The Operating Model for Productized In-Situ Inspection

ROBOVISION

Robovision provides production controls to make embedded AI commercially deployable. By integrating production-grade industrial vision intelligence directly into machines, semiconductor equipment manufacturers gain a differentiated capability: **machines that move beyond observation to interpretation.**

Turning Signals Into In-Tool Decisions

Within this architecture, the decision layer sits inside the tool, converting inspection outputs into structured process decisions in real time.

AT THE EDGE

Deployed close to the process, where low-latency decisions matter.

DECISION INTELLIGENCE

Transforms machine signals into reliable production-speed decisions.

EMBEDDED IN WORKFLOW

Interprets inspection data directly inside the equipment process flow.

PRODUCTION AUTONOMY

Makes routine decisions without external or human-in-the-loop dependency.

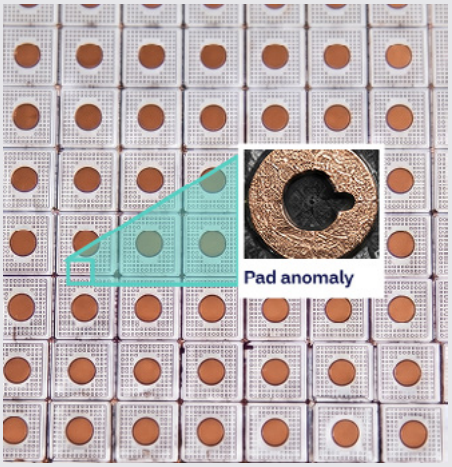
Industrial-Grade AI with Built-In Governance

This decision layer is built on three core applications: AI-driven automatic defect classification (AI ADC), defect measurement, and spatial signature. They form a unified system that combines industrial-grade defect classification, offering governance over how every decision is made and continuously improved.

Robovision's Industrial Vision AI for Wafer Inspection

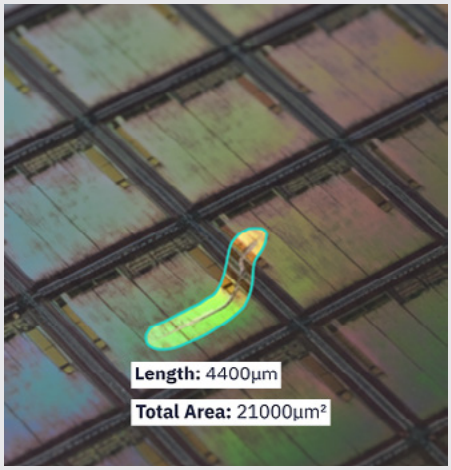
AI ADC Application

Automatically identifies and sorts defect types from images



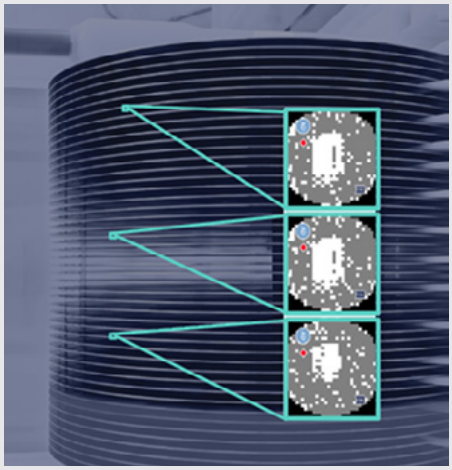
Defect Measurement Application

Pinpoints exact location and quantifies geometric properties through segmentation



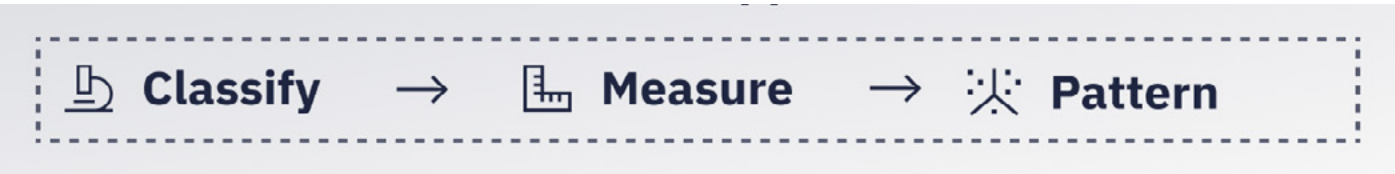
Spatial Signature Application

Reveals recurring patterns across wafers and lots to pinpoint root causes



Multiple Applications, One Workflow

These applications feel like one shared workflow out of the box. Although separate apps, they can be custom-combined for individual use cases as needed. Each application builds on the last, adding a new layer of intelligence that reveals context and patterns at scale.

