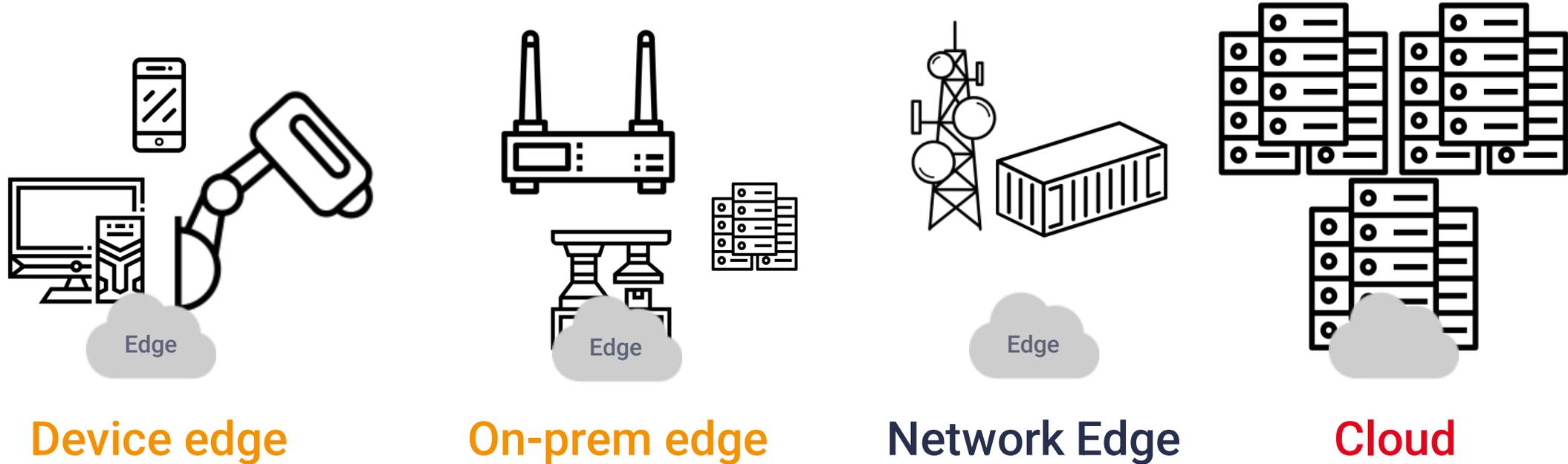


Enable automated processes

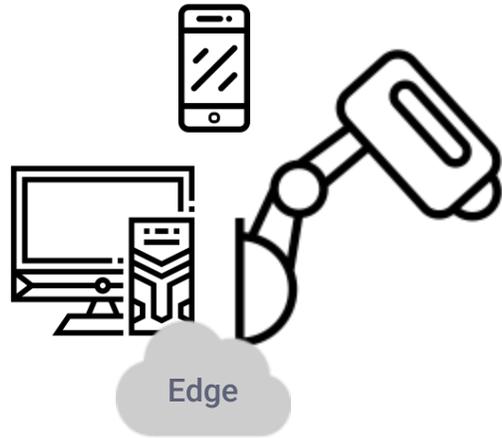


Improve efficiency & customer experience

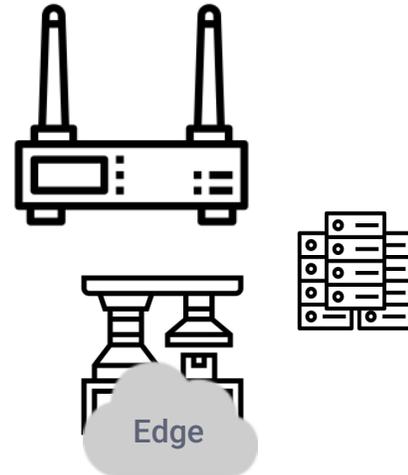
Edge computing can be located at several points between the source of data collection and cloud



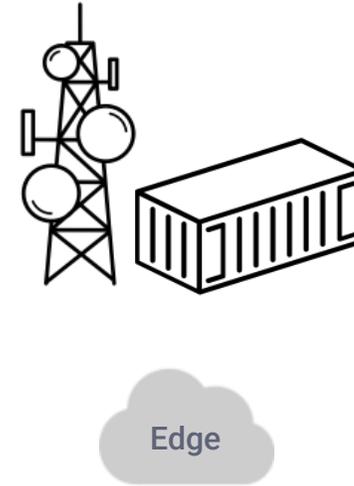
There are varying benefits across the different types of edge



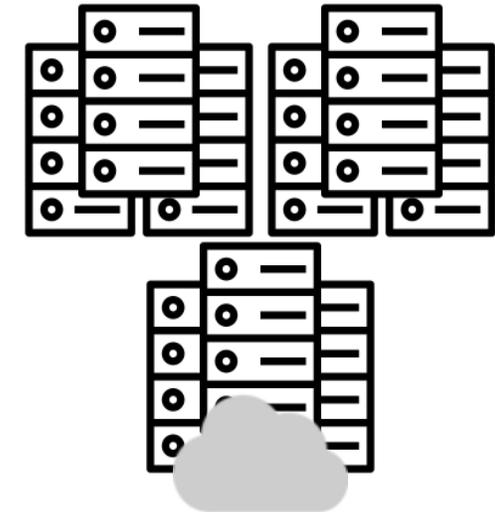
Device edge



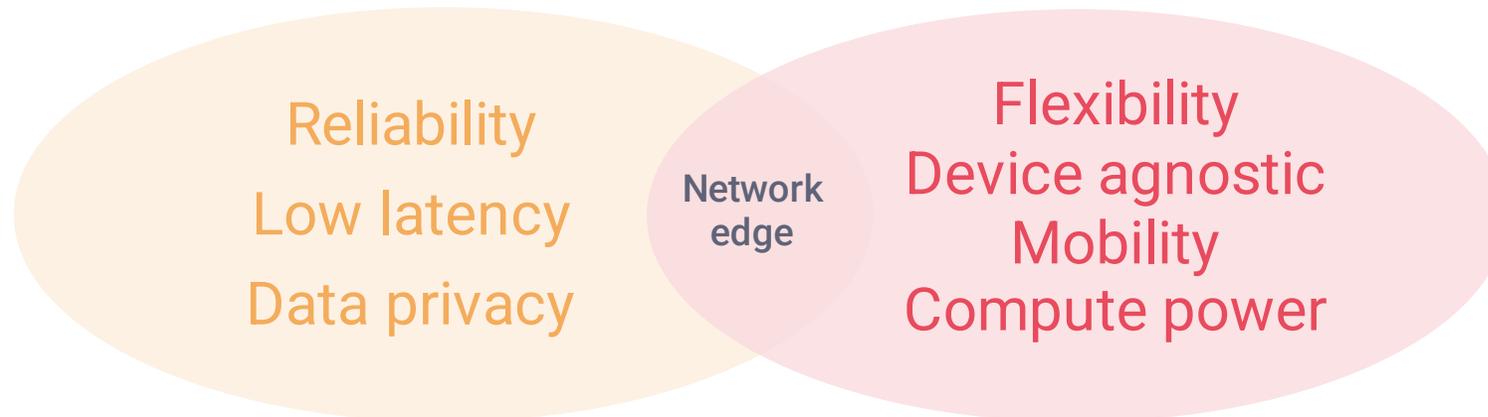
On-prem edge



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

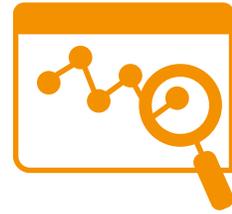
Edge benefit:

