



# The Role of Maps in the Age of AI-Driven Autonomy

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The Next Frontier

# Bringing Automated Driving To Cities



# Cracking Urban Automated Driving

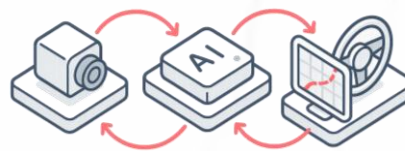
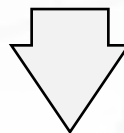
## Richer Sensors and More Capable Compute



Better at dealing with **urban road layouts** and complex traffic dynamics.

## Radically Different AD platforms

**MODULAR**  
Rule-based + ML



**END2END**  
LLM

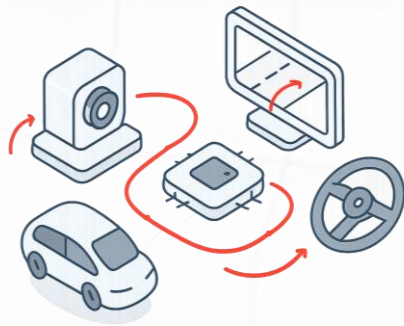
## Different Usage of Maps

**Mapless** ≠ Map-free



Next-gen AD stacks **use maps**, just not legacy HD maps.

# Why Maps Matters: Maps as Context Engines

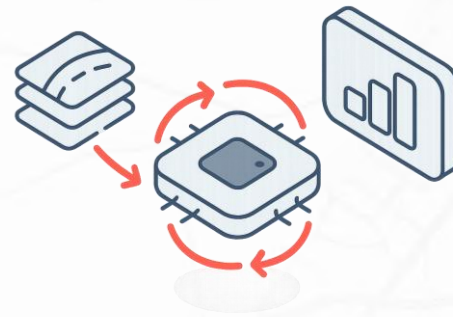


## Inference

Stay on route

Look Ahead

Legal rules

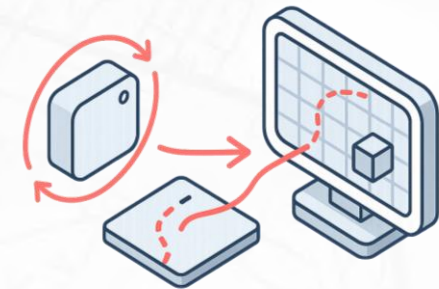


## Training

Context to Videos

Identify Road Elements

Complex Scenes



## Simulation

Increase Driven Miles

Rare Cases

Multiple Variations

# Mapmaking, Reimagined

## Map-Focused



Industry is moving away from traditional HD Maps for L2

Expensive

Hard to Scale

Not Fresh Enough

## Perception-Centric



Perception-Led AI-Powered AD to deploy L2+ at scale

Intelligent - Real-time - Flexible  
Great for urban environments

## Map-Aware



Maps are part of the L2+ solution

Fresh

Affordable

Easy to Scale



A new generation of maps enabling the perception-AI revolution

# Groundbreaking & AI-Powered Building the Map of the Future



Trustworthy Automation

# The Driver in the Loop



# Key Takeaways

## Market Direction

- E2E AI is moving automated driving into dense urban domains.
- Maps are still part of the solution:

It's not mapless → it's map-evolved.

## Problem

- Legacy HD maps and Navigation UX can't meet freshness, scale, cost, nor the trust bar.
- A new generation of lightweight, fresh and scalable maps is required to enable the perception-AI revolution.

## Solution

- Orbis' new crowdsourced and AI-powered Map Factory
- Surround Navigation's unified Automation & Navigation UX
- Delivering the context, anticipation, and explainability E2E needs.

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