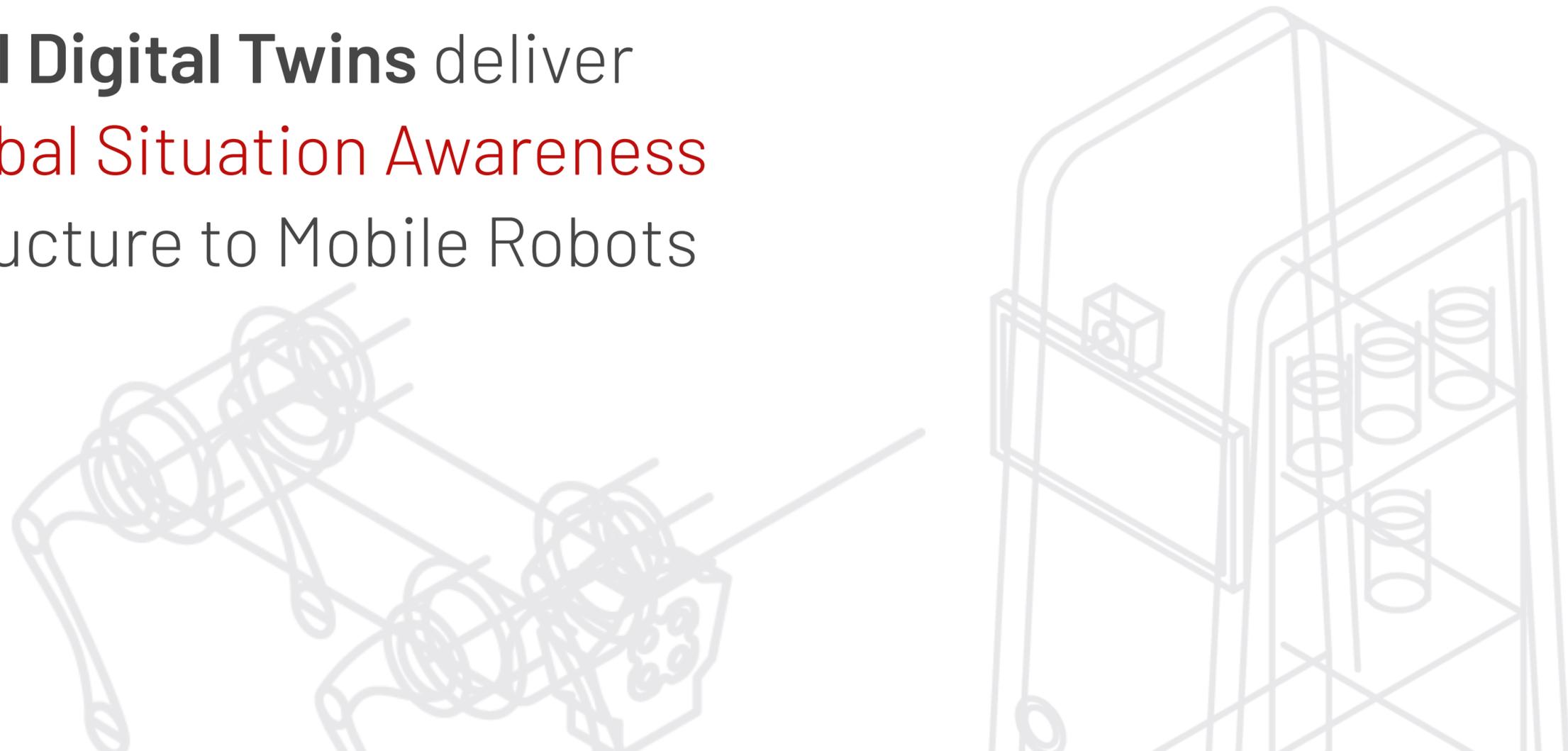


Beyond Line-of-Sight Physical AI for Robots

How **Motional Digital Twins** deliver
real-time **Global Situation Awareness**
from Infrastructure to Mobile Robots



About Us

Outsight's Spatial Intelligence solutions leverage Physical AI and 3D native sensors such as LiDAR to empower infrastructure operators by continuously monitoring the movement of people and vehicles in real time—enhancing efficiency, improving customer experiences, and strengthening security. This Spatial Intelligence is made accessible through Motional Digital Twins.

As the most experienced team in the industry, we lead the deployment of Spatial Intelligence solutions worldwide, operating from our offices in San Francisco, Paris, and Hong Kong.

Additional details about our company can be found in Annex A of this whitepaper.

Abstract

This whitepaper describes **how Motional Digital Twins extend mobile robot intelligence** beyond the constraints of onboard, line-of-sight perception.

Traditional robot autonomy relies on local sensors that face inherent limitations: blind spots, occlusions, and the inability to maintain context over time. **These constraints** force conservative behavior, reduce operational throughput, and **limit what robots can achieve** in complex, human-dense environments.

Motional Digital Twins address these challenges by providing **infrastructure-level Spatial Intelligence**. Using Physical AI and LiDAR as the core sensing technology, enriched with data from cameras, IoT sensors, and business systems, they continuously track every person, vehicle, and object across entire premises, **creating a shared, real-time representation of physical flows with full spatial and temporal continuity**.

This shared awareness layer delivers four foundational capabilities to any connected robot: **premises-wide perception** that acts as an omniscient understanding layer, **persistent memory** that maintains context and identity over time, **reasoning and planning** support through actionable insights and predictions, and **enhanced safety** through global situational awareness.

By complementing robot-centric perception with environment-centric intelligence, **Motional Digital Twins enable mobile robotics solutions to operate with global context awareness**, transforming individual autonomous units into coordinated systems that leverage collective intelligence from infrastructure sensors and other robots.

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The limitations of Line-of-Sight

Bound by Space

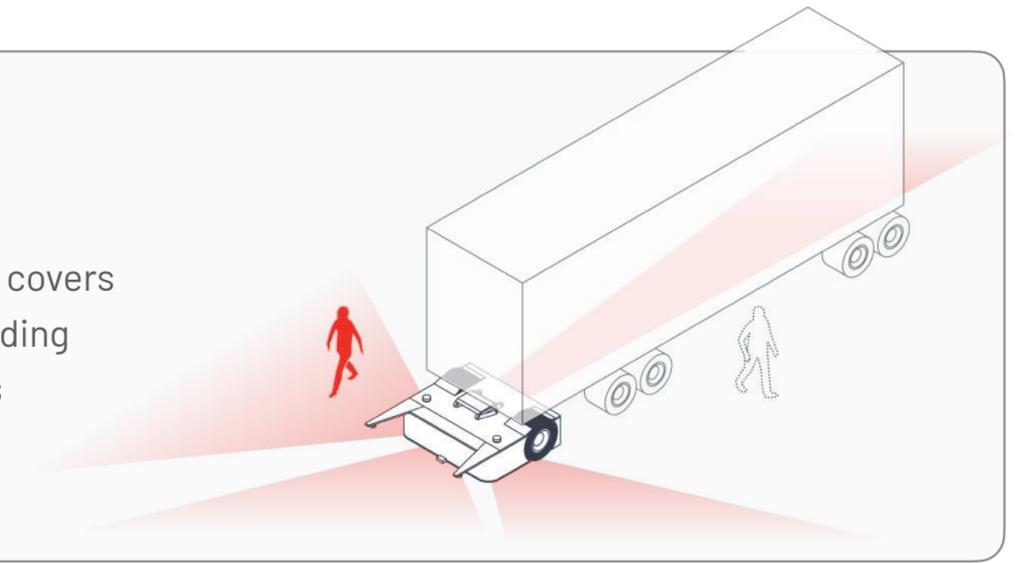
Spatial Limits of Line-of-Sight Physical AI

Blind spots, occlusions, and environmental complexity restrict what robots can perceive and understand in real-world, human-dense environments.

Overcoming these limits at the robot level is often cost-prohibitive or operationally infeasible, leading most systems to address them only to the extent required to ensure safety.

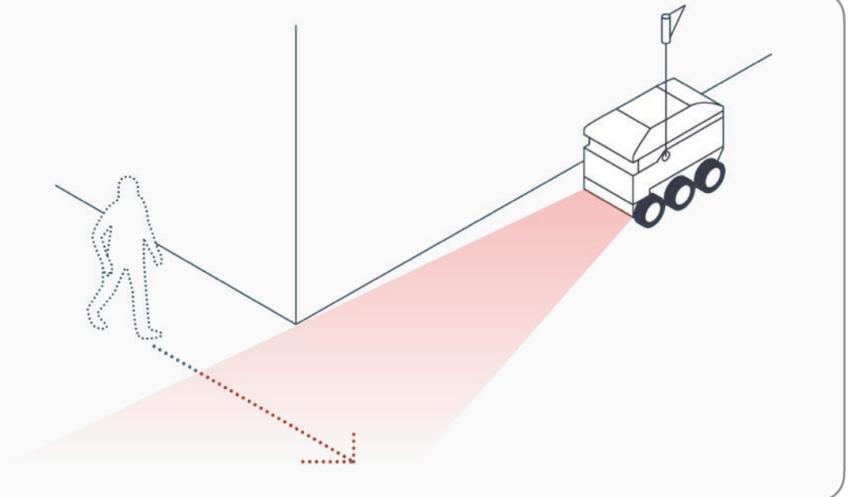
BLIND SPOTS

The field of view of a robot only covers a limited portion of the surrounding space, leaving areas outside its perception.