- Data stored locally
- Control over security

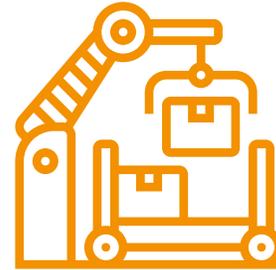
The value of integrating edge computing into IoT can be realised across the stages of this process



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

Improve customer experience



Reducing waste and defects



Increasing asset lifetime



Minimising time / maintenance & repair costs



Run operations more efficiently (automation)

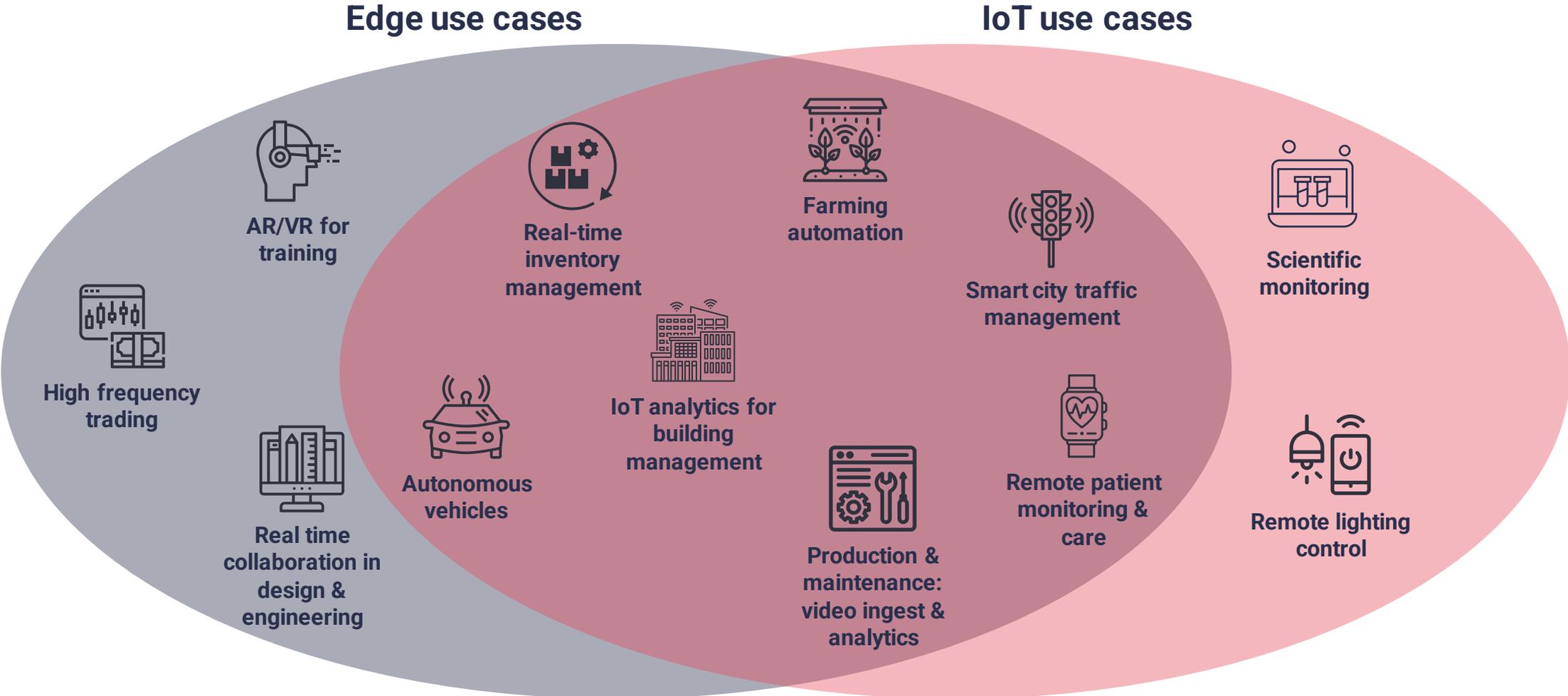


New immersive experiences

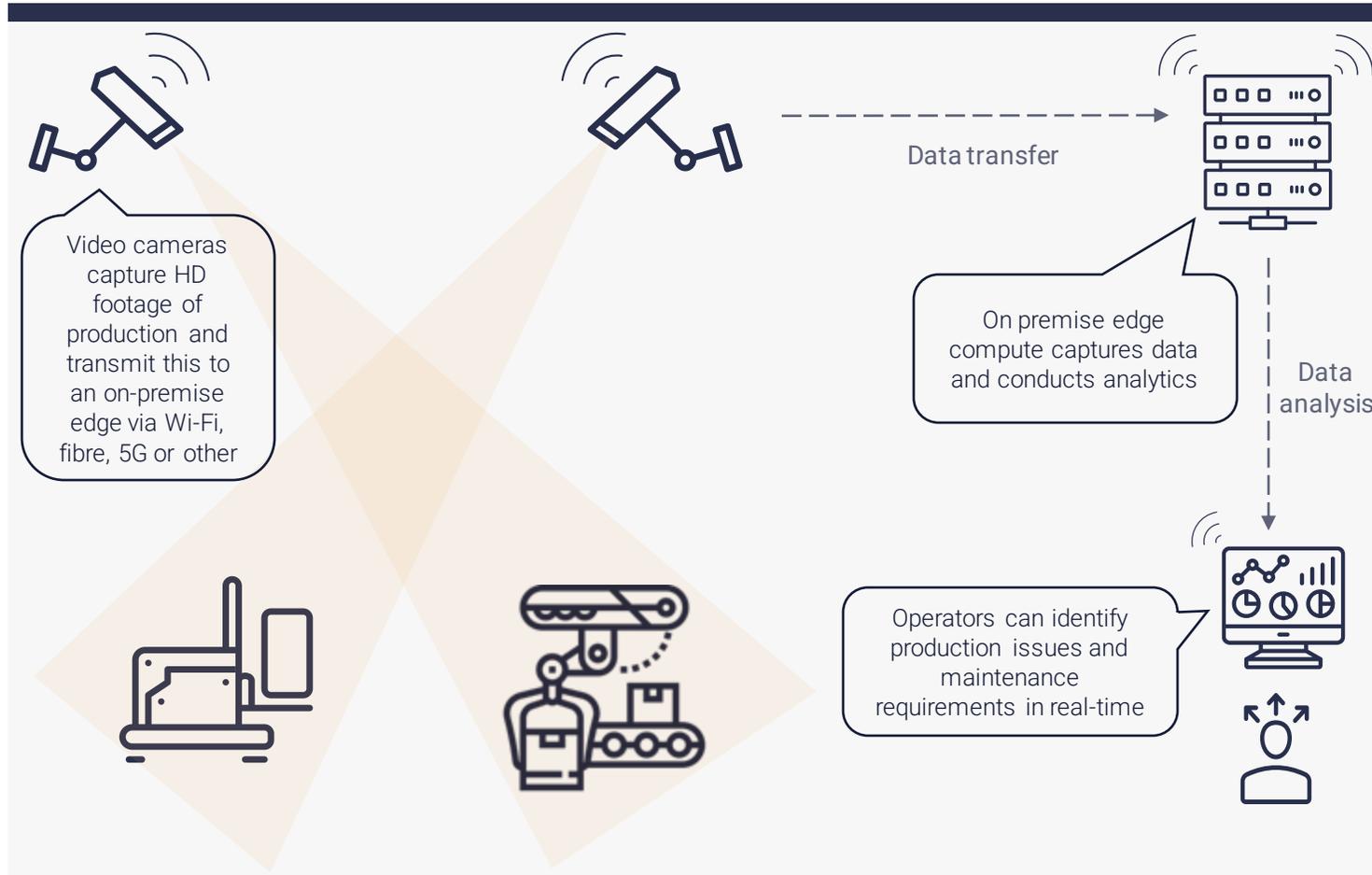


Greater supply chain visibility

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

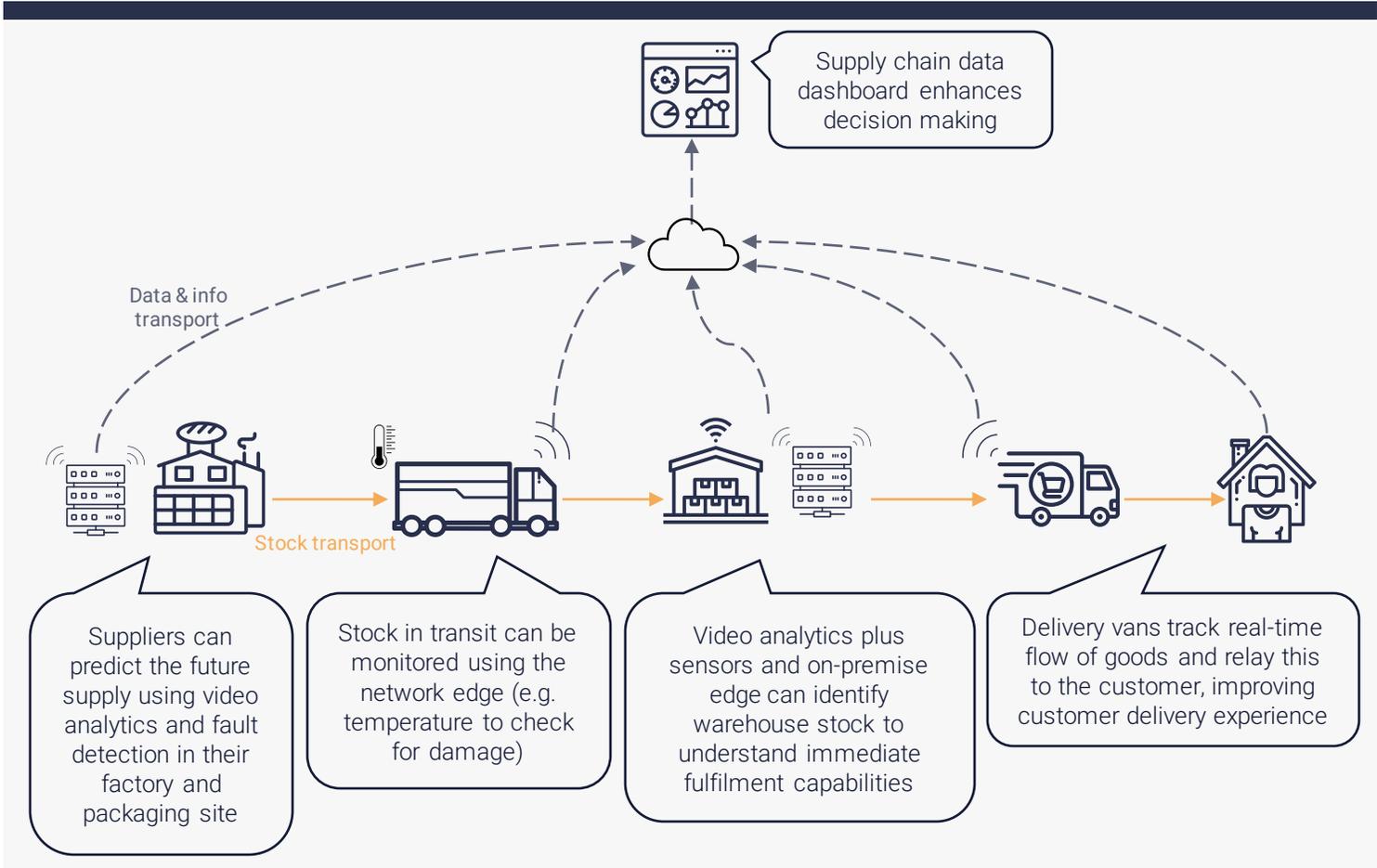
Challenges

- 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?

