

AGILE IoT

Air quality &
Pollution monitoring

white paper

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Environmental pollution has become an issue of serious international concern and is increasingly stimulating the development and adoption of solutions to monitor, prevent and reduce the effects of pollution. This challenging context has important economical and societal impacts and is characterized by a long history of monitoring methodologies and technological solutions. Unfortunately, the existing products present high development and maintenance costs, low territorial coverage and complex certifications. These barriers have confined the diffusion of high-end monitoring solutions to a limited set of vertical context, typically managed by the public authorities.

AGILE H2020 Project builds a modular hardware and software gateway for the Internet of Things with support for protocol interoperability, device and data management, IoT apps execution and external Cloud communication. It features diverse pilot activities, Open Calls & Community building. All AGILE software modules are Open Source and will become part of a new Eclipse Foundation IoT Project. The objective is to provide IoT developers and communities with free software components for effective and agile IoT prototyping. The AGILE project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under grant agreement N. 688088.

The convergence of hardware integration, reduction of sensor costs, IoT and M2M technologies introduces a new landscape that inspired AGILE project to focused one of the pilots on this topic. The pilot is responsible to deliver an AGILE based solution for air quality and pollution monitoring in industrial and public environments characterized by low cost, high quality monitoring and a capillary territorial coverage.

The pilot is based on a network of monitoring stations that provides multimodal, multisource, certifiable and pervasive monitoring of air quality and pollution. The monitoring stations are developed by EUROTECH and entirely based on the AGILE platform. The pervasive nature of the monitoring network is managed by Everywhere Cloud (EC), a cloud integration platform from EUROTECH, that cooperates with the AGILE platform to provide final user and B2B services.

The air quality and pollution data are collected and processed locally by the monitoring stations and published to EC, where the information become easily accessible to the final users, B2B services, mobile and enterprise application. The large amount of data collected with this cloud-based IoT solution represents a valuable asset for new added-value services that can generate new business opportunities.

The pilot will allow to demonstrate the advantages of the AGILE solution, highlighting the modularity and the monitoring capabilities of the monitoring station, the analytics functionalities, the functionalities enabled by the pervasive coverage of the monitoring solution and its market positioning.



References:

<http://www.agile-project-iot.eu>

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