

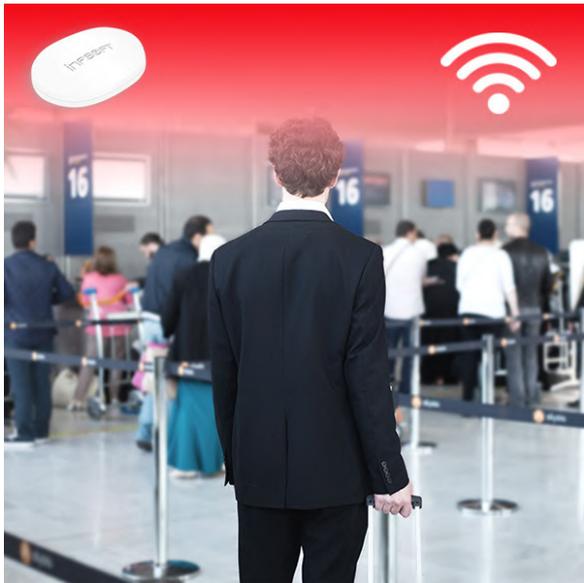


# Passenger Flow and Wait Time Monitoring at an Airport



## AT A GLANCE

- monitoring of passenger flow
- prediction of waiting times
- passenger counting based on ultrasonic technology



## PROBLEM DEFINITION

Air travel is often associated with waiting – hours of standing in line to check in, get through security, and board contributes to a negative flight experience for many travelers. With the number of passengers increasing every year, airports are keen to find new ways to improve passenger flow. Especially when short on time, it contributes to passenger frustration if information on waiting times at queues are not displayed.

For operators, it is crucial to have the right number of staff available in order to efficiently process passengers. To make proactive decisions, timely updates on disruptions and passenger flows are required.

## SOLUTION

A Wi-Fi tracking system combined with passenger counting zones based on ultrasonic distance measurement monitors passenger flows and dwell time patterns and highlights waiting times. Hereby, operational efficiency can be increased. Also, through predictive staff scheduling and better resource deployment, queue

lengths can be reduced.

On display boards set up centrally at the airport, passengers are shown the current waiting time at the check-in counters and security control.

Knowing on arrival at the airport how much waiting time has to be calculated at central checkpoints offers considerable added value for passengers. