

Simple and cost-effective bike sharing

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meters of wires
for bicycle stand
functionality

100%

easy-to-use
system for
citizens

over 200

bicycle stands
in one
IQRF network



The Idea

TECO developed for a customer Keylog a new bicycle stand system. Customer requested system enabling online monitoring of bikes and bicycle stands, with electronic locks for bikes. Payment should be easy and bike rental comfortable for customers. Some bicycle stands should be mobile. The system must be ecological and must work also in nights.



The Solution

The **SBS** (Smart Bike Station) system consists of:

- 1) set of smart bicycle **stands** (permanently installed or mobile) with photovoltaic cells and backup battery, wirelessly connected, with electronic locks (RFID/NFC);
- 2) FOXTROT **gateway** (IQRF/LTE) with an optional payment terminal;
- 3) web **application** with a status of bikes and stands.



The Results

Citizens can profit from the **simplicity of bike sharing**. They can borrow a bike in one place and return it in another. Payment is possible with a credit card (locally in a kiosk or remotely through web application). The owner knows where his bikes are located and how bicycle stands are occupied. The system supports the **ecological** behavior of citizens and less usage of cars.



The IQRF Benefits

IQRF is secure and robust wireless mesh. Bicycle stands can be monitored continuously without additional fees. A system is extremely low power, usually powered by sunlight, with backup battery allowing its functionality for many years. One gateway can collect data from more than 200 bicycle stands. All information from all networks is aggregated in a central application.