



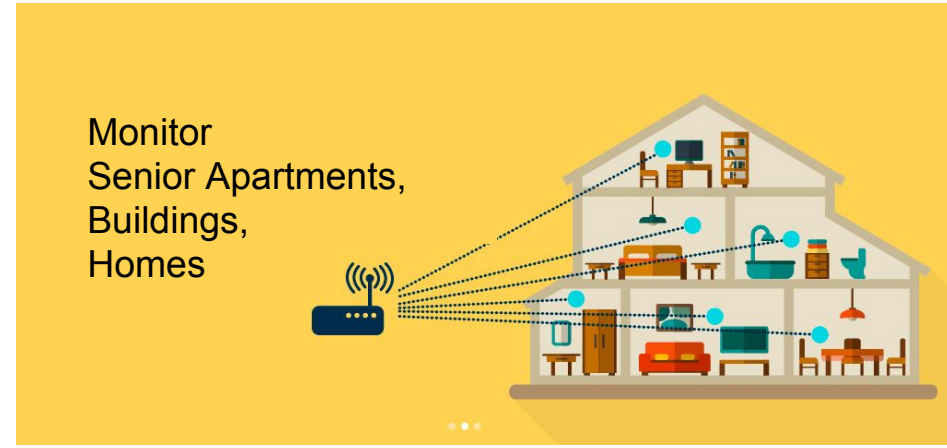
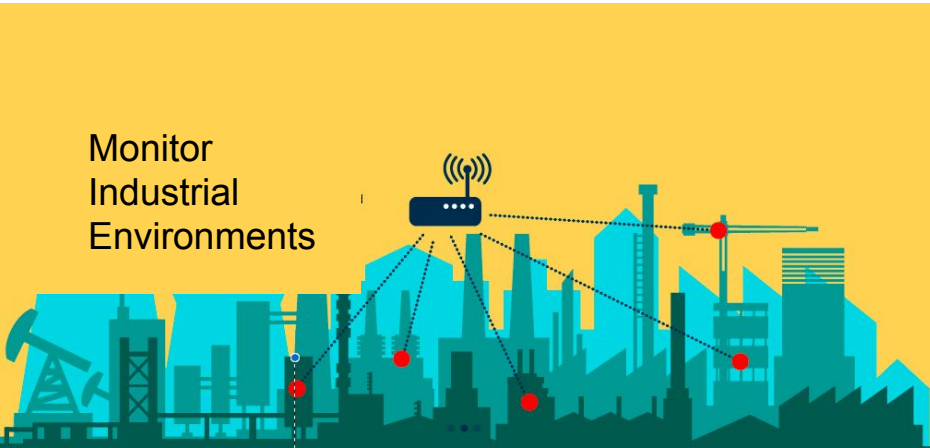
Starnberger
Innovation & Technologie