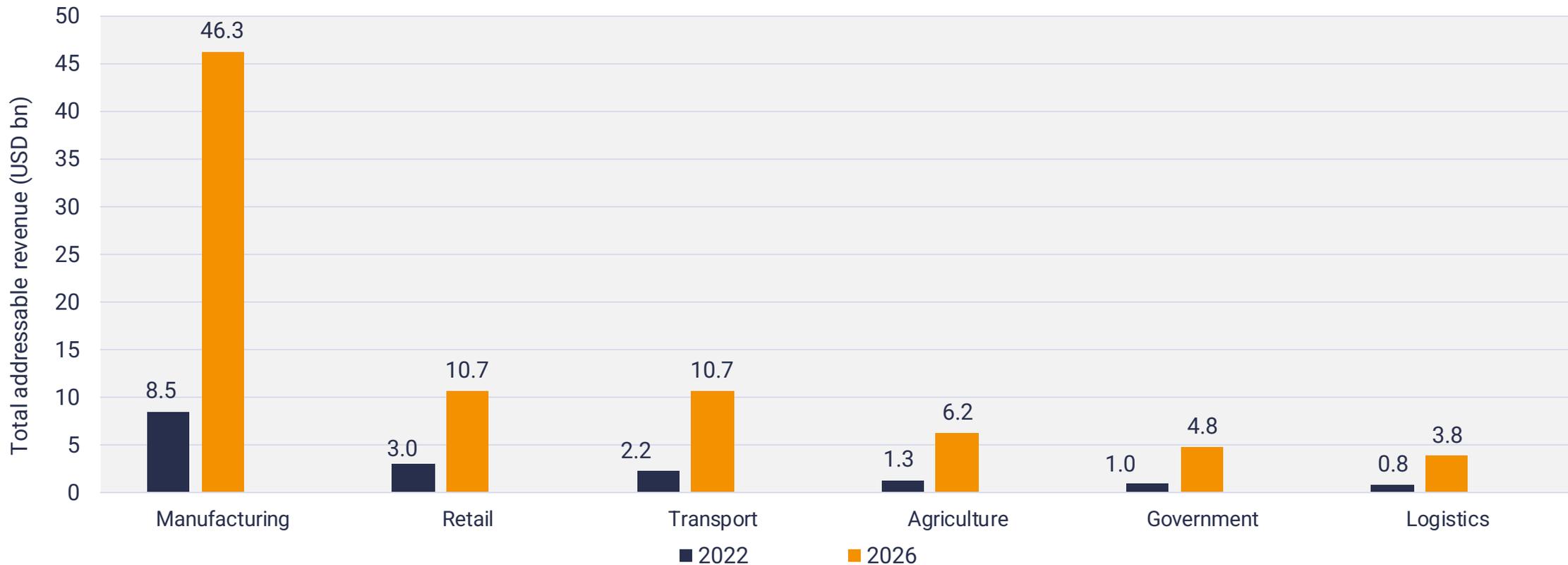
Different industries will have different approaches to implementing edge in conjunction with IoT

<p><i>Currently using IoT and using edge to overcome practical challenges related to cloud</i></p> <p>Early adopters</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Utilities</p> </div> <div style="text-align: center;">  <p>Logistics</p> </div> <div style="text-align: center;">  <p>Manufacturing</p> </div> <div style="text-align: center;">  <p>Mining</p> </div> </div>	<p>Current maturity: ●</p> <p>Value opportunity: ●</p> <p><i>Mostly 'brownfield' opportunities</i></p>
<p><i>Starting to leverage edge within some existing IoT deployments, as well as exploring new use cases</i></p> <p>Up and coming innovators</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Transport</p> </div> <div style="text-align: center;">  <p>Agriculture</p> </div> <div style="text-align: center;">  <p>Government</p> </div> <div style="text-align: center;">  <p>Retail</p> </div> <div style="text-align: center;">  <p>Healthcare</p> </div> </div>	<p>Current maturity: ●</p> <p>Value opportunity: ●</p> <p><i>Mix of 'brownfield' and 'greenfield' opportunities</i></p>
<p><i>Early in exploring new use cases for jointly deploying edge and IoT</i></p> <p>Speculative explorers</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Defence</p> </div> <div style="text-align: center;">  <p>Finance</p> </div> <div style="text-align: center;">  <p>Construction</p> </div> </div>	<p>Current maturity: ●</p> <p>Value opportunity: ●</p> <p><i>Mostly 'greenfield' opportunities</i></p>

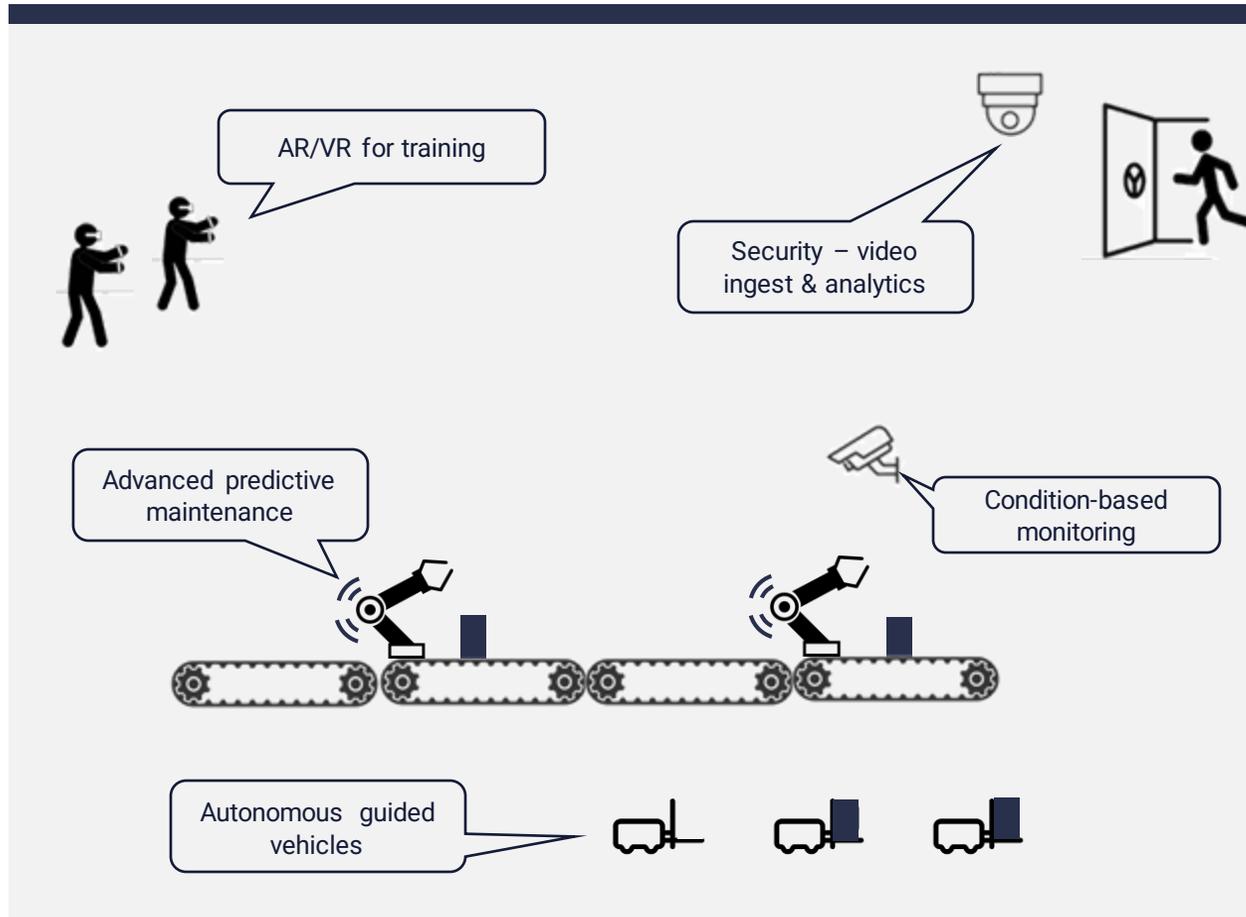
We anticipate edge revenues to increase dramatically over the next three years

