

REFERENCE

Flexible IoT platform at Connected Worlds improves the living environment in Dutch cities

THE BEST OF ICT WITH A HUMAN TOUCH

Connected Worlds links the world of outdoor public areas with the world of digitization. MAESTRO gives Connected Worlds a flexible platform allowing them to collect large amounts of data from IoT sensors which is processed, stored and made available for analysis and visualization.

Digitization enables addressing issues from the physical living environment in a smart way. For example: better traffic flow, better air quality for a healthier living environment, insight into the effect of environmental zones and noise reduction during major construction works.

A CLEAR VIEW ON SOUND AND AIR QUALITY

With in-depth knowledge of both public space and the digital possibilities, Connected Worlds connects both worlds by improving services and processes with real-time data to increase the sustainability and the quality of the living environment. In various cities dozens of Lamppost Sensor Hotels (LSHs) are installed for this purpose, measuring: NO₂, CO₂, particulate matter, noise, etc.

Optimizing the IoT platform is made possible by adding new and existing sensors



IOT PLATFORM FOR LARGE QUANTITIES OF DATA

Connected Worlds was looking for a flexible IoT platform for large amounts of sensor data to acquire, to process (calibrate), to store and publish for analysis and visualization. Of importance was the possibility to create an alarm for each sensor. Per alarm Connected Worlds can indicate a follow-up action.

Other characteristics Connected Worlds was looking for:

- ▶ Set up and configure a system for receiving, processing, aggregating and storing raw and processed data from various LSHs
- ▶ Provide authorized access depending on projects and roles
- ▶ Being able to set up notifications for users at project and role level
- ▶ Making the processed data available for specific data analysis, monitoring and modelling

CUSTOMIZED AND REFINED

With MAESTRO Axians offers a flexible IoT platform based on Microsoft Azure Cloud. This platform fits various use cases and enables acquisition of large quantities of (sensor) data to modify, store, and visualize the data.

The platform is a combination of Back and Front-End applications with storage in the

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Cloud. The tools available herein (e.g. Machine Learning) allow quick creation of various cross-sections of large amount of data to analyse and take adequate follow-up actions.

MAESTRO is particularly user-friendly through an extensive User Interface and Dashboarding options. Axians has modified and refined the platform towards the wishes and intended applications of Connected Worlds.

MORE CITIES AND ALTERNATIVE APPLICATIONS

The first data processed by Connected Worlds came from the program National Smart City Living Lab; seven municipalities have collected air quality and noise measurements via IoT for one year in total. With this data Connected Worlds is continuously optimizing the LSHs.

MAESTRO supports this optimization in several ways, e.g. with expanding the platform for data from both new sensors added to the LSHs as well as existing sensors from other parties. Future plans include expanding to other cities and monitor environment management at construction sites.

Would you like to know what benefits MAESTRO can offer your company?

For more information, visit www.axians.nl/maestro, or contact Raymond Janssen or Carlijn Donders.

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