

Watering around the clock

Digital remote monitoring of plant containers

bauer

Bauer Baumschulen AG is a family business that offers planting solutions to a wide range of customers, including landscape gardening businesses, local authorities, and landscape architectural firms. In addition to its core business of supplying outdoor plants, it also offers consultations for private customers. With over ten hectares of production area, the company is one of the leading tree nurseries in Switzerland.

“Thanks to the smart sensors and the connection to Netilion, monitoring the water supply in the planters takes place automatically. Our customers have a ready-made solution and can view the measurement data at any time.”

Sebastian Mühlemann
Purchasing Manager
Bauer Baumschulen AG
Bottmingen, Switzerland



Sebastian Mühlemann



Plant containers from the smart Mobile Green range

Mobile Green is an innovative concept from Bauer Baumschulen AG that enables smart greening of urban living spaces. The company supplies plants in containers that can be arranged and repositioned as needed. These plants can be relocated depending on the season.

As a special service, the nursery offers its customers an app that provides real-time information on the condition of the plants, such as the watering status. Measurement data is recorded by intelligent sensors for this purpose and transmitted to customers via a secure cloud connection.

Challenge The planters are designed to incorporate an internal water tank that supplies the plants evenly with water. This tank must be refilled at regular intervals to ensure uninterrupted watering. Now Bauer Baumschulen AG has developed an app that makes this task easier for customers, by providing information on the fill level and ambient temperature.

The need for on-site checks on the condition of the plants is therefore eliminated. The main challenge is recording the measurement data from the mobile plant containers and transmitting this data regardless of their location. It must also be possible to access this data via the nursery's own app.

Solution Endress+Hauser was able to provide a practical solution: fitting the plant containers with the Micropilot FWR30 wireless fill level sensor. This battery powered measuring instrument can measure the level of the water tank and ambient temperature regardless of where it is installed and without restricting the mobility of the plant containers.

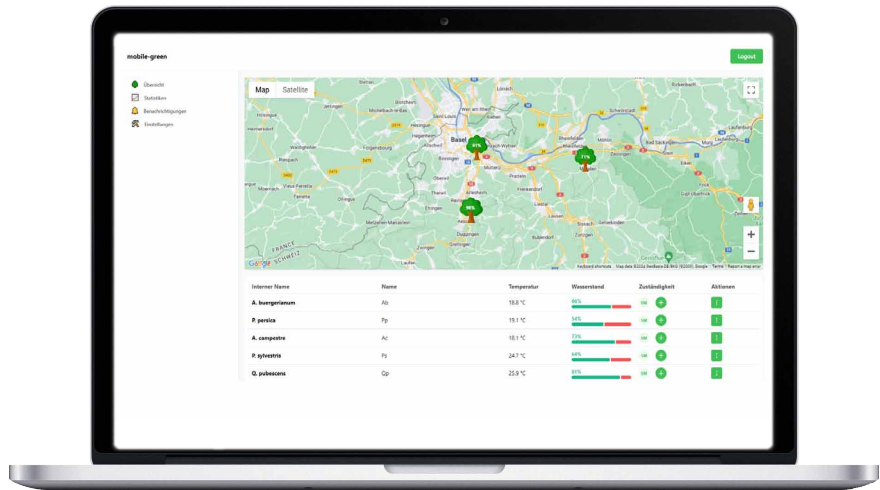
The smart measuring instrument transmits the measurement data directly to the Netilion IIoT ecosystem. Transmission takes place via a secure LTE connection between the sensor and the cloud. The data is therefore always available in digital form, and can be transferred to the nursery app via a digital interface (API).

Result Using this smart and mobile solution, the nursery's customers can view the measurement data in the app and check remotely whether the plants still have enough water. Replenishment intervals can be scheduled precisely.

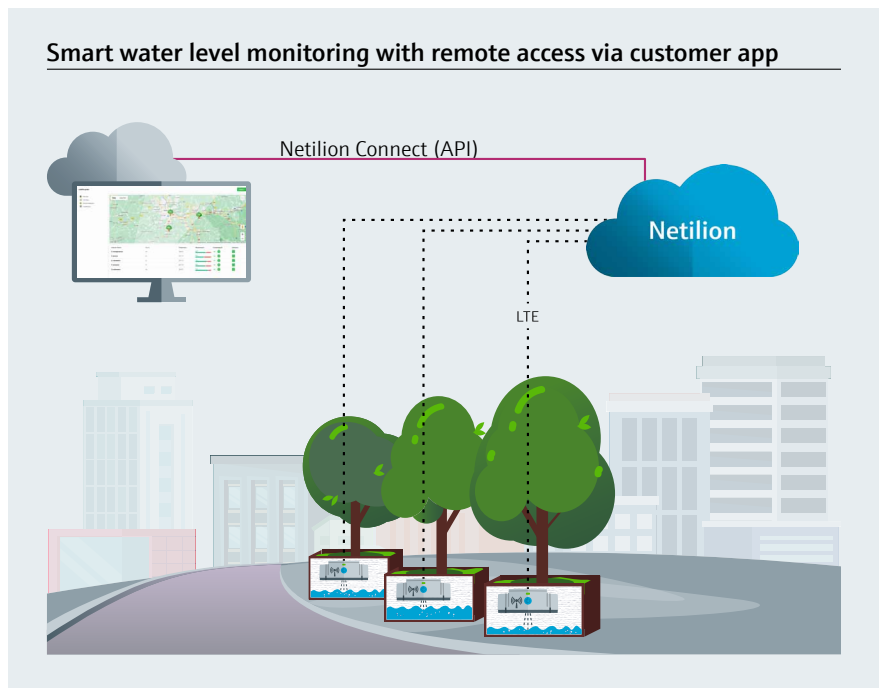
In addition, warnings can be programmed if the level falls below a defined limit or if the sensor's battery is low. Users can rely on the alarm email function to take action promptly. Temperature measurements provide additional information about the plants' condition.

Scope of delivery The supplied sensors and digital services include:

- **Radar level sensor** Micropilot FWR30, cloud-based and with battery powered radar.
- **Netilion Connect** Interface for transferring data to the customer's own systems (API).



View of the Mobile Green app displaying the water levels in the planters



System overview of measurement data transfer between sensor, Netilion and app

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