The simple and open way of deploying sensors in a city



What is Sentilo?

Sentilo is a platform for sensors / actuators designed to serve as a link between the sensors and actuators and the applications that manage urban services. Sentilo also has an Open Source Community (www.sentilo.io) that supports it.

Who needs Sentilo?

Sentilo is thought for cities that want to control the deployment of sensors and actuators in a centralized and common way.

Although Sentilo is designed for cities, it may also be useful for any organization that is deploying or wants to deploy a small number of sensors and actuators, inside buildings or in open spaces.

What are the present challenges?

To process, in an orderly way, the large volume of data generated by the Internet of Things (IoT) in order to achieve information and knowledge.

To overcome the fast-paced evolution in sensors and associated platforms that can lead to deploying a multiplicity of solutions, independent of each other, which hamper data sharing.

What are the present trends on Internet of Things?

- There will be close to 5 billion 'connected things' this year 2015 [1]
- IoT will continue to grow with 26 billion connected devices in 2020 [1]
- In 2016, spending on IoT hardware will exceed $2.5 million every minute [1]
- Nearly four out of five (79%) companies surveyed have IoT initiatives in place today [2]

[1] http://www.gartner.com/newsroom
[2] http://sites.tcs.com/internet-of-things/

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Why do you need a sensor and actuator platform?

1. Because it isolates the sensors and actuators from the applications that use them, enabling to change any of them separately without affecting anything else.
2. Because data from a sensor can be shared among different applications, breaking ownership feeling.
3. Because it breaks down the vertical solutions or silos, thus avoiding dependence on suppliers
4. Because it prevents the proliferation of isolated systems often deployed even for the same service.
5. Because it offers a number of common services needed by all applications and avoids its repetitive development: Catalogue of sensors/actuators, Monitoring, Quality of Service.
6. Because Sentilo creates the catalogue of sensors and actuators installed in the city, the essential core of the system that allows managing and maintaining this equipment.

Why will you install Sentilo?

1. Because it is a reality in several cities and public organizations and manages more than 1,000,000 daily records coming from more than 10,000 urban parameters.
2. Because it is open source and has no licensing costs (license LPGL3 and EUPL 1.1) .
3. Because cities that use it can make it evolve freely according to their interests without depending on suppliers' strategic roadmaps.
4. Because it is an open and shared platform. Everyone can play but nobody dominates.
5. Because its architecture allows unlimited horizontal growth.
6. Because it is designed to run natively via PUSH and makes sure you get the minimum data transmission.
7. Because its modular architecture and its simplicity allows any company and organization to develop new modules.
8. Because there is a significant number of Partners that have developed products compatible with Sentilo, and its simplicity fosters a steady growth of this number.
9. Because there is a Community that supports Sentilo.

Why will you adapt your sensors and business applications to Sentilo?

1. Because many organizations have Sentilo and they are demanding that applications / products / sensors are compatible with it.
2. Because its API REST interface makes easy to connect sensors and applications.
3. Because its modularity makes it very easy to develop new functionalities. Any company with basic knowledge of Java development will be able to play this role.
4. Because each one of the new functional modules may have its own business model.
5. Because there is a Community that supports Sentilo.

What Sentilo Community will provide you?

1. A forum for asking questions and sharing knowledge.
2. A wiki where all the updated documentation can be published immediately.
3. A channel where it is easy to suggest new product developments.
4. A procedure to share the new functionalities developed for the benefit of all the community. In the end, we all need the same.
5. An organization who makes possible to the members of the community to identify and define requirements in a collaborative way and share development costs.

How can I know more about Sentilo?

On the website of the Sentilo Community (www.sentilo.io) you will find the most up-to-date documentation.

How can I test Sentilo?

At least during this year 2015, you can use the Sentilo pre-production platform offered by Barcelona City Council in order to connect sensors and applications and see how it works. Institut Municipal d'Informàtica (IMI) of Barcelona (Barcelona City Council IT Department) will provide technical and consultant support for these tests.

The Sentilo Community also provides a Virtual Machine containing all the Sentilo software pre-configured and ready to use.

If you need further information please contact the Sentilo Team at io.sentilo@gmail.com

How do I start to use Sentilo?

1. **On Premises**: Connect to the Sentilo web (www.sentilo.io) or GitHub (github.com/sentilo) and download Sentilo. In the wiki of Sentilo Community there is the entire guide explaining how to install Sentilo.
2. As a **SaaS** (Software as a Service) through Diputació de Barcelona. This possibility will be available during 2015.