Forecasted edge computing total addressable revenue (selected verticals)

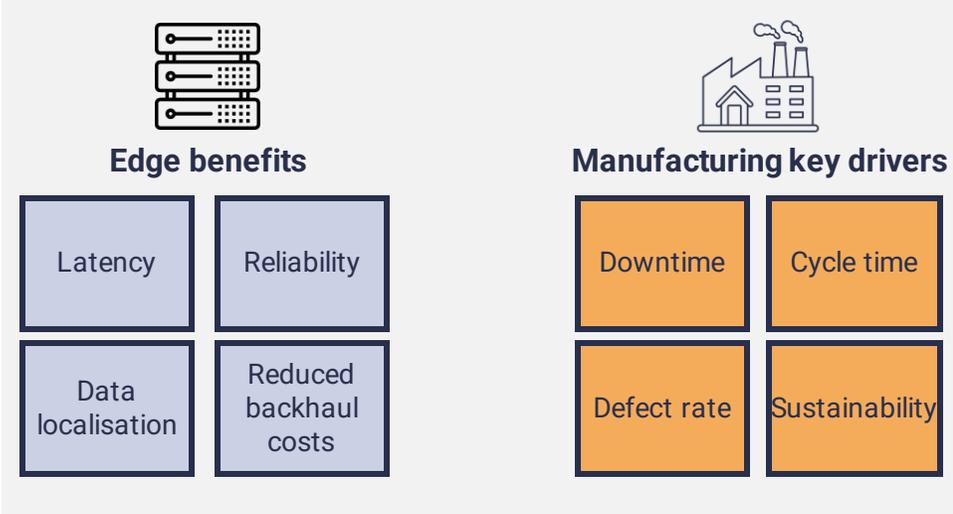
STL edge computing market sizing forecast 2022-2030



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

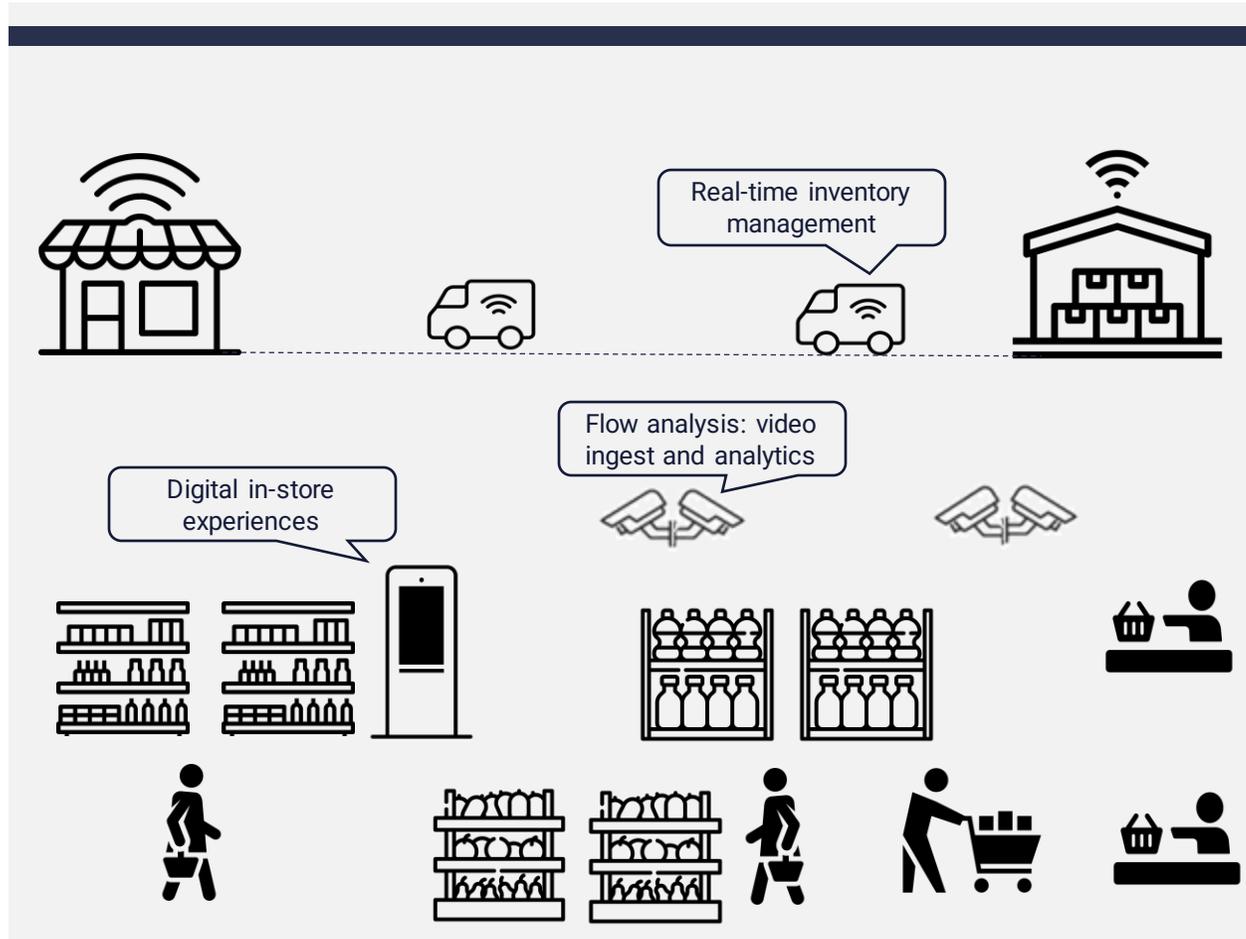


Edge benefits are closely aligned to key drivers in manufacturing

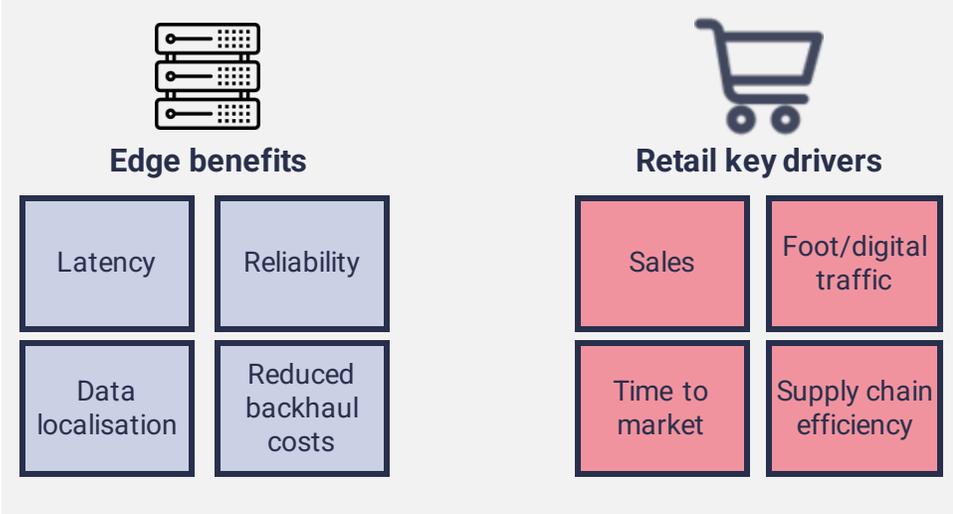


“Manufacturing is divergent because multiple sub-verticals have realised positive ROI on previous IoT investments”
CEO, Edge IoT platform