tokencube condition monitoring solution

Sensor Data & Device Management

Starnberger Innovation GmbH
Mödling/Vienna - Austria

tokencube condition monitoring



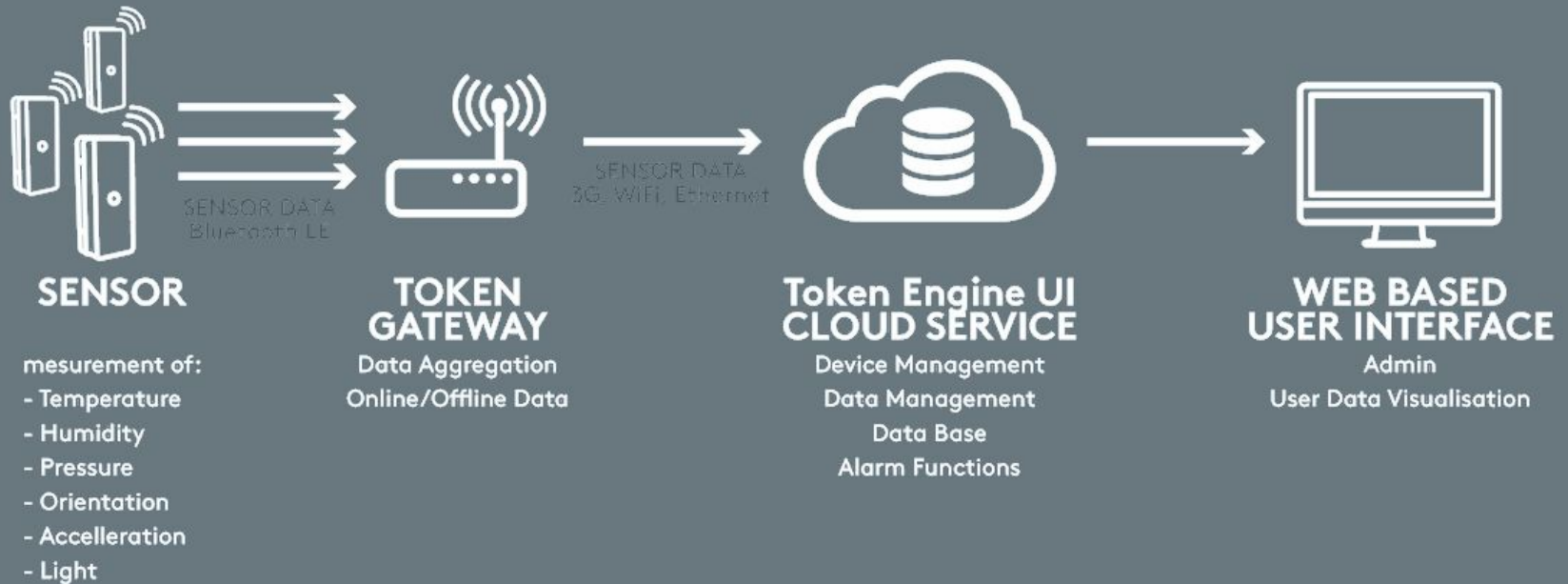
- *Application Examples*

Solution Overview



- **tokencube** sensors are placed in the application's environment
- Once configured **tokencubes** measure and log
 - Temperature, humidity, barometric pressure, mechanical shock, proximity (PIR sensor), etc.
- States and conditions can be defined
- In case of alarm conditions notifications can be sent (notification module available in June 2016, version V2.1)
- The **tokencube** condition monitoring system provides reliable data of all sensor conditions
- The **tokencube** gateways receive all data and forward data to the Token Engine data & device management platform
- The **tokencube** monitoring app displays all conditions of the sensor of interest based on the **tokenlibrary** for smartphones/tablets (August 2016)
- All data are stored on a central data base and can be accessed from a host system by REST API

System Architecture



Basic System Elements



BLE Sensor



BLE Gateway



Token Engine

All data sensor data are available on the Token Engine. We manage all devices and data with this software. Instead of the BLE Gateway a tablet can be used.

BLE Token Sensors

tokencubes are universal and configurable BLE sensors that measure and log

- Temperature
- Humidity
- Barometric Pressure
- Light
- Orientation
- Acceleration
- Proximity etc.



All measurement parameters of the **tokencubes** can be configured remotely by the **Token Engine** device and data management software.

Token Engine

Device & Data Management Platform



The Token Engine is a device and data management platform for **BLE Sensors** that helps you to manage your customers, sensors, gateways and is useful to analyze sensor data and monitor any kind of condition. Using the **BLE Gateway** it is possible to remotely update the configuration of every single BLE Sensor.

Token Engine - Key Features



- Display Sensor Data
- Fire alarm by E-Mail or SMS if sensor values are out of range (V2.1)
- Battery Status of every device
- Manage multiple customers and assign Devices
- Management of stationary and mobile sensors
- Manage your BLE Gateways and get status information
- Easy Device Finder using a QR-Code Scanner
- REST API to access devices and data

Token Engine in the cloud



The Token Engine

- can be offered as a cloud service (V2.0) or
- hosted on a custom server infrastructure (V2.1).

Token Gateway TC9001

- Use our Linux based BLE Gateway software that runs on our embedded gateway platform



User Interface - Web or App



Data can be displayed in the web or on app (V2.1)

Platform Features



Data Management

- Display Sensor Data
- Battery Status of each device
- Signal strength indicator of each device
- Automatic data sync of Sensor Log data with Token Engine

Customer Management

- Manage multiple customers and assign Devices
- Hierarchical structure
- Access levels
- Location Management