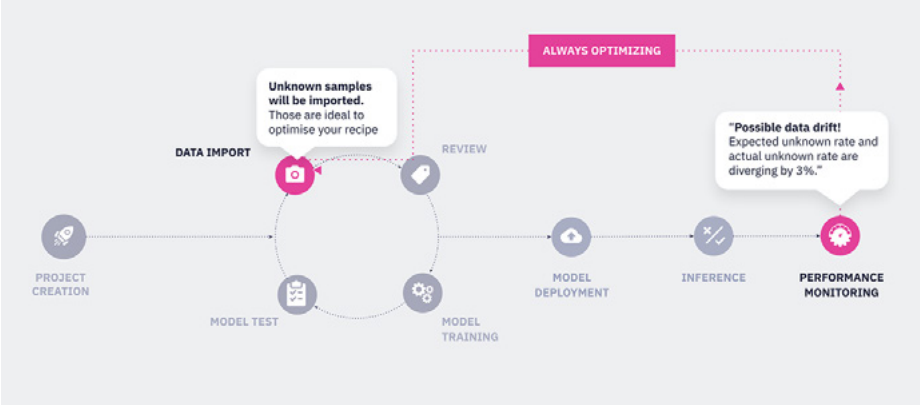


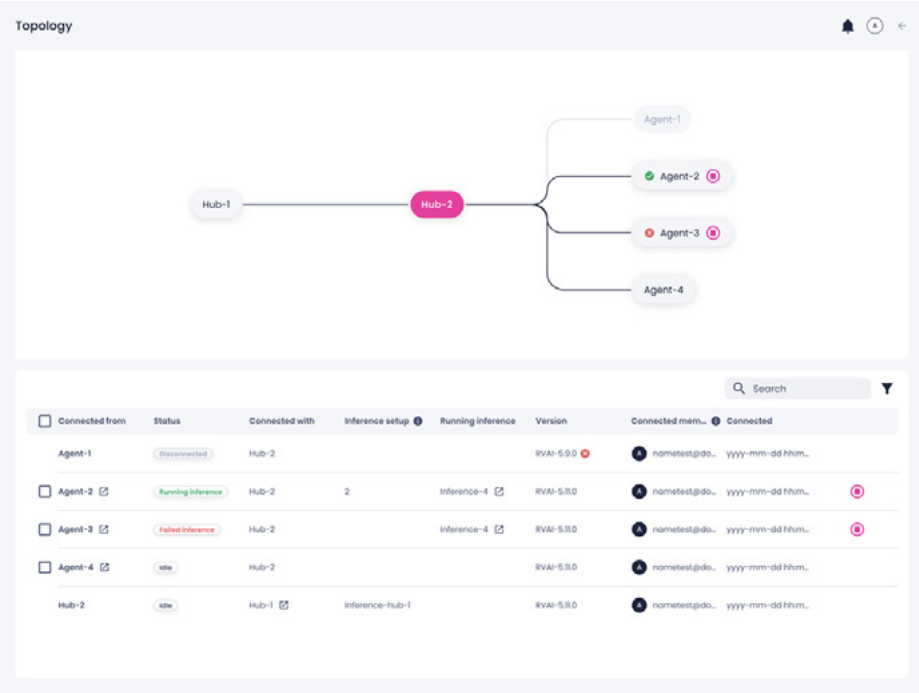
Supporting Productized Machine Intelligence

A shared operational foundation enables inspection intelligence to be deployed and maintained consistently across installed machine fleets.

FOR PROCESS ENGINEERS

Define how intelligence becomes a differentiated machine capability aligned to customer requirements.



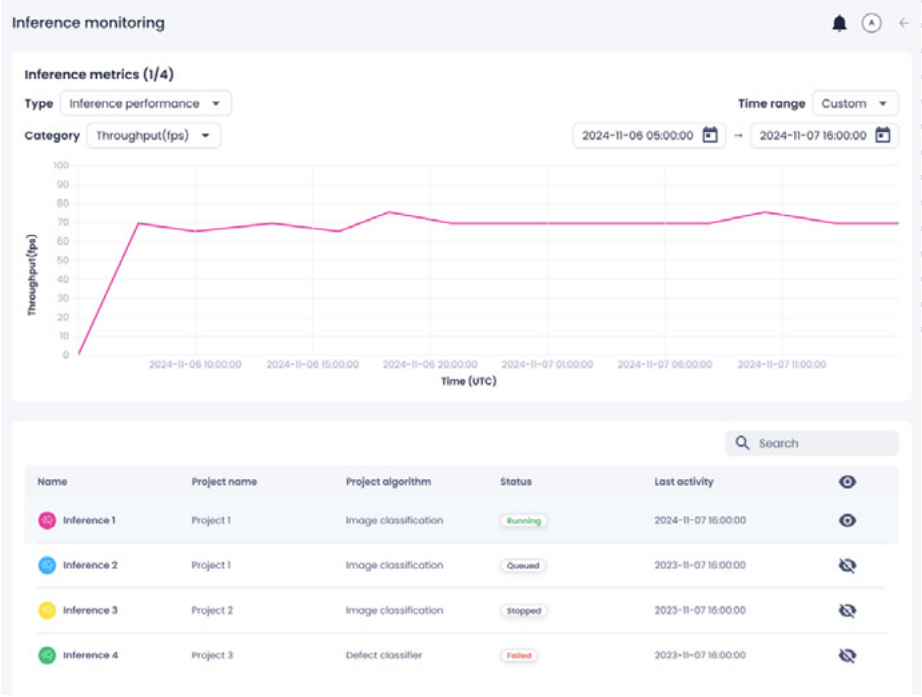


FOR OPERATORS

Manage model lifecycle, updates, fleet consistency, and machine behaviour across customer environments.

FOR LEADERSHIP

Gain visibility into operational performance, deployment readiness, and the commercial scalability of embedded intelligence.



Built Around Your Existing Processes

Robovision's intelligence layer integrates with existing machines and environments. It preserves established manufacturing ownership, rather than forcing architectural replacement.

- √ **Class-to-bin logic stays customer-controlled where required**
- √ **Inspection systems continue performing their existing role**
- √ **Factory systems continue controlling broader production logic**
- √ **Machine-level decision quality increases, along with operational value**

Outcome

A governed, production-ready capability that customers trust, operational teams can maintain, and commercial teams can position as differentiated machine value.

Take our interactive assessment and discover your machine's in-situ inspection readiness in minutes.

START ASSESSMENT

To learn more about moving from experimental AI to embedded intelligence as a validated machine capability, head to our blog.

READ OUR BLOG

ROBOVISION

www.robovision.ai