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

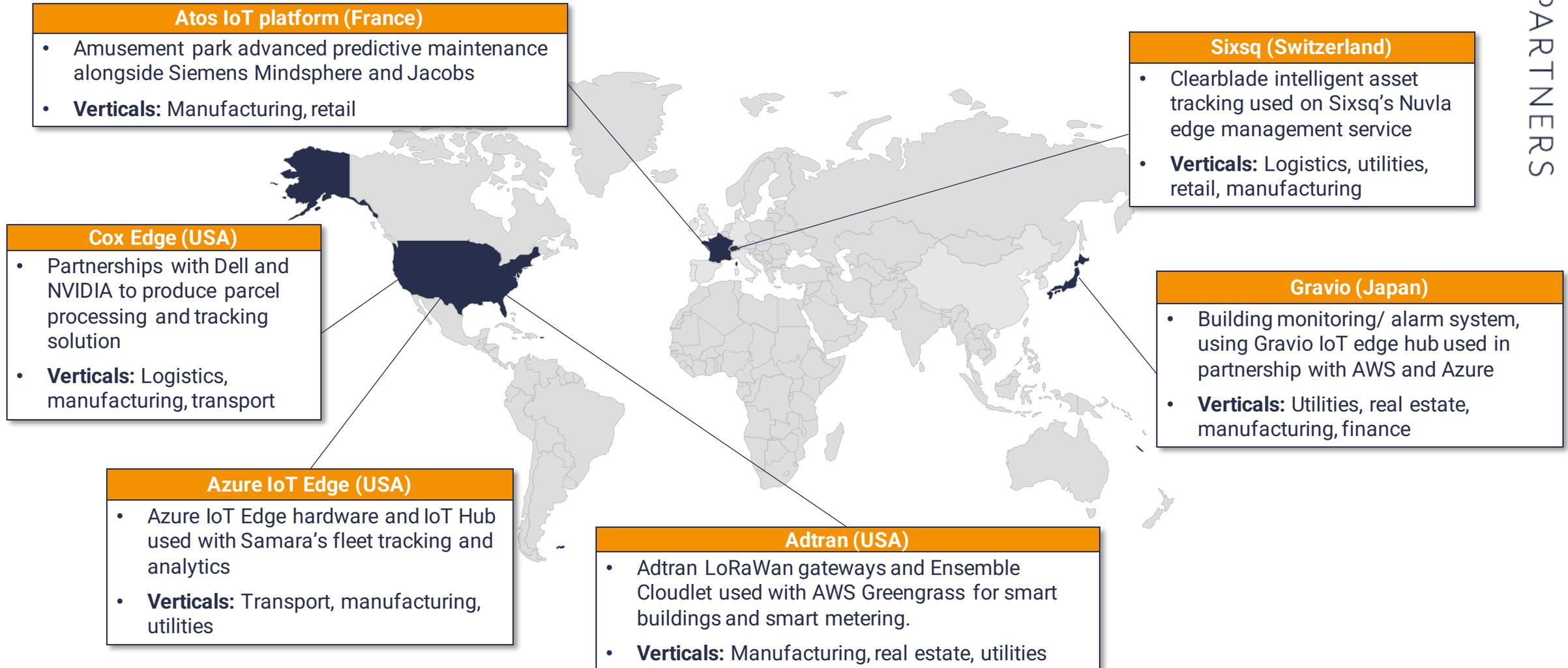


Edge benefits are closely aligned to key drivers in retail



"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:

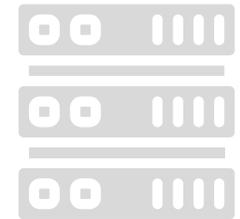
- **Collect, transfer and analyse** data
- **Take action** either through an automated or manual workflow

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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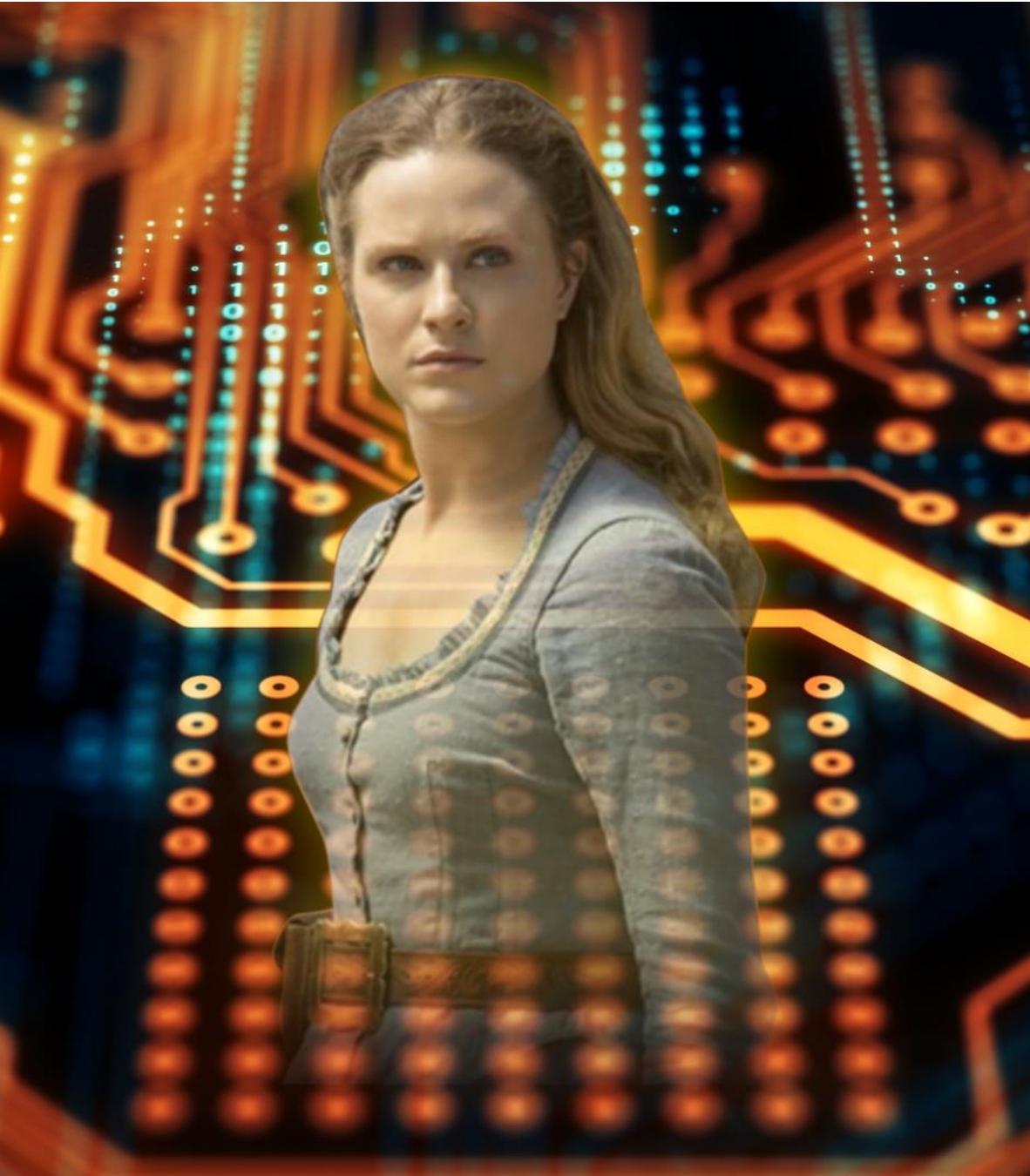
Autonomous mobile robotics deep-dive



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...

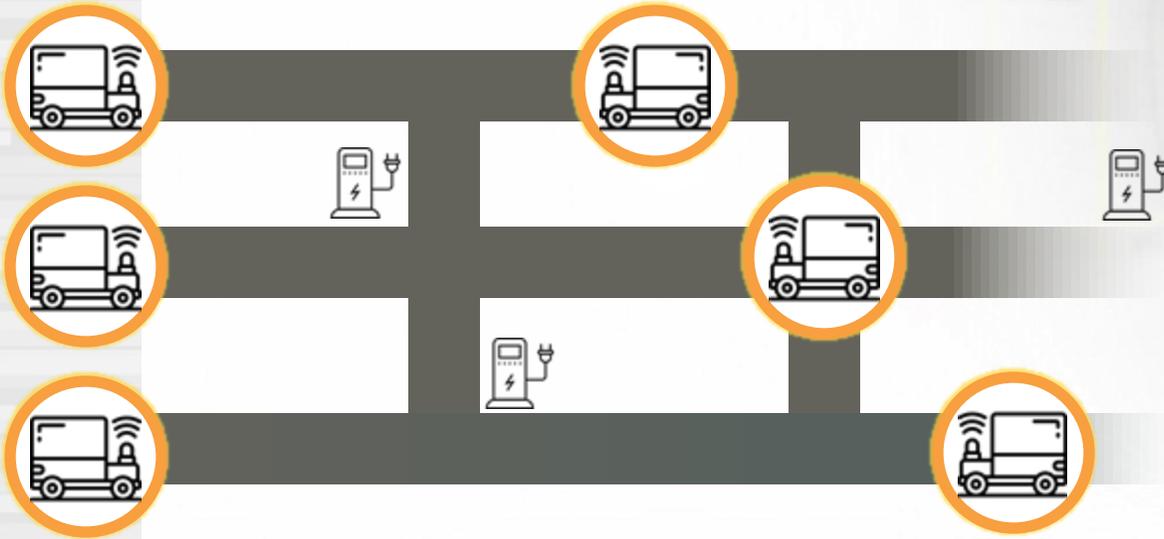
AUTONOMOUS MOBILE ROBOTICS – PROMISE VERSUS REALITY

What you actually need:

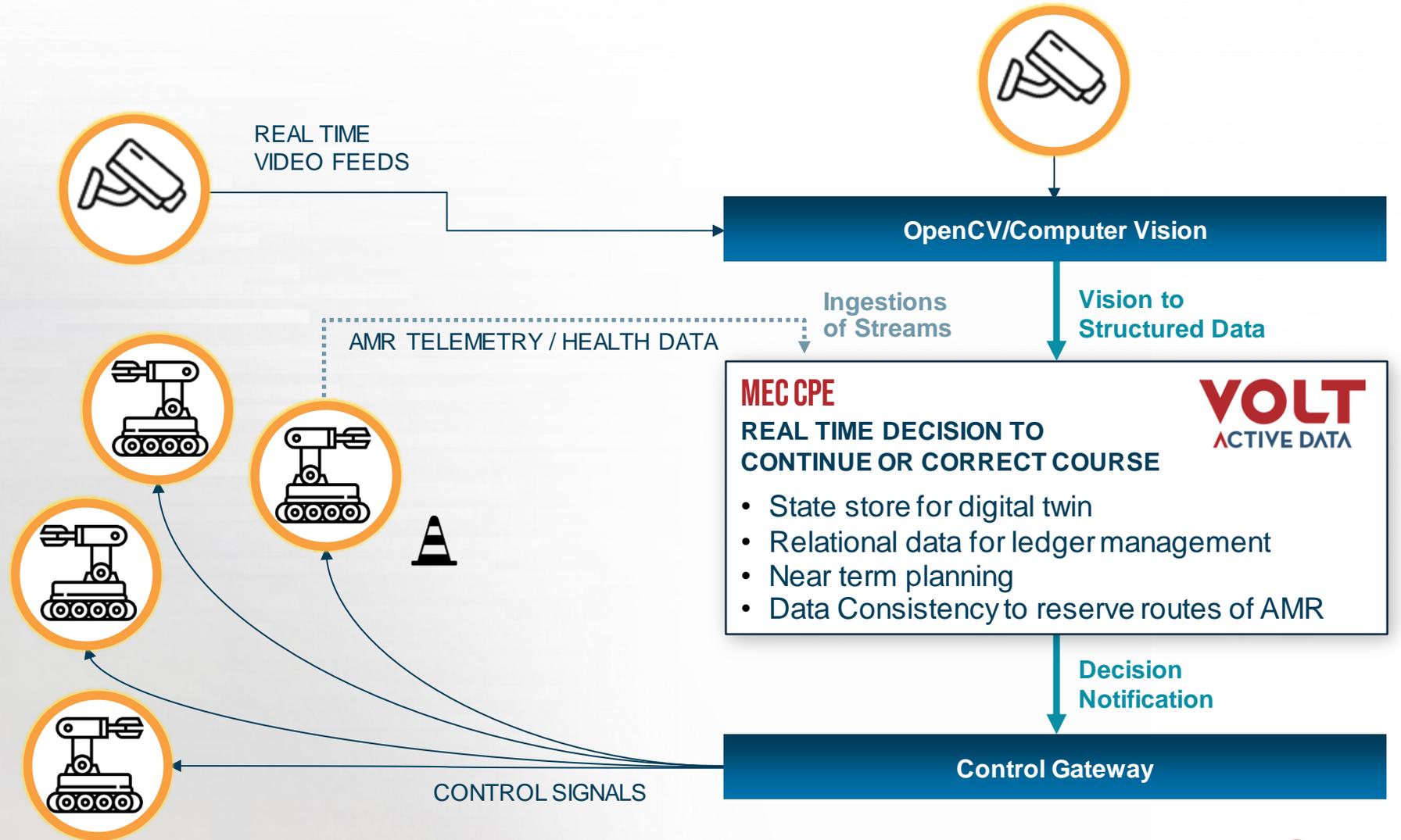
- Robot needs to be capable of moving by itself, but is controlled remotely. The robot is blind.
- CCTV is used to track the robots.
- An orchestration platform is used to determine high level goals, break them down into tasks, and then get the robots to carry them out.
- A human would struggle to operate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