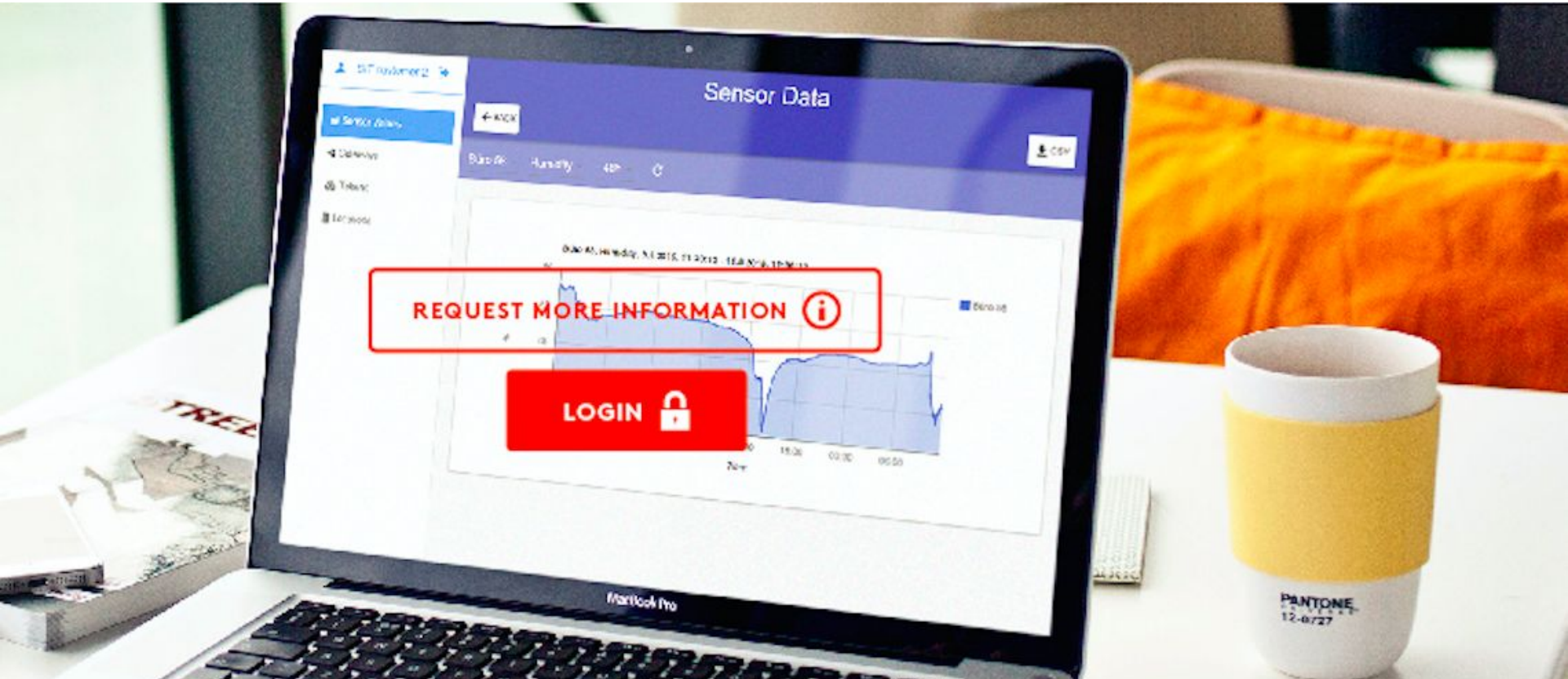
Platform Features



Device Management

- Management of stationary and mobile sensors
- Manage your Bluetooth Low Energy(4.0) gateways and get status information
- Location Management
- Easy Device Finder using a QR-Code Scanner
- Regular Gateway Firmware Update
- Scan for BLE Token Sensors
- Handling alarm situations
- Handling mobile BLE Sensors
- Data Sync with token Gateway and **tokencube** Sensors