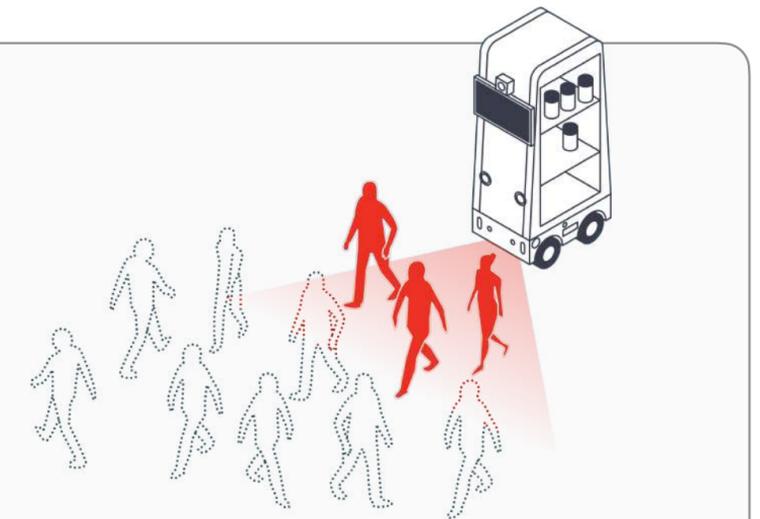
OCCLUSIONS

Elements of the environment physically obstruct perception, causing people or objects to disappear from view even when they are nearby.



SCENE COMPLEXITY

High-density environments, including crowds, with continuous motion and intersecting paths reduce the reliability of local perception and increase uncertainty.



Instantaneous awareness

The limitations of Stateless Perception

Line-of-sight Physical AI is limited not only in space, but also in time.

Instantaneous perception makes it difficult to connect current observations with past events without using privacy-sensitive identification.

Line-of-sight Physical AI typically relies on stateless perception, where each observation is processed as an isolated moment without a persistent representation of the world over time.

This has three direct consequences:

1. Lack of Continuity Over Time

As robots and surrounding entities move, observations that fall out of the field of view cannot be reliably associated with later ones, causing the same object or person to be perceived as new upon reappearance, unless explicit identification mechanisms are used.

2. Lack of Relationship Building

As a consequence, events, interactions, or co-occurrences detected at different moments cannot be easily linked together, making it difficult for robots to understand sequences, dependencies, or evolving situations.

3. No Context Reuse

Information and attributes captured at a different time or location by external systems and sensors cannot be readily applied to the current situation, limiting anticipation and informed decision-making.

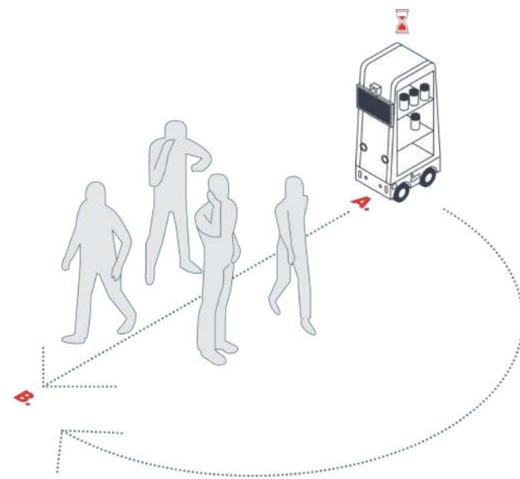
Examples

Operational Consequences of Line-of-Sight Limitations

The examples below show how these limitations manifest in practice and directly constrain what robots can achieve in operational environments.

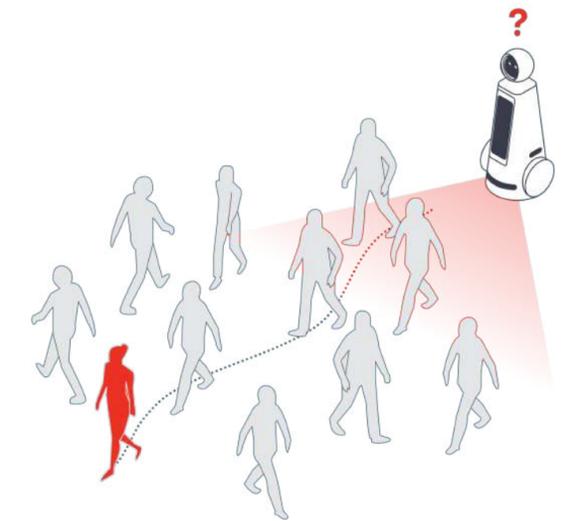
Context-Unaware Path Selection in Dynamic Crowds

A robot selects the shortest path from A to B, unaware that a temporary crowd ahead will make this route slower than a longer but clearer alternative, reducing throughput and the return on investment of the solution.



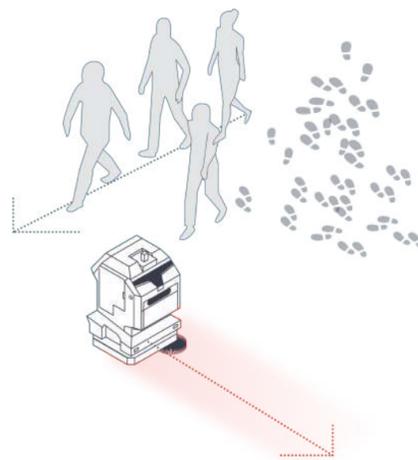
Follow-Me Robot Losing Its Leader in a Crowd

When a person temporarily disappears in a crowd, a follow-me robot cannot reliably recognize them upon reappearance without ID, losing all prior interaction context, degrading the user experience and limiting adoption.



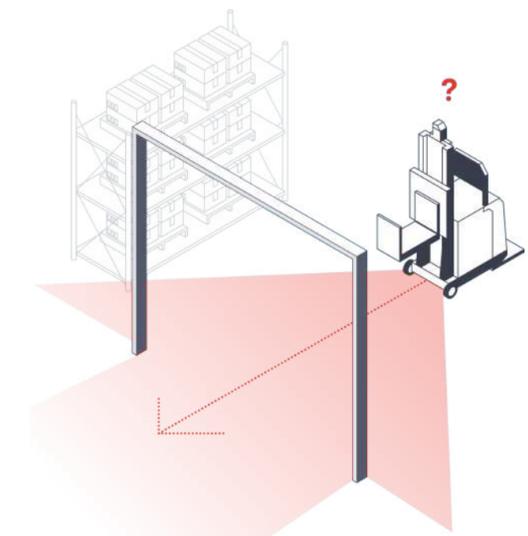
Cleaning Without Awareness of Recent Crowd Activity

A cleaning robot treats all areas equally, unaware that a space heavily used moments ago is likely dirtier than low-traffic areas, reducing cleaning effectiveness and increasing unnecessary operating costs.



Doorway Crossing Uncertainty in a Warehouse

An AGV/AMR approaching a doorway cannot see what lies beyond it, forcing conservative behavior when entering a new zone where people or vehicles may be present, slowing operations and reducing overall throughput.



Motional Digital Twins: The Shared Awareness Layer

Digitizing Individual Movement

What's a Motional Digital Twin?

This technology extends traditional Digital Twins beyond static buildings and assets by adding the critical dimension of real-time movement digitisation, revealing unique insights about the physical world interactions.

To Learn more about **Motional Digital Twins**, take a look at our specific whitepaper [in this link](#).



A **Motional Digital Twin (MDT)** is a real-time digital replica of a real-world space that delivers **Spatial Intelligence** by continuously tracking how every person and object moves and interacts within that environment.

It collects and processes real-time data from infrastructure-mounted native 3D sensors, such as LiDAR, combined with supplementary sources from external sensors and systems.



By capturing movement and spatial interactions in real time from the infrastructure, Motional Digital Twins enable continuous operational insight for Smart Places and provide mobile robots with global, context-aware situational understanding.

Unlocking Premises-wide Situation Awareness

Turning Physical Flows into Spatial Intelligence

A Motional Digital Twin continuously delivers insights on each individual's Profile (**who**¹), Position (**where**²), Behavior and Interactions (**what**³), instantly, historically (**when**⁴), and predictively (**what if**⁵).

¹ Each individual is represented by a unique anonymous ID, enabling every action and event to be accurately tracked and associated.

² Positions are monitored with high precision and updated continuously to digitize events and movements with the level of detail required for each specific application.

³ Insights extend beyond customers to include how they interact with the infrastructure assets, driving actions based on unique behavioral patterns.

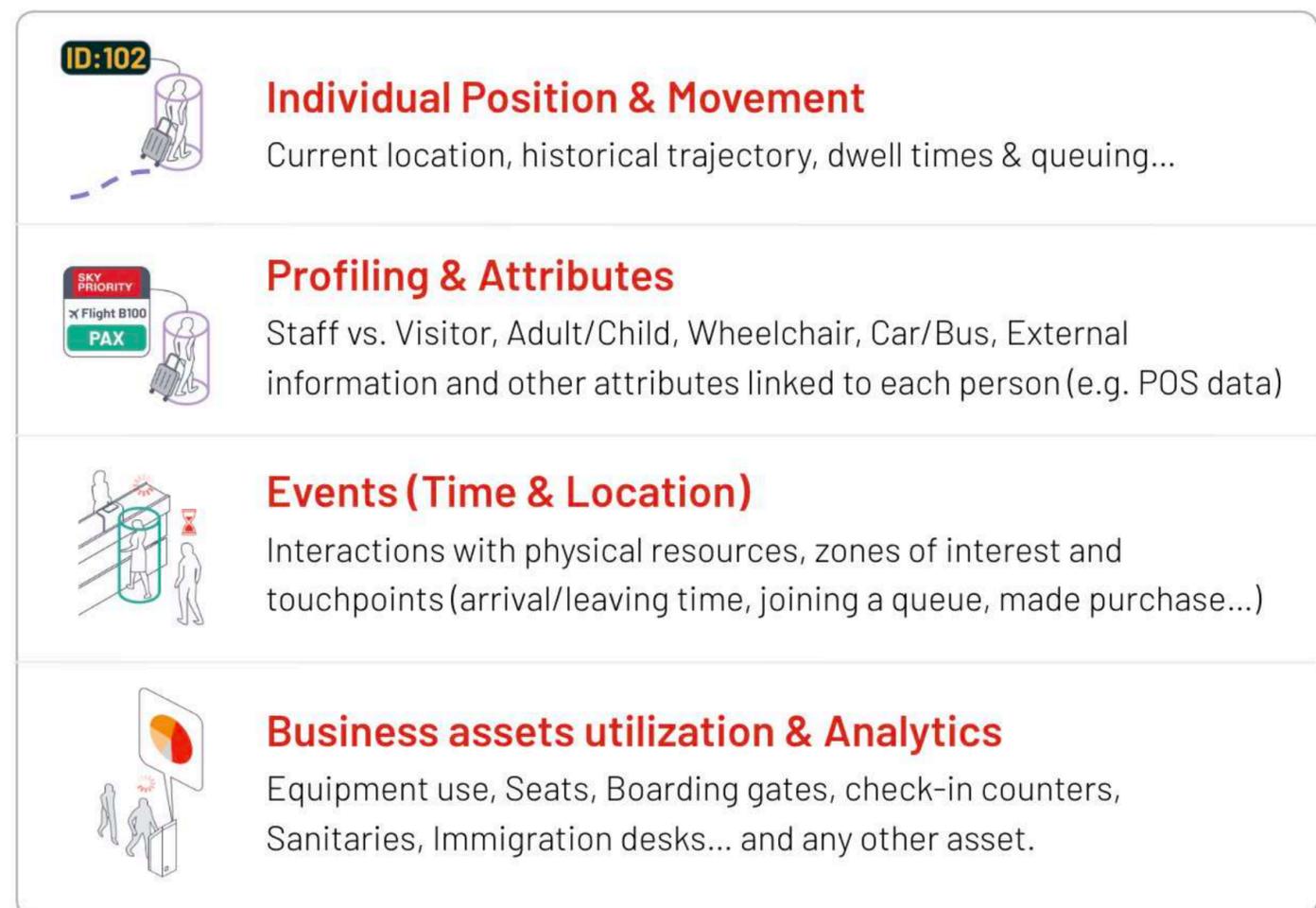
⁴ Every data point is precisely time-stamped, enabling integration with external data sources and the generation of actionable historical analyses.

⁵ This rich dataset supports both immediate alerts triggered by predefined thresholds and predictive insights to guide future actions.

At the core of a Motional Digital Twin is a Physical AI layer that continuously models movement, attributes, and interactions from infrastructure perception within a shared premises-wide spatial and temporal reference.

By structuring reality at the level of individual entities and events, the system builds a coherent, evolving understanding of how people, vehicles, and assets behave across a premises.

This infrastructure-level intelligence supports advanced operational analytics and serves as a global and shared time-aware context that mobile robots can leverage beyond their local, line-of-sight perception.

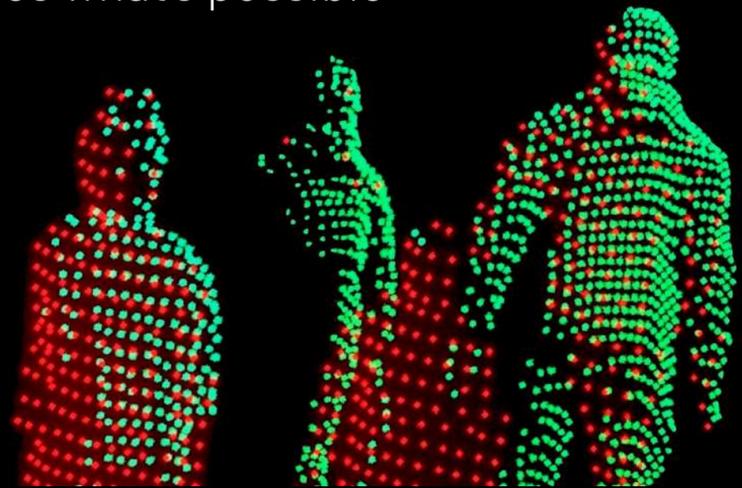


Revealing Real-World Insights

Physical AI: the Technological Foundation

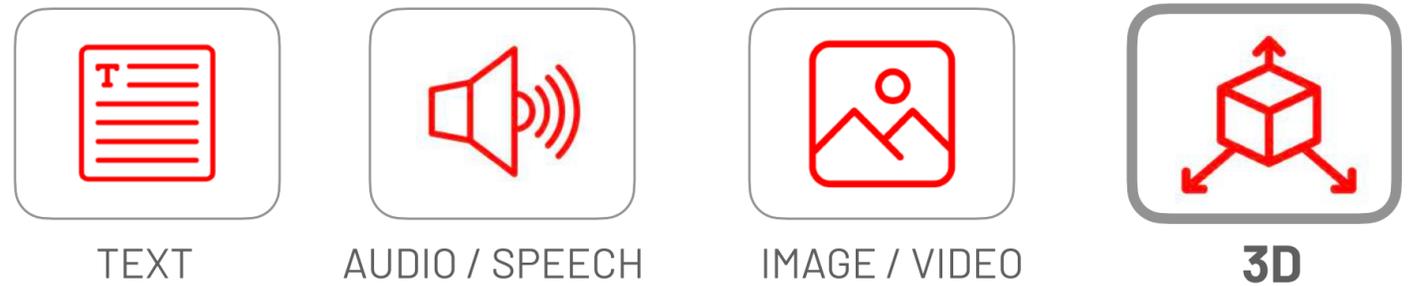
The emergence of Motional Digital Twins has been made possible by the convergence of two critical technologies: Physical AI and 3D native sensors.

Read our article [Understanding Occlusions-free 3D Perception](#) for more details on how Global Awareness redefines what's possible



Physical AI, also known as Spatial AI, is a set of artificial intelligence techniques designed to understand and analyze movement and behavior in three-dimensional space. It processes 3D sensor data to track individual objects, recognize patterns, and generate insights about how people and assets interact within physical environments.

What makes this possible is that Physical AI handles the fourth major data modality in artificial intelligence:



Spatial Intelligence represents the actionable insights generated by Physical AI as it processes data from **3D native sensors** and other external sources within a consistent 3D reference system.

$$\text{3D Sensing} + \text{Business data} + \text{Physical AI} = \text{Spatial Intelligence}$$

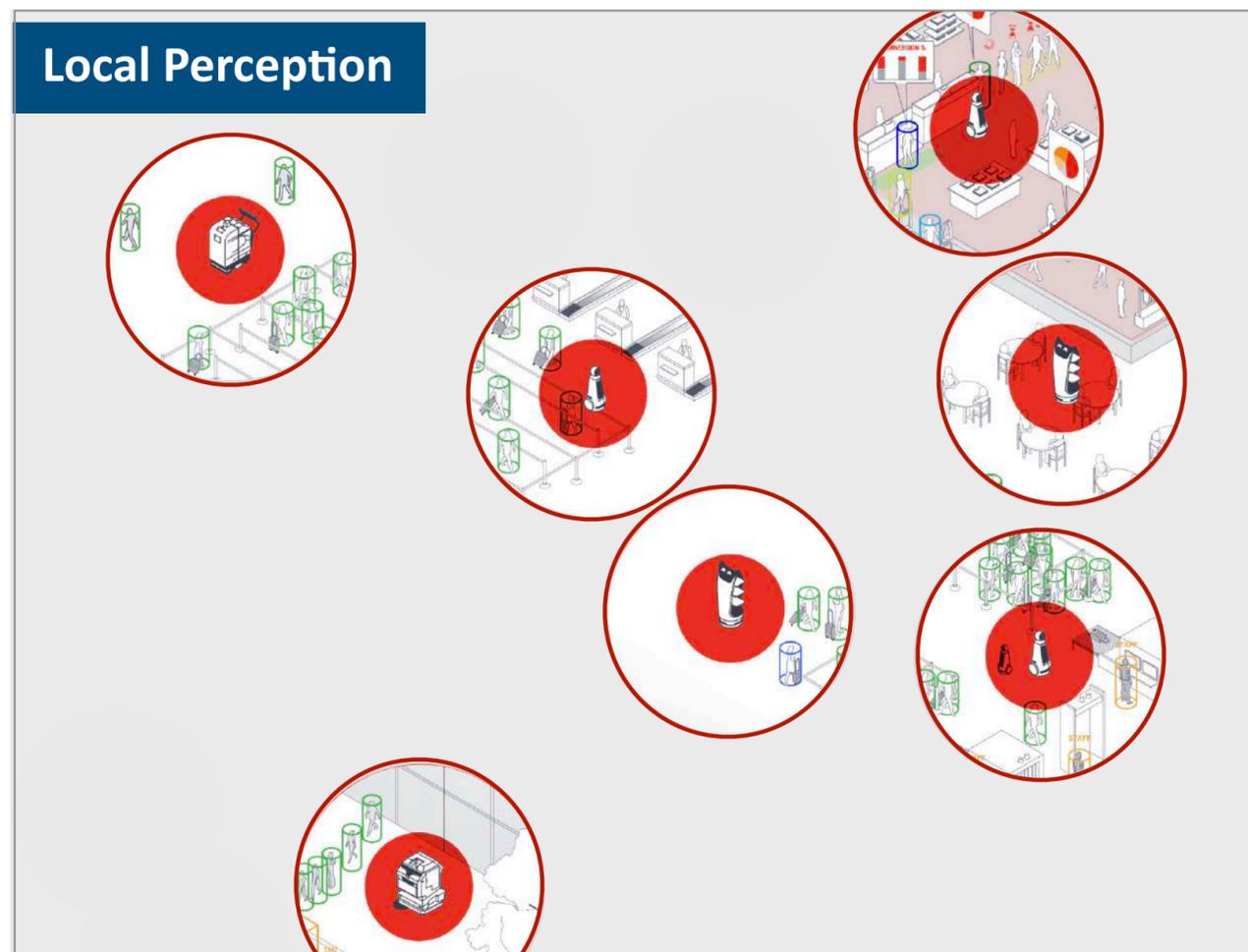
A **Motional Digital Twin** is the concrete medium for users to leverage the value of Spatial Intelligence.

