

## FACTORY-GUARD

### Project Idea

**FACTORY-GUARD: Trustworthy Multi-Agent AI Supervisors for Adaptive Manufacturing**

***AI agents that see, reason, act, and justify decisions in real factory environments.***

### Organization name, town and country

[Aitek S.p.A.](#), Genoa, Italy.

### Addressed topic(s)

HORIZON-CL4-2026-02-DIGITAL-EMERGING-51-two-stage – AI improved advanced manufacturing and production processes in factories (RIA)

HORIZON-CL4-2026-02-DIGITAL-EMERGING-53-two-stage – Innovative AI methods and technologies for the process industries (RIA)



**1986**

Year of birth



**50 employees**

60% graduates and  
20% active in R&I



**2 headquarters**

Genova and Savona



**6,0 M€**

Turnover 2025



**10+**

EU innovative research projects  
active in 2026



**12% of revenue**

In R&I

# Daitek

**VIDEO SURVEILLANCE  
& VIDEO ANALYTICS**



**TOLL SYSTEMS &  
GATE AUTOMATION**



**WEB-BASED  
APPLICATION**



**DIGITAL SIGNAGE**



**2.09 Aitek**

Brokerage Event - Industry 2026

## FACTORY-GUARD

Current AI in factories:

- is **opaque**
- works in **silos**
- fails when **conditions change**
- is **not trusted by operators**



Factories *want* autonomy, but

**do not trust black-box AI in:**

- machine control
- quality inspection
- safety-critical operations



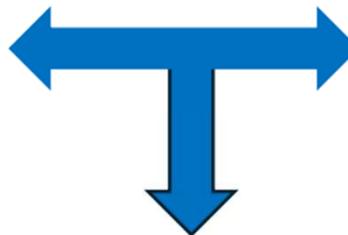
# FACTORY-GUARD

Current AI in factories:

- is **opaque**
- works in **silos**
- fails when **conditions change**
- is **not trusted by operators**

Factories *want* autonomy, but  
**do not trust black-box AI in:**

- machine control
- quality inspection
- safety-critical operations



## Multi – agent system



**Operational Agent (Control Agent)**

- Controls machines / processes
- Optimizes parameters in real time
- Learns from data + simulations

**Perception & Context Agent (VLM-based)**

- Uses **Vision-Language Models**
- Understands:
  - camera feeds
  - operator actions
  - anomalous visual situations
- Translates *what it sees* into **semantic descriptions**

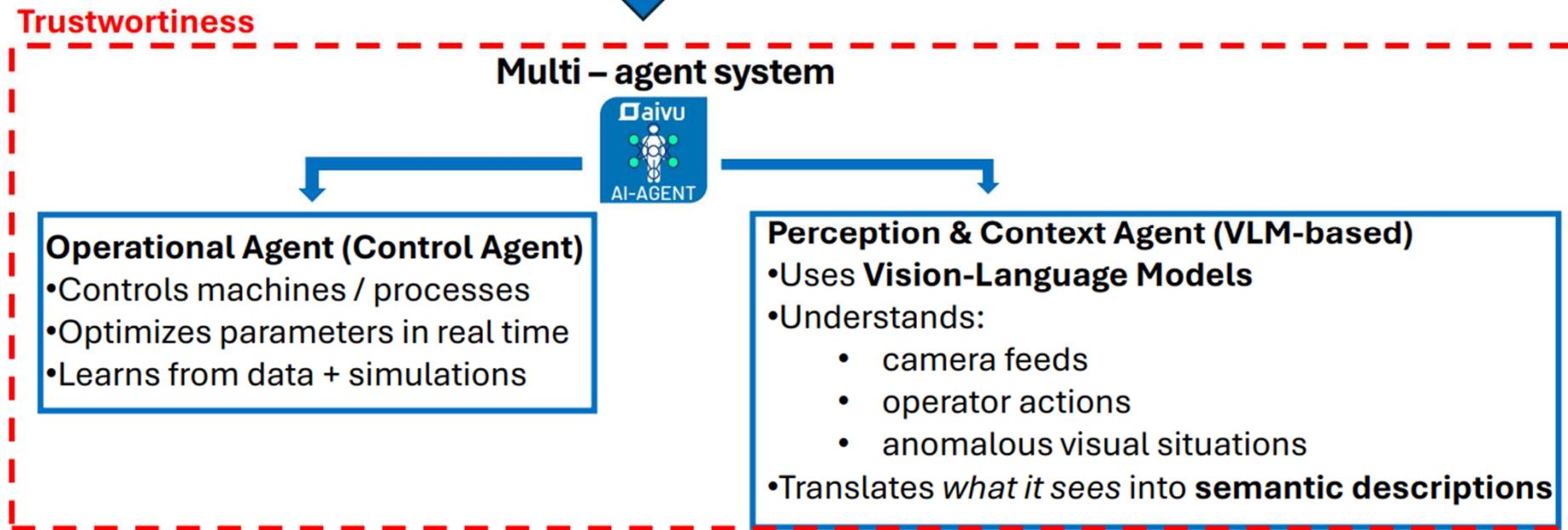
# FACTORY-GUARD

Current AI in factories:

- is **opaque**
- works in **silos**
- fails when **conditions change**
- is **not trusted by operators**

Factories *want* autonomy, but  
**do not trust black-box AI in:**

- machine control
- quality inspection
- safety-critical operations





NexTArc



1. Requirements elicitation WP leader.
2. Lead the safety assessment.
3. Technology provider to guarantee safe and reliable video analytics.



1. Technology provider to monitor driver behaviour.
2. Describe the scene through LLMs.
3. Correlation with external input for VRUs safety.



2.09 Aitek

# Expertise

Fallen-person



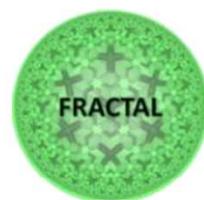
Re-identification



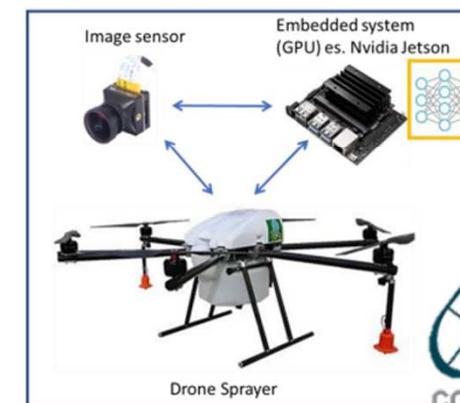
APPRAISE

SafeCOP

Exploitation leader



Use case exploitation leader



64 COMP4DRONES

Brokerage Event - Industry 2026



## Contact details

<b>Contact person</b>	<b>[Alberto Carlevaro]</b>
Organisation:	[Aitek S.p.A.]
Address:	[Genoa, Italy]
Phone:	[+39 3498766100]
E-mail	[acarlevaro@aitek.it]
B2Match profile	[ <a href="https://albicarle.github.io/">https://albicarle.github.io/</a> ]
LinkedIn/Twitter	[ <a href="https://www.linkedin.com/in/alberto-carlevaro-80a2761a7/?originalSubdomain=it">https://www.linkedin.com/in/alberto-carlevaro-80a2761a7/?originalSubdomain=it</a> ]

