Italian company offers an IT SMART metering water control

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Identificativo proposta:TOIT20211026001   **RICHIEDI MAGGIORI INFORMAZIONI**

An Italian company has developed a platform that takes advantage of the development of IoT and AI to reduce the impact of water wastage in the supply network. The IT platform can be useful for customers and the administrator of the water supply network, allowing monitoring of water consumption, and detecting possible anomalies, such as malfunctions in pipes, water thefts, among others. It offers technological partnership, services in subcontracting and licence agreement.

The Italian company represents a network of small, medium and large companies, research organizations, spin-offs and start-ups of excellence that actively operate in the Calabrian, national and international territory with the aim of favoring and supporting the development and application of research projects with high technological content that can have strong development potential and impact on the sector ICT. It has developed a platform that provides the functionalities for the acquisition, storage, and processing of large volumes of heterogeneous data, as well as mechanisms for the training of predictive models based on Machine Learning and Deep Learning techniques, in addition to the possibility of combining them with automatic reasoning systems based on Answer Set Programming and Logic Programming. The end-users can access the processed data through the implementation of a web portal that provides monitoring dashboards. Using these dashboards is possible to identify leakage scenarios due to water main failure or water theft. The web portal also others the possibility of predicting failure situations through the application of predictive maintenance techniques, thus allowing signi cant savings on maintenance activities and simultaneously minimizing water losses, with the resulting environmental impacts. To monitor the water supply network, it is necessary to install devices that allow us to measure the water ow, as well as the transmission of this information to the platform. The sensors used are listed below: ⌐ Meters and transmitters, to be installed in place of the mechanical meters already present in the individual utilities served and in the well from which the pipeline serving the utilities starts. ⌐ Concentrator device, for collecting and sending consumption data from users, to be installed on the public lighting pole. ⌐ For energy-saving reasons, devices mounted on mechanical meters do not perform complex processing of measured values. However, these devices are able to record and transmit alarms determined by water leaks and/or low battery levels. Complex analysis and computation are all delegated to the application server. Below we list the main features that make it very useful for the water utility and the citizens: ¬ Real-time monitoring of the water supply on the network and identication of any problems/criticalities; ¬ Prediction of water mains failure situations and identication of possible water tampering/theft scenarios; ¬ Visualization of water consumption readings for individual users or groups and for time intervals parameterizable by the system user through a web dashboard that will be accessible by different types of users with different levels of visibility; ¬ Detection of abnormal situations through real-time reporting of IoT devices in the distribution network that are not transmitting data or providing anomalous readings; ¬ User reporting highlighting personal information and data regarding water readings. The reports will also have to identify any users without readings and will have to provide a series of statistics and graphs to allow network managers to evaluate the trend. ¬ Geographic localization and map display of IoT monitoring devices ¬ Monitoring and reporting of abnormal situations, both with reference to the operation of the sensors and concerning the consumption detected. Each citizen will have a dashboard to monitor their water consumption, check for leaks and compare their consumption style with that of other similar users in their area. They are interested in offering their platform as technological partnership, services in subcontracting and licence agreement to customers and administrators of the water supply network . They could be, also, interested in distribution agreements.

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