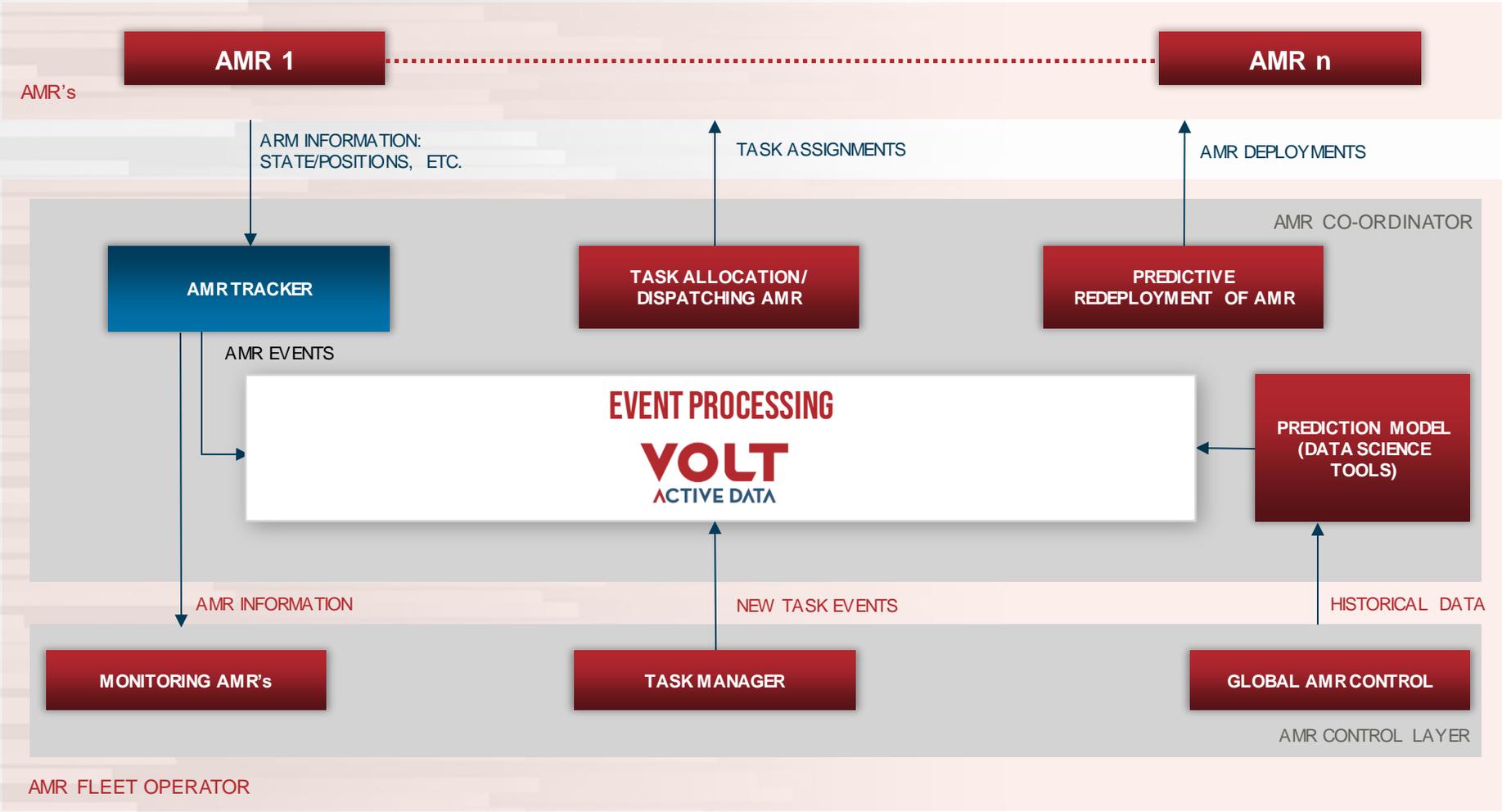
AUTONOMOUS MOBILE ROBOTICS



REPRESENTATIVE SETUP OF AMR ON FACTORY FLOOR



MICRO AMR FLEET MANAGEMENT ARCHITECTURE

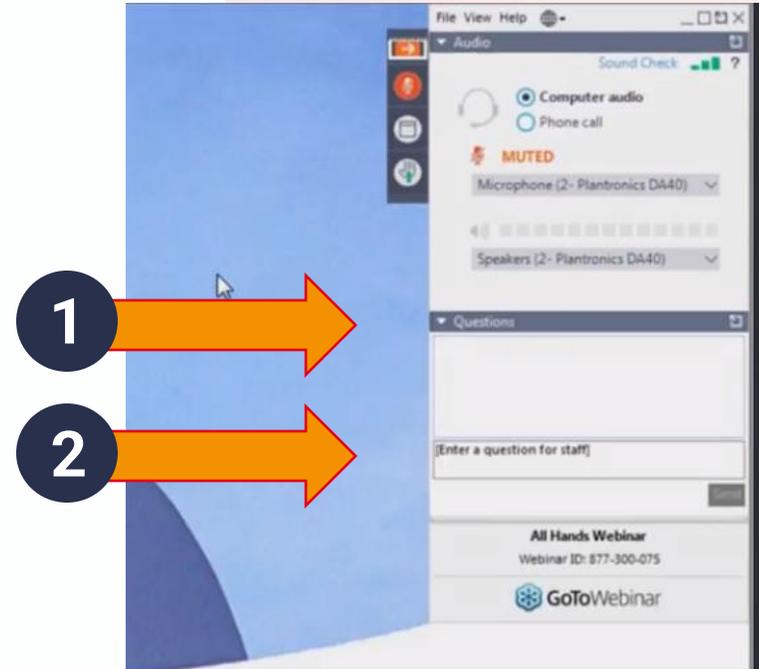


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Q&A session

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
- David Rolfe, drolfe@voltactivedata.com

