

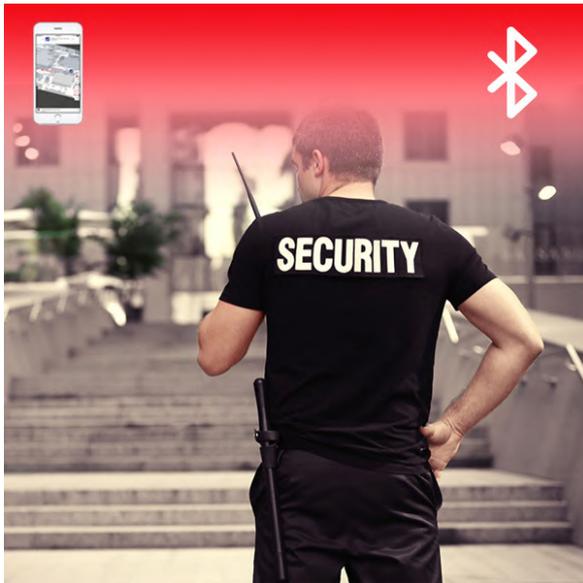


## Indoor Navigation and Tracking of Security Guards



### **AT A GLANCE**

- 2D/3D building maps
- Indoor navigation within the area
- task status and location overview in digital map
- data synchronisation with images from surveillance cameras



## PROBLEM DEFINITION

The security guards of a military site are exposed to certain risks on a daily basis. In addition to military personnel, there are often also civilian employees and visitors to the site. The problem arises when an unauthorized person gains access to sensitive areas.

In addition to securing the grounds, the tours of the security guards also play an important role. On a large and sometimes confusing area, several hundred employees are on guard duty every day and have to carry out a wide variety of tasks and tours. In this context, it often happens that tasks are not fulfilled properly.

## SOLUTION

The guards are equipped with bodycams for additional documentation. These allow access to the live material and also enable a historical evaluation, which is linked to the location data.

For this purpose, the security guards also carry a smartphone with a special app with them during the tours. The application transmits the employee's location and enables the return channel for location-based assignment of tasks. Completed tasks can also be confirmed. A dashboard gives a supervisor an overview of the individual locations and the current task status.

## TECHNICAL IMPLEMENTATION

Bluetooth Low Energy (BLE) beacons are installed throughout the entire area. Beacons are inexpensive and can be installed with little effort because they are battery operated. The Beacon Management Tool from insoft facilitates maintenance and monitoring of the radio transmitters.

To determine their position, the security personnel's smartphones receive Bluetooth signals from the BLE beacons, which are interpreted by an app installed on the device. The position can be used for turn-by-turn navigation to assigned tasks or reported points. Once the security personnel have completed a task of their service, this information can be stored on the smartphone either automatically or after tapping.

The bodycam, which is attached to the shoulder of each guard, is connected to the Wi-Fi at the beginning of the service until the end of the service. The recorded position data of the employee is transferred to the insoft LocAware platform® and evaluated.

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**insoft GmbH**  
Ingolstädter Str. 13  
85098 Großmehring  
Germany

**Contact**  
Phone +49 8407 939 680 0  
Fax +49 8407 939 680 12  
[contact@insoft.com](mailto:contact@insoft.com)  
[www.insoft.com](http://www.insoft.com)