Infrastructure-Level Intelligence

Bringing Shared & Global Situation Awareness to Robots

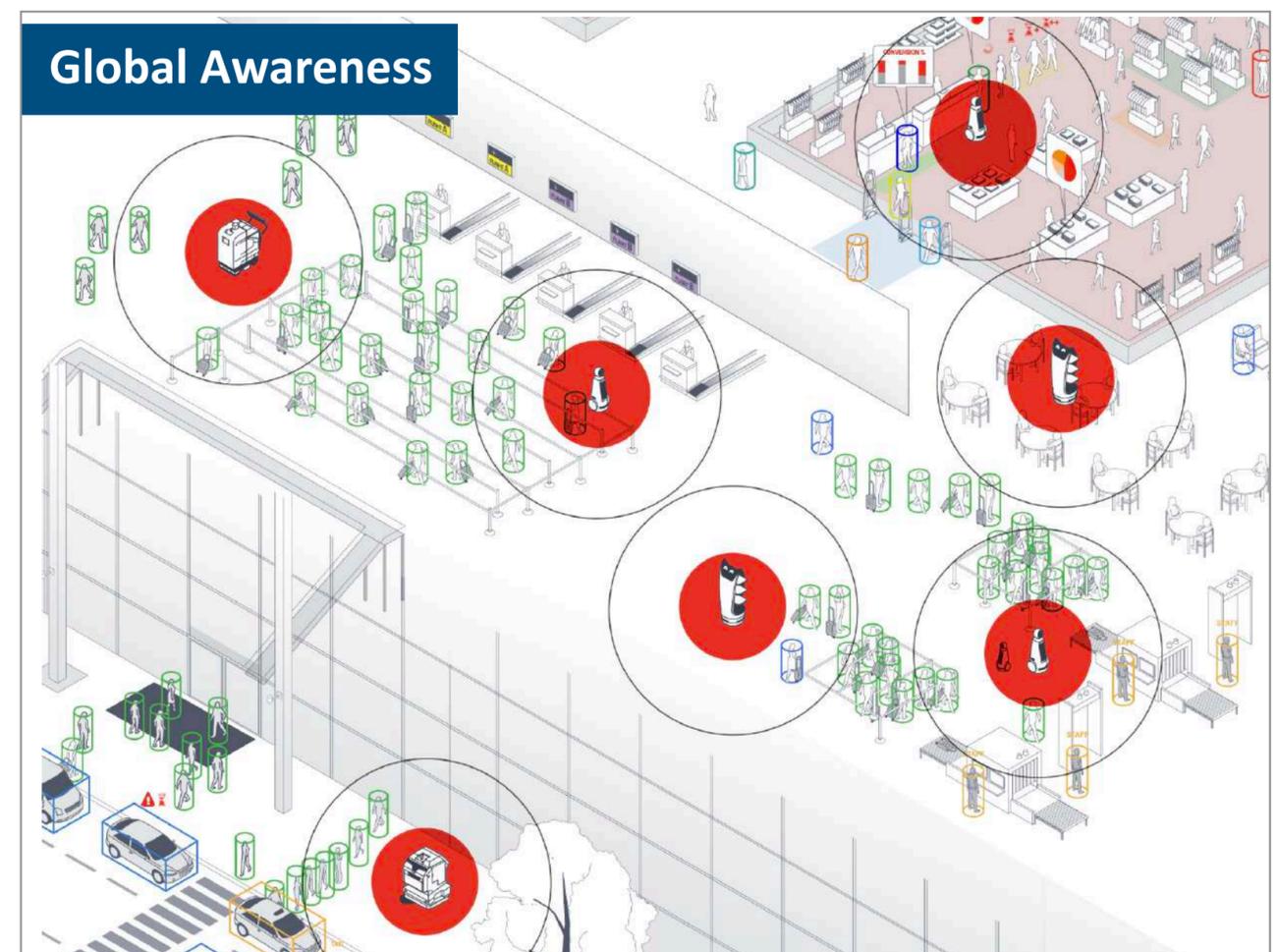
A shared, real-time representation of reality with temporal and spatial continuity, available to all robots on site and extending beyond local, instantaneous perception.

Local Perception



Each robot remains confined to its own sensor bubble, **unaware of what lies beyond its immediate field of view**, regardless of how advanced its onboard perception may be.

Global Awareness

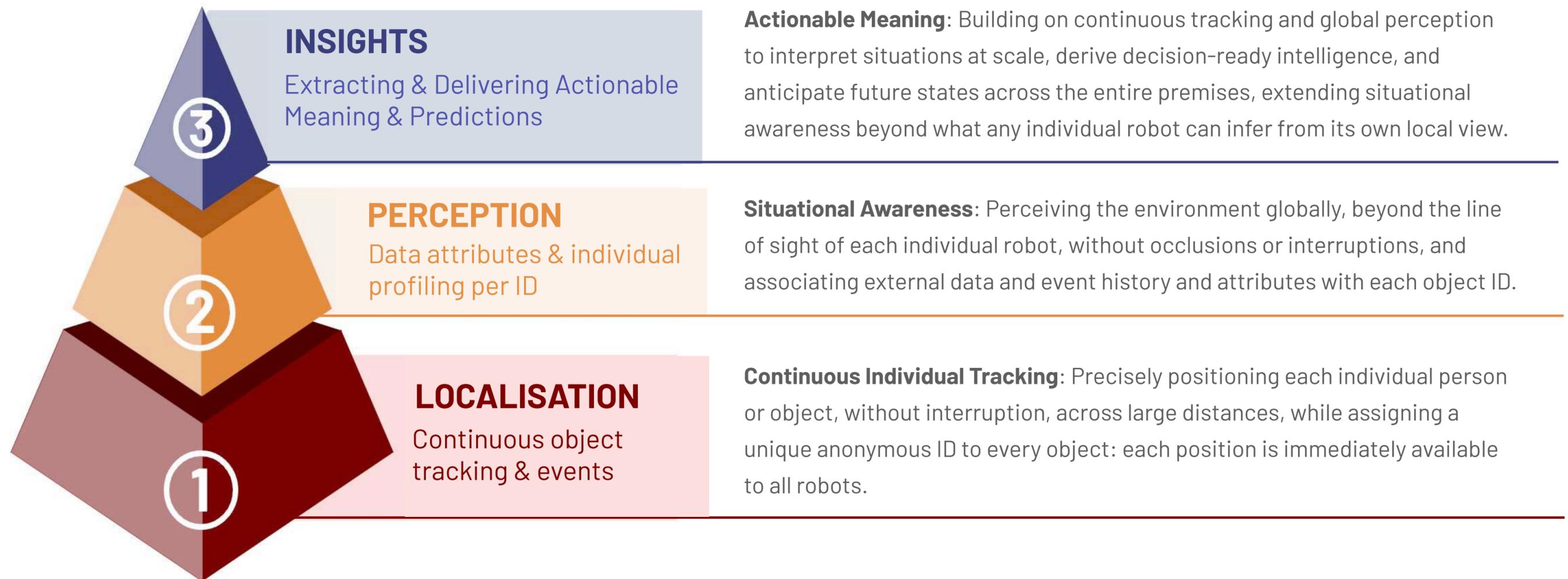


Every robot operating within the premises, indoor or outdoors, gets access to **Global Situation Awareness**, combining infrastructure perception, external data, and the collective insights of all other robots.

Infrastructure-Level Intelligence

The three pillars of Beyond Line-of-Sight Spatial Intelligence

This shared global situation awareness is enabled through three core capabilities.



Six main drivers have converged

Why now?

The need to precisely monitor and manage the physical flow of people, vehicles and objects as they move is not new.

However, the comprehensive capabilities of a Motional Digital Twin cannot be realised using legacy technologies.

Today, a combination of technological advancements, market dynamics, and evolving societal expectations have converged to reshape what is possible, with two main pillars forming the foundation.



Native 3D Sensors

LiDAR sensors—the only technology capable of accurately perceiving in 3D over long distances—are now both mature and affordable.



Physical AI

Comprehensive Spatial Intelligence software platforms, leveraging 3D AI, such as Outsight's, are ready and proven at scale.

Additional drivers:



Edge Computing

Processing massive 3D data in real time is now possible with next-generation edge hardware combined with cloud computing.



