FIWARE

EGM at the heart of FIWARE, the European open-source community for the Smart Territory vision

FIWARE is a European initiative of international scope which brings together public and private actors around open-source software for the deployment of innovative digital solutions. This open-source community is based on open interface specifications produced by the ETSI standardization body.

This specification provides:

- 1 **A generic data model** to interconnect and contextualize your data with spatiotemporal attributes.
- 2 An interface (API) for updating, querying, subscribing to events on this dataset.

The heart of a FIWARE system is a contextualised data broker which connects data producers (sensors, fluid consumption consumption, documents, GIS, etc.), data processors (flow analysis, business workflow, etc.) and data consumers (dashboards, management applications management applications, open-data portals, etc.).

The FIWARE model therefore allows the connection and reuse of data between businesses (transport, environment, fluids, etc.).



ETSI

The CIM committee of the ETSI standards body ETSI is in charge of the development of the NGSI-LD specification for contextualized information management.

This approach brings many benefits:

- Reuse and better exploitation of data within an organization or territory.
- Development of local ecosystems for cities based on the interoperability of the technologies promoted by FIWARE
- Economies of scale on developments, reusable between applications.
- Replicability of solutions and sharing of numerous feedbacks on best practices.
- Generate qualified information by putting the data in a global perspective.
- No vendor lock-in: interfaces are open and defined by a standardization body (and not by a single company). The FIWARE Foundation leads an open-source ecosystem of components that can build complete architectures.
- The FIWARE model allows the integration of RGPD management. The FIWARE users retain ownership of their data
- The FIWARE ecosystem is in constant innovation and now offers digital twin management or the provision of the provision of AI models as a service.
- Contextual information management is at the heart of smart city governance. It helps to break down (e.g.)smart parking, smart waste management, smart traffic management) silos of data.



EXAMPLE FIWARE Open APIs for Open Minds

More than **390 members** in **45 countries**

More than **150 cities** use FIWARE (e.g. Saint-Quentin, Amiens, Nice, Aix-Marseille) **8000 developers** work and improve the technology daily

+215 companies including Atos, Telefonica, Red Hat, NEC



EGM has been involved in FIWARE since 2011 and is a Gold member since 2019. Franck le Gall, CTO of EGM is part of the technical steering committee.

EGM is a founding member of the NGSI-LD standardisation group at ETSI of which Franck Le Gall is vice chairman. Benoit Orihuela is leader of the Testing Task Force deployed by ETSI for the implementation of interface conformance testing procedures.

The FIWARE open-source Context Broker Stellio produced by EGM allows the management of contextual information on a large scale thanks to the NGSI-LD API, a public and royalty-free API. It allows to connect several data sources from IoT use cases already deployed by the city and other data sources (french weather service) to build its global management tool to optimize and improve the city's performance. Stellio is at the heart of the European FIWARE open-source ecosystem.

Thanks to this position, we accompany cities in:

- The definition of relevant use cases for the city.
- The implementation of the communication network allowing to recover the data from the deployed IoT sensors.
- Deployment of a FIWARE architecture (creation of a platform specific to the city) allowing to create dashboards to discover, visualize and use the data. Stellio is the basis for building a decision support tool.
- ✓ The definition of data models adapted to the need

Use case : Saint-quentin

Connected watering by coupling 4 sources of heterogeneous data:

- > Data from the French weather service
- Data from humidity sensors installed on the stadiums
- > Data from the mowing robots on the fields
- > Stadium usage schedule

The combination of these 4 data sources allows the optimized planning of watering for the 13 sports fields of the city.





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