Cyberphysical system (hardware and software) for water efficiency in different customers and sectors

- SCHEDA
- APPROFONDIMENTI

Identificativo proposta:TOES20200604001 **RICHIEDI MAGGIORI INFORMAZIONI**

A Spanish SME,active in industrial engineering and IT,has developed a cyberphysical system(hardware and software) for water efficiency and consumption in different customers and sectors. The main purpose of this modular technology is to carry water from the water heater to the tap where it will be used, without wasting a single drop in the process.They seek financial agreements, commercial agreements with technical assistance and technology partners/prescribers for technical cooperation.

Water is one of the main natural resources for human life, if not the most important. One of the greatest challenges of our society in this century is to reach a proper and sustainable water usage and management, in order to preserve or improve the current environmental situation of our planet, for ourselves and the generations to come. Nowadays, there are many individual habits related to daily water consumption that, based on comfort or lack of awareness, seem to be incorrect. We are frequently powerless witnesses of how many litres of cold water are wasted every time we demand hot water. At this point, any technology in the market is combining hardware and software components at the same time to approach this problem in the consumption process in a friendly and easy way by the user. In this context, a Southern Spanish SME, active in the areas of industrial engineering and IT, has developed a cyberphysical system for water efficiency. This solution is a modular water efficiency system made of the following components: 1. Power module - this module will pump hot water from that water heater towards the bypass module, inside a room where hot water has to be used. 2. Bypass module - this unit communicates a hot water pipe with a cold water pipe next to a tap, so that the water flows from one to another during the functioning cycle. 3. On-grid activator module - this module is in charge of starting the cycle and warning with a light signal when the hot water is ready at the desired room. It aims at solving water consumption issues by: smart hot water recirculation, leak detection, preventing water from freezing inside the pipes, water consumption awareness using big data analysis, water-meter functions with billing features, smart irrigation, water-recycling, among other functionalities. Therefore, the main purpose of this technology is to carry water from the water heater to the tap where it will be used it, without wasting a single drop in the process. This innovative device pumps water that has cooled in the hot water pipes after the last usage, guiding it towards the cold water pipes in a recirculation process. The Spanish SME is interested in partnering with several types of entities, depending on the focus of the contact: * Commercial agreements with technical assistance are sought with real state developers and building and installation companies. The Spanish SME would install the technology according to their neesds. * Technical cooperation with technological companies or prescribers in the construction sector. These partners would contribute with their know-how and expertise to upgrade the technology as well as promote it in their markets. * Financial agreements are sought with potential investors. They would enter the capital of the company and would provide strategic support as well.

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