Web-based 3D

A 3D-native interface that perfectly complements Spatial insights can currently run seamlessly in web applications with a simple browser.



Privacy Concerns

Rising privacy concerns are fuelling public resistance to image-based and wireless surveillance, requiring respectful alternatives.



Global adoption

Leading operators across the USA, Europe, the Middle East, and Asia are deploying MDT solutions at scale, with many more exploring adoption.

Capabilities and Reference Architecture

Off-the-Shelf Global Awareness

Key capabilities

Motional Digital Twins bring four foundational capabilities that extend robot intelligence beyond onboard systems:



Premises-wide Understanding

Infrastructure sensors capture the position and movement of every person, vehicle, and object in 3D and in real time, **delivering spatial insights at scale.**

This acts as **an omniscient layer of understanding available to any robot**, regardless of its onboard sensing and processing capabilities.



Persistent Shared Memory

Continuous tracking assigns a unique ID to every entity and maintains context over time, **building a historical record** of movements, interactions, and events.

This persistent memory allows robots to **leverage past data collected across the entire environment, not just from their own sensors.**



Reasoning & Planning

Delivering premises-wide actionable insights enables demand forecasting, **route optimization, and proactive decision-making.**

Robots can plan based on predicted conditions and multi-step reasoning **rather than reacting only to immediate observations and local awareness.**



Control & Safety

Global situational awareness **makes any robotics solution inherently safer** by detecting risks beyond individual robot perception.

Operators retain full visibility through dashboards, alerts, and timeline replay, with intervention capabilities to ensure compliance.

These capabilities translate into a set of ready-to-use features, detailed in the following page.

Off-the-Shelf Global Awareness

Key features

Connecting any mobile robotics' solution to a Motional Digital Twin enables **a ready-to-use set of advanced real-time features:**



Shared 3D Map & Navigation

A single 3D map serves robot navigation, localisation and flow monitoring, reducing onboard computation while enabling route selection based on real-time conditions within 100ms latency.



Continuous Individual Tracking

Every person, vehicle, and robot receives a unique ID maintained across the entire environment, enabling persistent Situation Awareness.



Occlusions-free Perception

Infrastructure sensors act as an omniscient perception layer, providing robots with complete spatial awareness beyond the limitations of their onboard sensors.



Multi-Modal Sensing

Contextual information from different sensor modalities is fused into a unified spatial reference, enriching robot perception beyond what onboard sensors can capture alone.



Assets Interactions & Events

Real-time operational context from the infrastructure enables robots to optimize workflows based on resource availability, occupancy, and activity patterns.

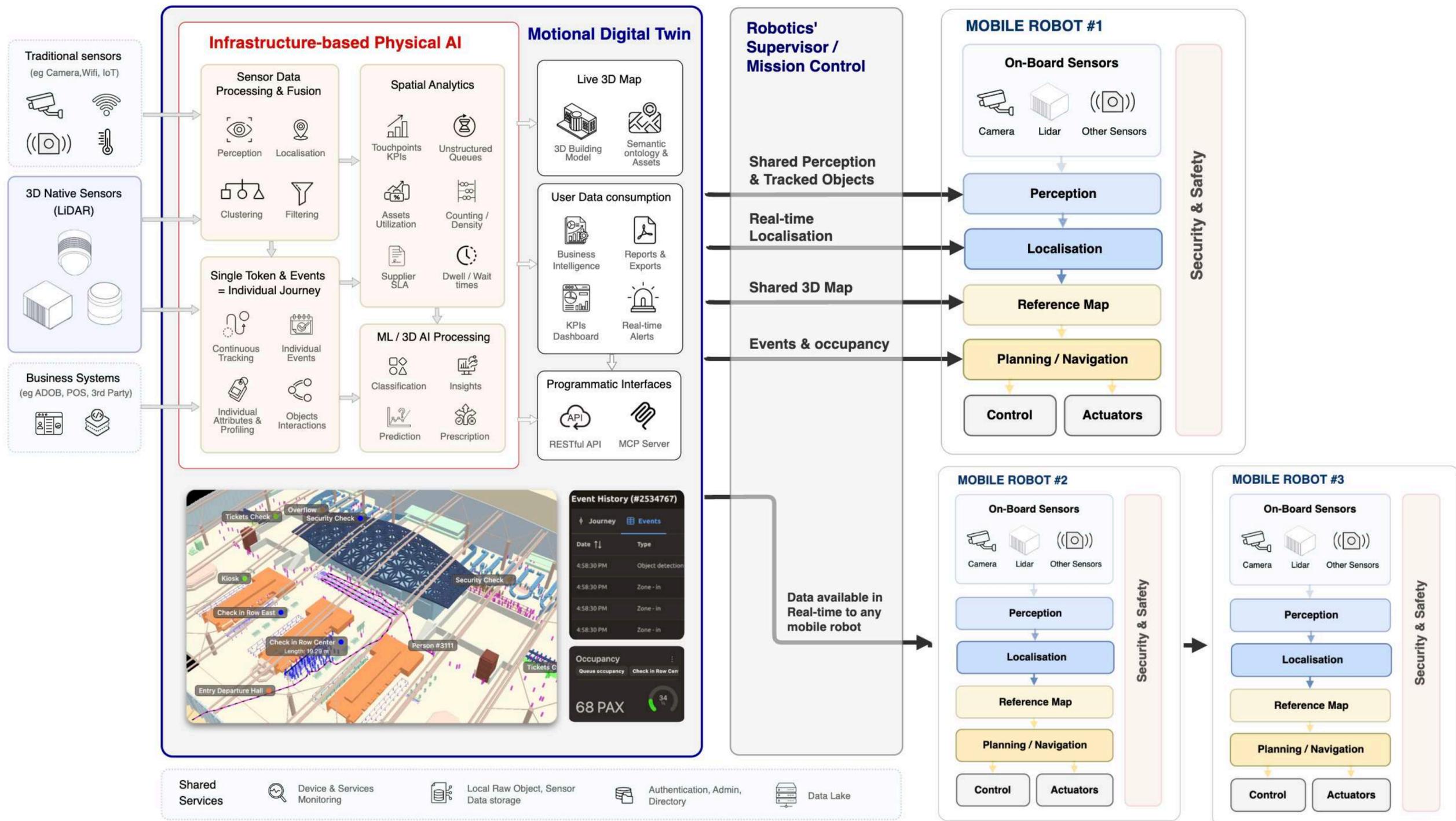


Alerts, Reports & Timeline

A shared layer of notifications, alerts, and historical playback enables coordinated responses to events triggered by robots, infrastructure sensors, or a combination of both.

Reference Architecture

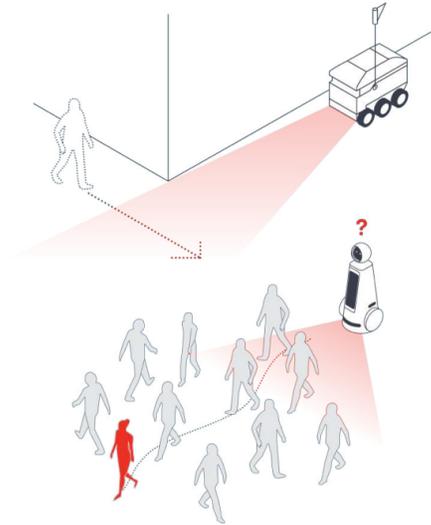
The premises-wide Situation Awareness & Spatial Intelligence delivered by a Motional Digital Twin, becomes available as an Omniscient sensor to all connected robotics systems, in real-time.



Key Takeaways

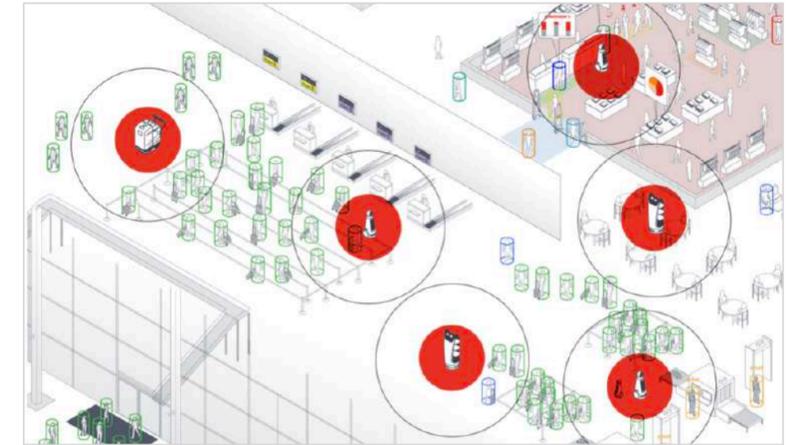
Line-of-Sight Physical AI Is Not Enough

Robots operating solely on onboard perception face inherent spatial and temporal limitations. Blind spots, occlusions, and stateless awareness force conservative behavior, reduce throughput, and prevent robots from understanding the broader operational context.



