

uPathWay

INTELLIGENT ROBOTICS

Autonomous Site Monitoring for Large-Scale Facilities

Detects security incidents earlier, expands patrol coverage, and transforms visual and thermal observations into actionable security intelligence.



GMV enables autonomous patrol and site monitoring for large-scale facilities using mobile robots, intelligent sensor payloads and the **uPathWay®** platform for centralized mission control and incident supervision.

The solution increases security coverage, monitoring frequency and situational awareness across industrial sites, logistics centers, business parks and critical facilities which allows security teams to focus on incident assessment and response.

CUSTOMER CHALLENGE



Large sites with wide perimeters, remote zones and multiple access points are hard to monitor continuously.



Incidents often occur during low-activity periods or outside scheduled patrol windows.



Fragmented data across CCTV, access control and patrol reports slows down incident assessment.



Staff shortages increase the need for automated routine monitoring.



Detectable anomalies include: unauthorized access, suspicious movement, perimeter breaches, open access points, abandoned objects and thermal anomalies.

Contact

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gmV[®]
INNOVATING SOLUTIONS

MAIN SOLUTION COMPONENTS

- Autonomous patrol robots for large-scale outdoor site monitoring:
 - Ground robots for perimeter patrols and access point monitoring.
 - Quadruped robots allow for rough terrain, staircases and indoor/outdoor transitions.
 - Autonomous charging for unattended recurring missions.
 - RGB, thermal, PTZ, LiDAR/navigation sensors and two-way audio.
 - **uPathWay®** platform for centralized fleet, mission and incident management.
- **Applied Artificial Intelligence:** Vision Language Model-based AI detects abnormal behavior, intrusions, unauthorized persons or vehicles, thermal risks and deviations from normal site conditions which turn sensor data into actionable alerts.
- **Agentic AI for Security Operations:** AI agents coordinate robots dynamically, assign missions, replan routes and prioritize responses based on alarms, severity and resource availability.
- **Operational Workflow:** Robots patrol predefined routes, collect visual and thermal evidence, detect relevant incidents and provide operators with real-time alerts and geolocated evidence.
- **uPathWay® Platform Capabilities:** Centralizes robot supervision, mission orchestration, alarm handling and evidence management, with integration into CCTV, VMS, access control and PSIM systems.
- **Deployment Model:** The solution is modular, scalable and hardware-agnostic, deployable across one or multiple sites with minimal infrastructure changes.



BUSINESS BENEFITS



Increased patrol coverage and frequency without proportional staffing growth.



Earlier incident detection through AI-powered visual and thermal monitoring.



Improved traceability, auditability and operational efficiency across patrol activities.



Expected outcomes: stronger situational awareness, more efficient security operations, better incident traceability and a scalable path toward autonomous multi-site monitoring.

WHY GMV

- **Proven delivery in mission-critical environments:** GMV brings long-standing experience in autonomous systems, security and critical infrastructure projects, where reliability and operational continuity are essential.
- **Certified quality and security processes:** GMV's processes operate under rigorous ISO 9001 (Quality), ISO 14001 (Environment), and ISO 27001 (Information Security) standards.
- **System integrator, not single-vendor lock-in:** GMV's hardware-agnostic platform integrates different robot and sensor setups into one operational layer, enabling scalable deployment from pilot sites to multi-site operations.

NEXT STEPS



Step 1 **Site assessment:** Review of site layout, security priorities and pilot objectives.



Step 2 **Deployment and commissioning:** Deployment of the robot and **uPathWay®** platform, validation and capability transfer for security operators and site personnel.



Step 3 **Pilot operation and validation:** Execution of autonomous patrol missions and validation of monitoring workflows.



Step 4 **Scale-up and multi-site deployment:** Extension of patrol coverage and introduction of centralized multi-site fleet management.

Interested in autonomous site monitoring robotics?

- Request a pilot assessment: alazaro@gmv.com