

## CLUST-ER INNOVATE SusHi Tech Delegation

### Organization Name

Mavigex

### Organization Type (industry, Laboratory, Research Center...)

Laboratory

### Website

[mavigex.com](http://mavigex.com)

### Contact person (name – email)

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### What we do (describe your core activities)

Mavigex is a technology company and research laboratory specializing in middleware development, particularly for IoT and smart mobility solutions. We integrate systems across different protocols, ensuring seamless communication between devices and platforms. With a skilled team of senior, middle, and junior developers, we offer tailor-made, high-quality solutions that address the specific needs of each client. Our services include IoT integrations, AI-based solutions, and cloud support for Amazon AWS, focusing on delivering innovative, scalable, and reliable products.

We have a strong history of involvement in European research projects and are currently working with international partners. Our strategy focuses on expanding globally by partnering with startups and IT companies, offering our expertise as a trusted technology partner in the IoT and AI sectors.

### Strengths, Technologies and Methods that distinguish us (and application field)

Mavigex offers a range of products and services tailored to meet the needs of businesses looking to innovate and integrate their systems. Our offerings include:

- System integration: Ensuring seamless communication between different platforms and systems.
- Middleware creation: Developing bespoke middleware solutions, particularly for IoT and smart mobility applications.
- Mobile app development: Crafting native and cross-platform mobile applications.
- Custom platform development: Building tailored platforms that meet specific business requirements.
- IoT device integration: Connecting and managing IoT devices across diverse protocols.
- AI projects: Implementing artificial intelligence solutions to enhance automation and data-driven insights.

These services are designed to help businesses leverage cutting-edge technologies for digital transformation.

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We will present 2 case history developed with our expertise

**Case History: Middleware for IoT Vehicles**

Mavigex developed an advanced middleware solution for IoT vehicle integration, simplifying communication between various providers and the client's software infrastructure. Using an ingestion architecture that supports both TCP and MQTT protocols, the system normalizes data from e-bikes, scooters, and microcars into a unified data model. This approach enables the seamless addition of new devices without modifying the core service. The middleware is already compatible with vehicles from a series of producers like Segway, Hongji, Teltonika, OMNI, eMoped, and MOBILIZE.

**Case History: Mobility Monitoring Infrastructure**

Mavigex partnered with an accredited TSP (Telematics Service Provider) for the Move-In project (Monitoring of Polluting Vehicles), active in Lombardy, Piedmont, Emilia-Romagna, and Veneto, to track the kilometers driven by polluting vehicles in restricted traffic zones (ZTLs).

We designed an infrastructure to collect and decode circulation data from Arlo and Teltonika devices, storing it in an AWS S3 data lake for mileage aggregation. We also managed the creation and manipulation of shapefiles using Python Geopandas and QGIS.

**What we are searching for**

- **Partnership (describe types)**

We seek partnerships with software houses or large system integrators that leverage our expertise in middleware, IoT, AI, and system integration to enhance digital transformation projects on a large scale.

- **Clients (describe types)**

Our target clients include:

- **Smart vehicle manufacturers:** We integrate their proprietary protocols into our middleware or develop tailored solutions for their partners or clients.
- **Startups:** We assist in developing MVPs or refactoring existing platforms to scale quickly.
- **SMEs:** We support digital transformation efforts, building custom portals, configurators, and improving business processes.
- **Corporate enterprises:** We provide system integration services to ensure seamless communication between platforms.