Motional Digital Twins Deliver Global Situation Awareness

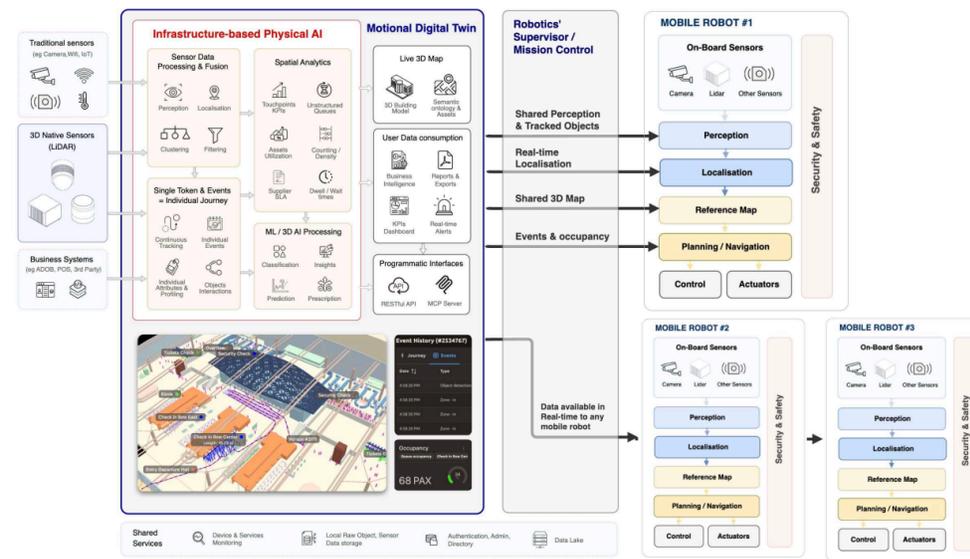
By continuously tracking every person, vehicle, and object across entire premises using infrastructure-mounted LiDAR and Physical AI, Motional Digital Twins provide a shared, real-time representation of reality.



From Individual Autonomy to Collective Intelligence

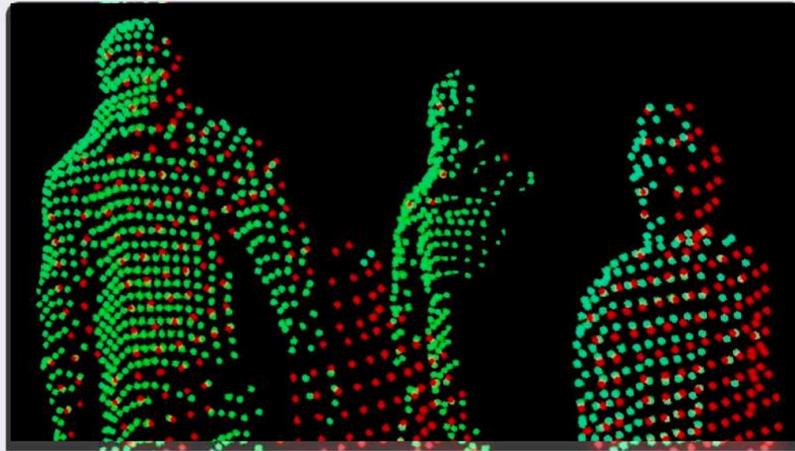
Motional Digital Twins complement robot-centric perception with environment-centric intelligence, enabling any robot to benefit from global context awareness without requiring changes to its onboard systems.

This transforms isolated autonomous units into coordinated systems that leverage collective insights from infrastructure sensors and other robots, enabling safer and more efficient operations.



Other resources

Find all our Insight Articles here: www.outsight.ai/insights



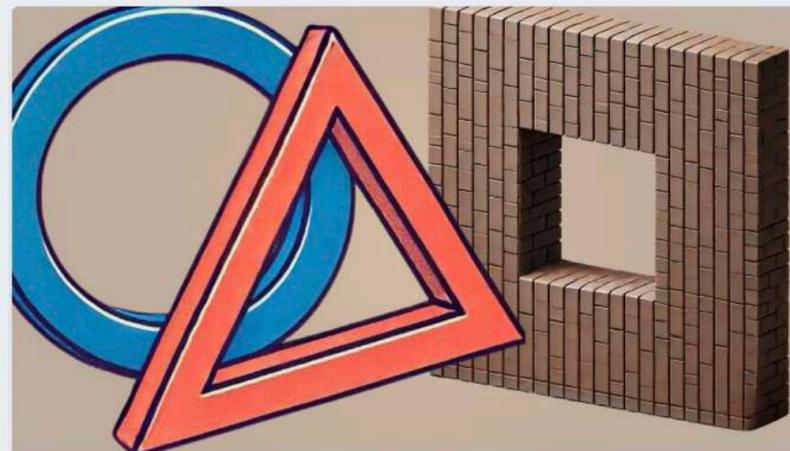
TECHNOLOGY

Understanding Shadowless 3D Perception

Unlike cameras, which perceive reality from a single point of view, 3D native data from LiDAR opens up new possibilities.



Jun 17, 2024
Charlotte Simon



TECHNOLOGY

Why All LiDAR Sensors Aren't Created Equal

This article explores LiDAR differences and why customers use multiple vendors to meet their needs.



Jun 14, 2024
Anne-Sophie Dubois



TECHNOLOGY

An in-depth comparison of LiDAR, Cameras, and Radars' technology

This article explores the capabilities and limitations of each type of sensor, to provide a clear understanding of why LiDAR has emerged as a strong contender in computer vision tech race.



Jul 31, 2023
Anne-Sophie Dubois



Other resources

Find all our Insight Articles here: www.outsight.ai/insights



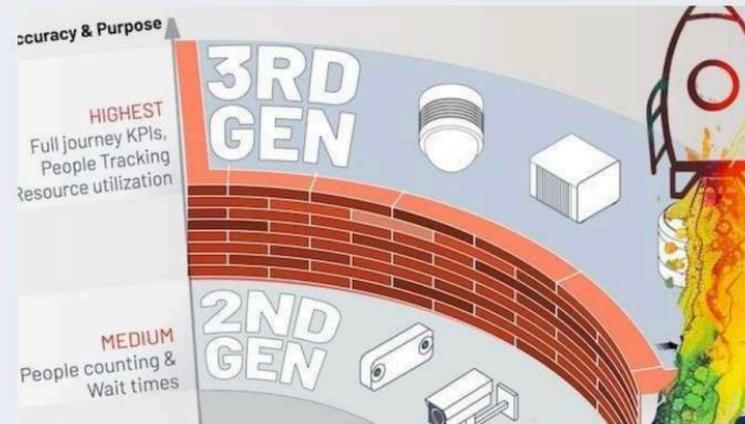
TECHNOLOGY

What Happens in Airports... Happens Everywhere

Airports combine all the complexities of modern infrastructure, making them the ideal launchpad for solutions that will soon scale to cities, industries, and beyond.



Aug 11, 2025
Anne-Sophie Dubois



TECHNOLOGY

Meet the 3rd Generation of People Counting Technology

Mirroring the technological evolution seen across various industries, People Tracking and Counting Technologies have already entered their third generation.



May 7, 2024
Charlotte Simon



APPLICATIONS

LiDAR Software Helps Airports to Manage Increased Traffic

See how and why Airports are increasingly using LiDAR-based software solutions to tackle their biggest challenges, leveraging the unique value of Spatial Intelligence.



Nov 22, 2023
Anne-Sophie Dubois



Beyond Line-of-Sight Physical AI for Robots

How **Motional Digital Twins** bring real-time Global Situation Awareness to Mobile Robots' Fleets

To learn more, visit our website outsight.ai or follow Outsight on

LinkedIn

outsight



Annex A

Outsight's Spatial Intelligence solutions leverage Physical AI and 3D native sensors such as LiDAR to empower infrastructure operators by continuously monitoring the movement of people and vehicles in real time—enhancing efficiency, improving customer experiences, and strengthening security.

This Spatial Intelligence is made accessible to both Operators and AI Agents through Motional Digital Twins.

As the most experienced and awarded team in the industry, we lead the deployment of Spatial Intelligence solutions worldwide, operating from our offices in San Francisco, Paris, and Hong Kong.



WHY OUTSIGHT

Pioneers and Leaders of 3D software solutions

The most experienced team in the industry by far.



37 Patents, +100 FTE Expert team, +5 years development

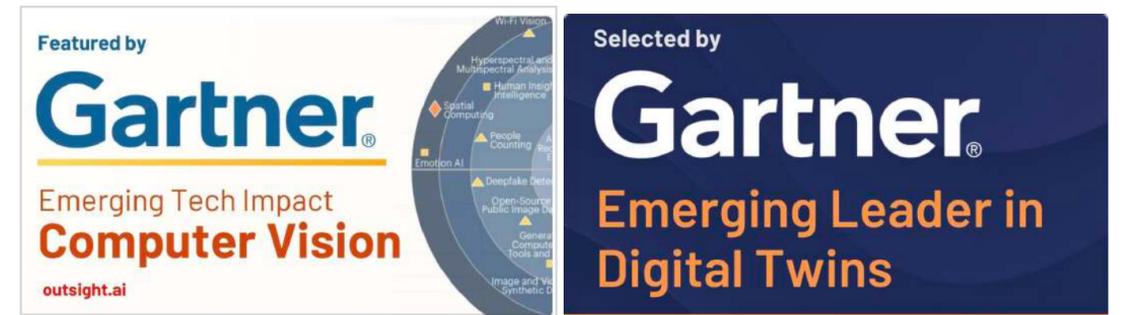
We are a global company:

PARIS | SAN FRANCISCO | HONG-KONG

Rock-Solid Institutional Investors



Recognized 7 times by Gartner as Category-Defining Emerging Leader:



OUR SOLUTION

We deliver **Spatial Intelligence**

Our Spatial AI Software Platform converts raw 3D LiDAR data into actionable insights **by continuously tracking every individual across the entire premises.**



We're compatible with all relevant LiDAR hardware models and manufacturers and can get input from other sensors like Cameras



Our Software runs in real-time and delivers unique Spatial Insights (KPIs), for Past, Present and Future events



The output is delivered as a user-friendly Digital Twin and Dashboard or an API

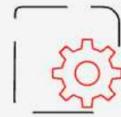
SPATIAL INTELLIGENCE CREATES UNIQUE VALUE

Transformative benefits



Elevate Visitors Experience

Reduce bottlenecks, waiting times and create a seamless journey for your shoppers, visitors or passengers.