Token Engine User Interface



Sensor Data

← BACK

↓ CSV

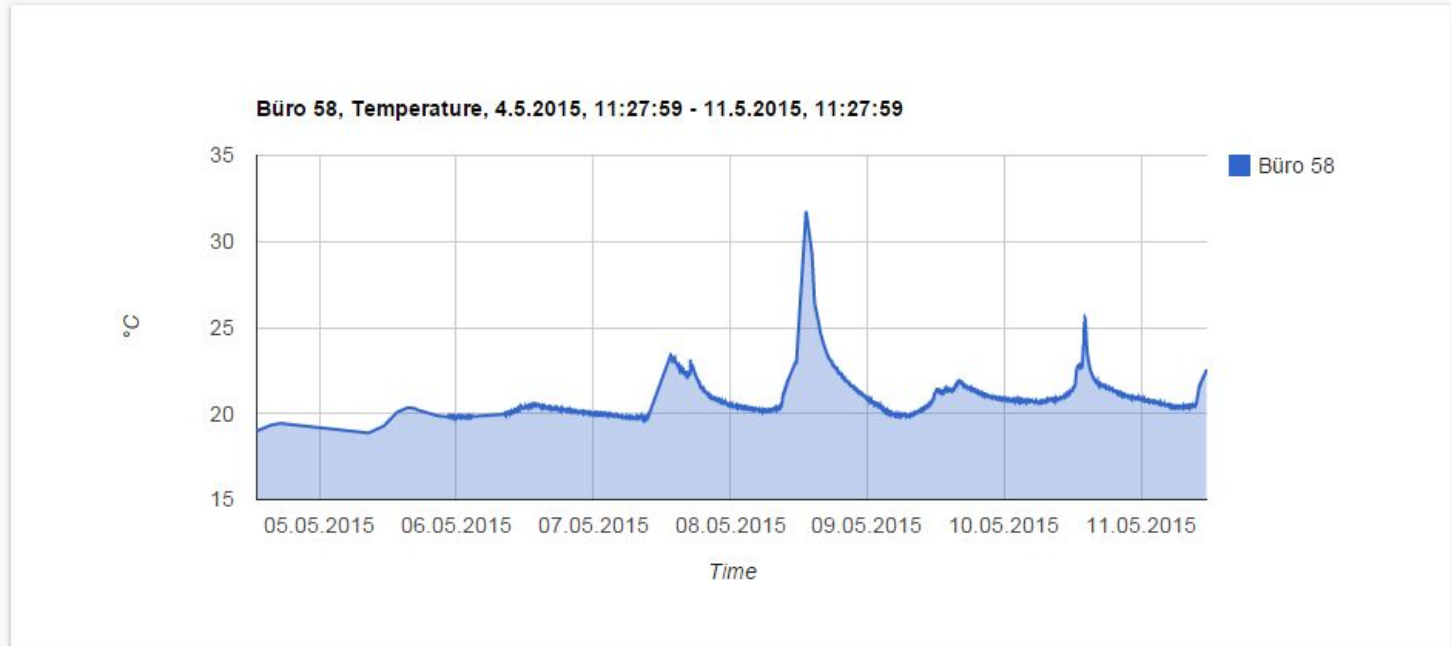
🏠 Sensor Values

🔗 Gateways

🔑 Tokens

📅 Locations

Büro 58 ▾ Temperature ▾ - 7d ▾ ↻



tokencube Starter Kit



The tokencube solution is available for testing. The starter kit includes engineering samples of:

- 1 pcs. Gateway TC9001-ETH
- 5 pcs. **tokencube** sensors
 - 5 pcs. TC 8001
- 1 hour remote support

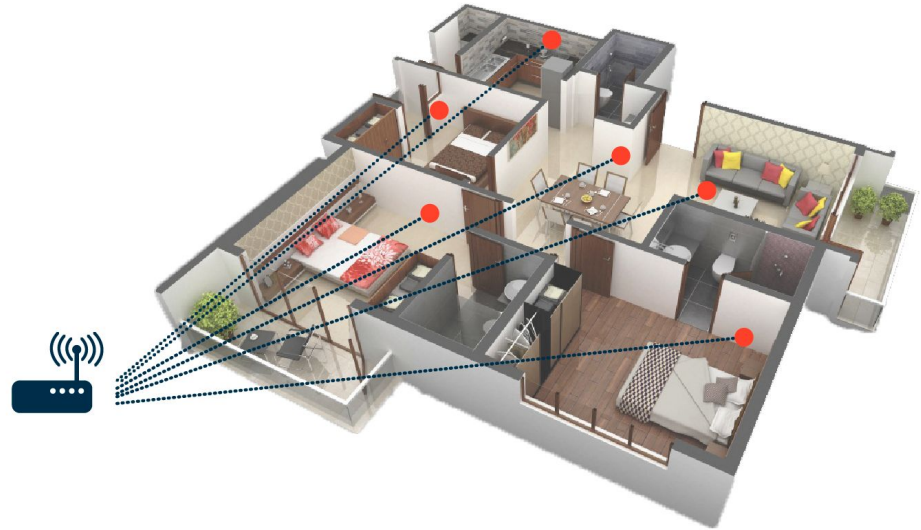
In addition a workshop to define customization can be booked:

- Workshop at customer premises alternatively (excl. travel expenses)

Application Modules based on Token Engine

Concept: Supervision of Senior Apartments

1. Use Token Sensors for monitoring spaces and hotspots of an apartment.
2. Install a BLE gateway to receive sensor data
3. Define states and conditions of the application (room = light/dark; person has moved/not moved in the bathroom)
4. Define logical operation (if at 10:00 in the morning the room is still dark and the bathroom was not entered, send a nurse)
5. Use Token Engine for Data & Device Management
6. Use Application Module “Logic definition” for describing the actions



Contact

Starnberger Innovation & Technologie GmbH

2340 Mödling/Vienna

Austria

T +43 2236 32 0000

info@starnberger.at

www.tokencube.com