Improve your Operations

Streamline your processes and optimise Workforce efficiency based on accurate spatial insights.



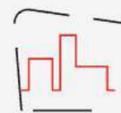
Increase Security & Safety

Accurately manage risks ranging from unauthorized access to overcrowding, both indoors and outdoors.



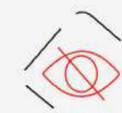
Grow Revenue

Improve throughput in queueing and check-in so visitors spend more time in retail and concession areas.



Accurate Infrastructure Planning

Trend analysis and simulation with historical data that leads to better data-driven investment decisions.



Enjoy Privacy by Definition

Experience the simplicity of GDPR compliance: LiDAR sensors never capture personal identification data.

UNIQUE CAPABILITIES

Premises-wide **Continuous Tracking**

We provide the most advanced solution able to continuously track the complete customer/passenger journey at scale, generating unparalleled insights about the behaviour, interactions (events) and resource utilization across the entire premises.

Event History (#2534767)

📍 Journey **📅 Events**

Date ↑↓	Type	Asset
4:58:30 PM	Object detection	[Orly] T3
4:58:30 PM	Zone - in	Orly 3
4:58:30 PM	Zone - in	Check-in - PIF
4:58:30 PM	Zone - in	Boarding extended

4:42:01 PM	[Orly] T3	Detection	4 min, 17 sec
4:42:01 PM	Orly 3	Presence	4 min, 17 sec
4:45:19 PM	GR34	Presence	4 sec
4:45:31 PM	GR35_overflow	Presence	12 sec



WHY OUTSIGHT ?

Partner with the best

Our team, with over two decades of expertise, is by far the most experienced in the business of LiDAR real-time processing.



Fast & Easy deployment

Working in hours, not weeks.
Deployment made simple with auto calibration & synchronisation.



Use the right LiDAR sensor

With our software and tools you can use the best combination of sensors and manufacturers for your needs.



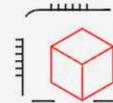
Achieve world-class performance

Independent third-party audits have verified an impressive accuracy rate of up to 99% in critical metrics



Optimise cost & energy

Our Edge & Cloud architectures minimise processing, network and setup costs while ensuring scalability.



Leverage the most advanced tools

We've built the most advanced set of tools, including **the first Multi-Vendor 3D LiDAR Simulator**.



Future proof

Our solution grows with you, with OTA updates and ensuring hardware availability over time.

Annex B

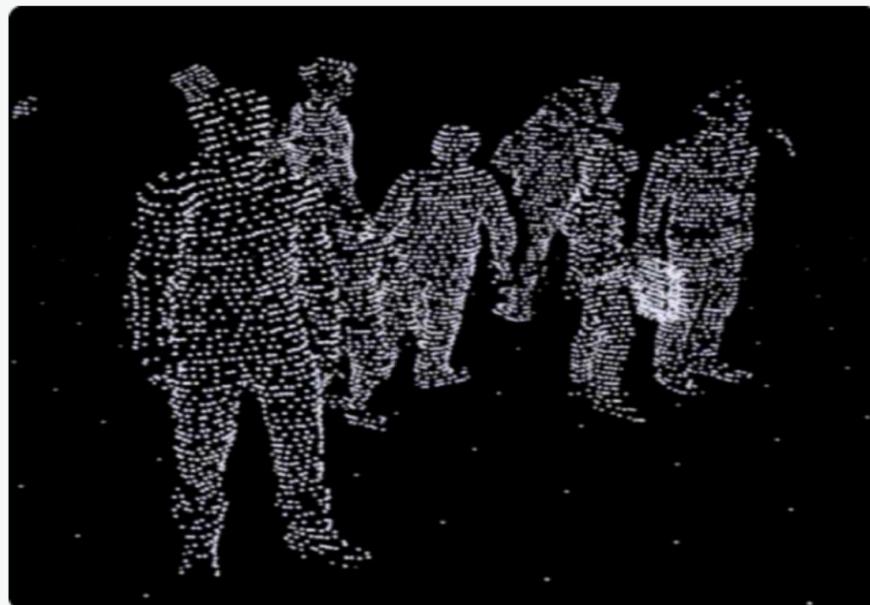
Light Detection and Ranging, also known as LiDAR, is a technology for remote sensing that is used to measure distances in an environment. Unlike legacy 2D-based perception technologies such as cameras, the 3D data from LiDAR produces highly detailed, accurate spatial measurements and works in various environments, contexts and changing lighting conditions.

These unique characteristics unlock new possibilities, enabling seamless tracking, enhanced safety, and precise monitoring of movements in complex environments, offering capabilities that were previously unattainable with traditional technologies.

What is LiDAR?

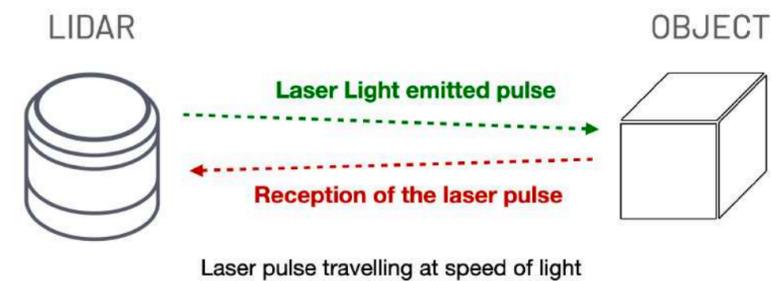
NASA initially developed LiDAR in the 1970s for use in space. It uses laser beams to create 3D vision for a computer to perceive its surroundings.

When deployed at scale, LiDAR offers an important nontechnical advantage: no personally identifiable information is ever captured.



Light Detection and Ranging, also known as LiDAR, is a technology for remote sensing that is used to measure distances in an environment.

This is accomplished by illuminating the environment in question with light that is invisible to the human eye and timing how long it takes for the light to reflect back.



Repeating this process millions of times per second gives computers an accurate portrayal of the environment that is being scanned, allowing them to "see" the world in three dimensions.

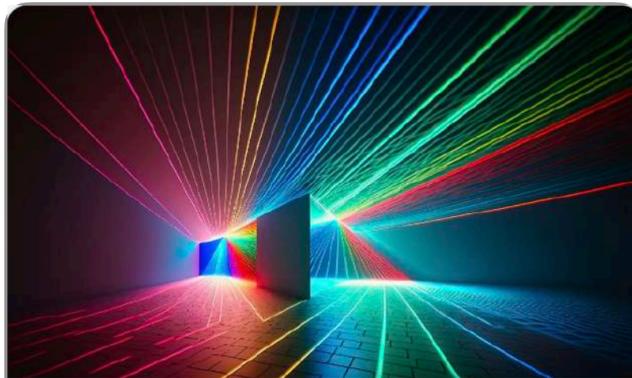
Unlike existing 2D-based perception technologies such as cameras, the 3D data from LiDAR produces highly detailed, accurate spatial measurements and works in a range of environments and contexts, such as during the night and under direct sunlight.

Thanks to multi-Billion Dollar investments in the context of Self-Driving Cars, customers in all other industries now have the choice of many different LiDAR manufacturers, all of them with specific strengths and weaknesses.

Only in the US, more than five LiDAR Companies are public. The other continents have also several key players each, with some seven key players in Europe and a dozen more in Asia.

Price and performance are no longer barriers to widespread adoption

Learn more in this article



TECHNOLOGY

Understanding the Basics of 3D LiDAR Technology

Learn about the underlying technology enabling a whole new level of 3D Perception and Situation Awareness.

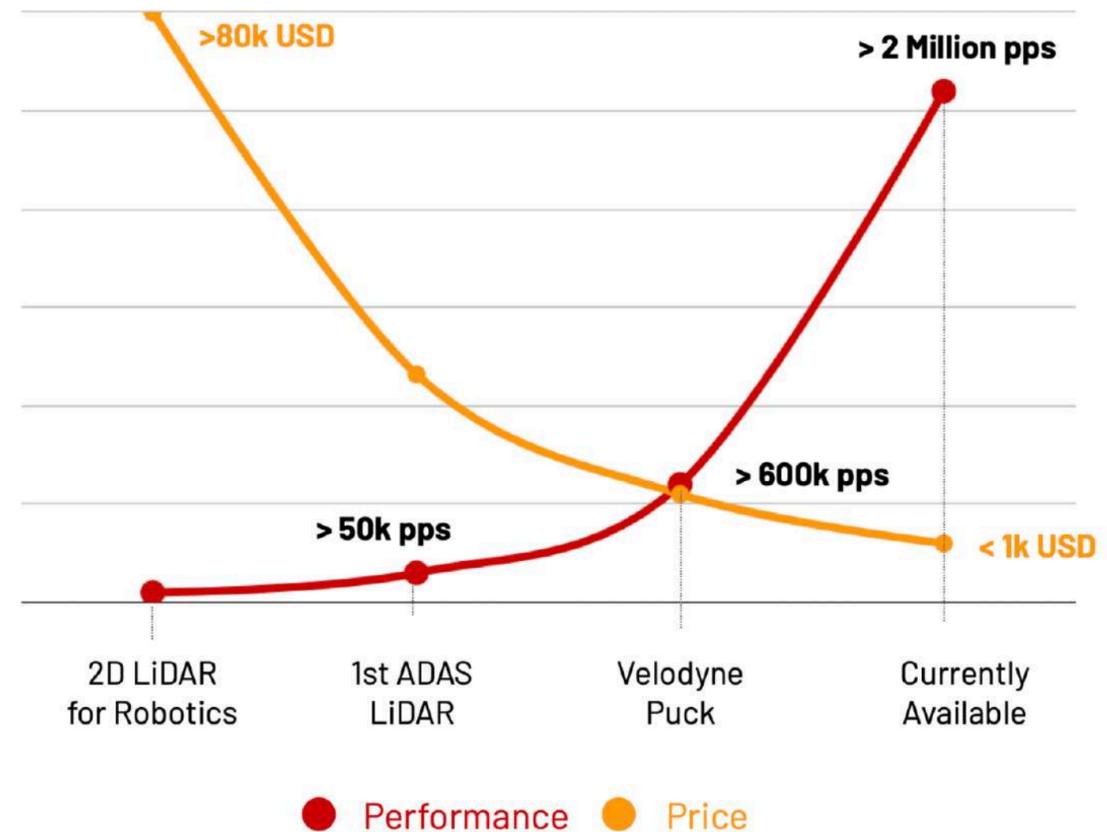
[Read the article](#)



Anne-Sophie Dubois

LiDAR Hardware is maturing and becoming more affordable.

There are many sensor models on the market right now with the right price-performance ratio, because, unlike automotive, prices in the tens of dollars are not an absolute requirement for deployment in most applications.



Similarly, performance is rapidly improving, with millions of points per second* becoming the norm rather than the exception.

This allows for use cases that were previously impossible with low-resolution models.

* In general, the higher the device's laser hits per second, the better its performance. Note that this is only a partial performance estimate; many other KPIs strongly influence which LiDAR to use.

Why LiDAR is a key enabling technology

Compared to legacy technologies like Camera-based perception, 3D LiDAR brings unique value.

Uninterrupted Tracking*

Thanks to continuous tracking across the entire facility, you can view end-to-end traffic flow throughout the airport or detailed individual level data in any location.

You can cover large areas

Thanks to detection ranges of up to 300 meters, large areas like terminals can be covered by a few units, which translates into lower hardware & setup costs.

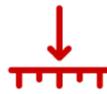
It emits its own light

It can function in complete darkness and is unaffected by changing lighting conditions because it is an active sensor (as opposed to a passive one like cameras).



It provides Spatial Insight

With the help of 3D native data, it is possible to gather important information like distance, size, volume, and speed, improving performance and providing new insights.



Centimetre-level Accuracy

Thanks to the use of Laser light, the high precision is constant regardless of the distance, which is crucial for tracking in wide areas.



Privacy by design

It is not possible to identify specific people using LiDAR data. Therefore, tracking is completely anonymous; no need to record facial information.



Multi-Purpose

It's not only about tracking passengers: the same LiDAR infrastructure can be used for a variety of purposes, from managing parking lots to streamlining tarmac operations.

** Requires a processing Software Solution*

Meet the 3rd Generation of People & Vehicles Counting Technologies

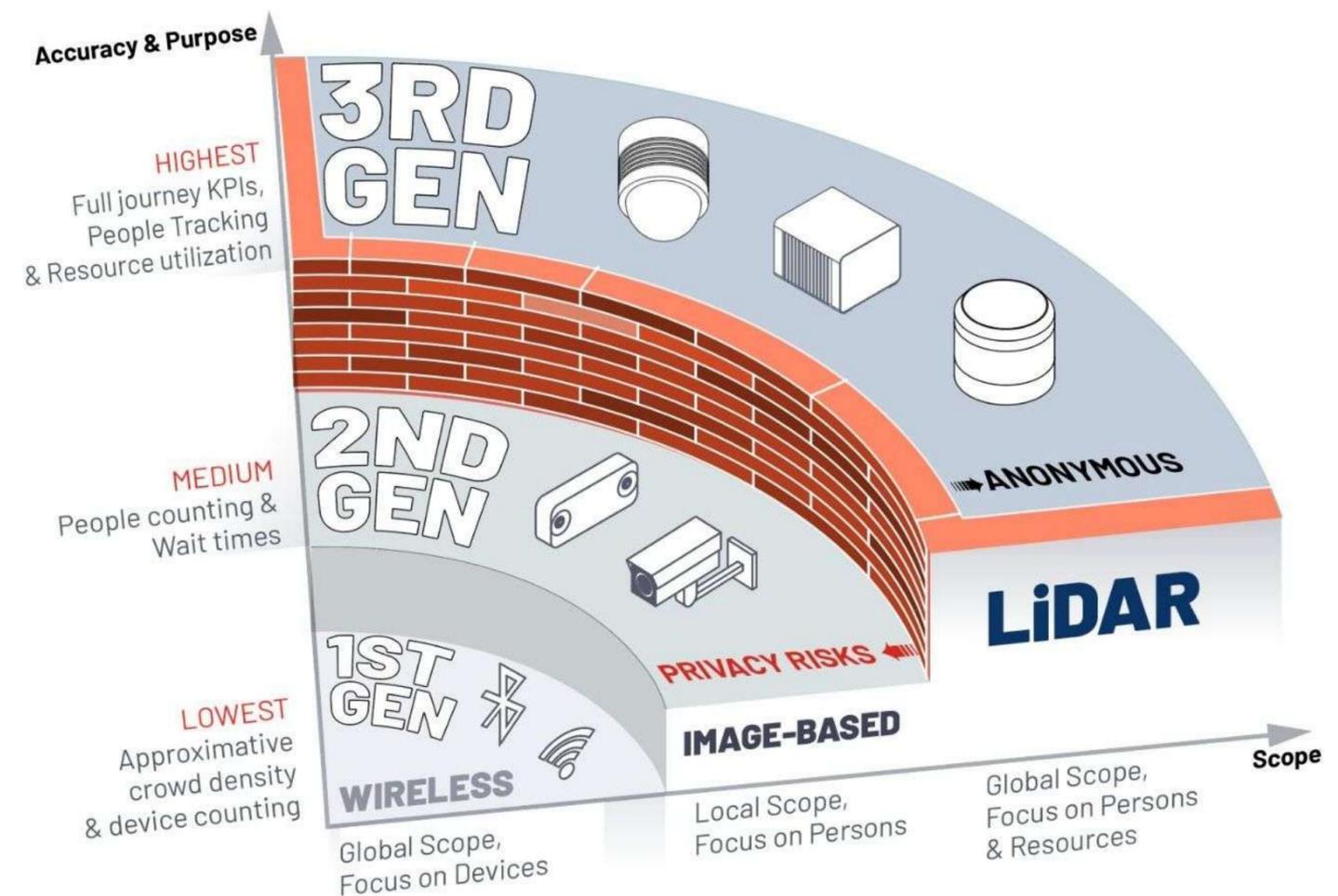
From rudimentary People Counting to encompassing Spatial Intelligence, two evolutionary leaps have been made.

Technological evolution is not a linear or uniform process. Significant improvements in performance and capabilities, which open up previously impossible possibilities, typically follow quantum leaps or technology generations.

The transition from approximate People Counting solutions to comprehensive Spatial Intelligence, based on continuous People Tracking, involves not just one, but two generational steps.

This evolution simultaneously also spans two axes, Performance and Scope, as summarized in the figure below and explained in more detail in this article.

LiDAR Technology is the key enabler of the 3rd technology Generation.



People counting technologies

Comparative Table

	Light-emitting	Image-based		Radio signals	
	Lidar	CCTV	Stereovision	Wifi/Bluetooth	Radar
Position Detection Rates	● Very high	● Moderate	● High	● Low	● Moderate
Unique ID Tracking	● Premises-wide	● Low	● Locally	● Low	● Low
cm-level Precision	● Yes	● No	● No	● No	● No
Choice of HW manufacturer	● High ¹	● Very high	● Low	● Very high	● Moderate
Flexible mounting	● Yes	● Moderate	● No	● No hardware	● Moderate
Real-Time Views	● Yes	● Yes	● Yes	● No	● No
Cost of Processing	● Low (CPU ²)	● High (GPU)	● Moderate	● Low	● Moderate
Lightning interference	● None	● Yes	● Yes	● None	● None
Reliability	● Very high	● Moderate	● High	● Low	● Moderate
Devices per sqm	● Few	● Many	● Many	● No hardware	● Several
Installation & Maint. Cost	● Low	● Low	● High	● No hardware	● Low
Sensor Cost	● Moderate	● Low	● Moderate	● No hardware	● Moderate
Privacy risks	● None	● Significant	● Significant	● Significant	● None

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LiDAR-based curbside monitoring

The illustration shows a street scene with various vehicles and pedestrians. A blue car is in the foreground, a bus is in the middle ground, and a taxi is in the background. Pedestrians are walking on the sidewalk. A red dashed line indicates a monitoring zone. A red triangle with an exclamation mark is placed near the bus, suggesting a warning or alert. The text 'LiDAR-based curbside monitoring' is prominently displayed in red and black.

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People Counting Technologies comparative guide

The illustration shows a group of people walking on a sidewalk. A red dashed line indicates a counting zone. A red triangle with an exclamation mark is placed near the group, suggesting a warning or alert. A red plus sign is placed near the group, suggesting a count. A red hourglass is placed near the group, suggesting a time delay. The text 'People Counting Technologies comparative guide' is prominently displayed in red and black.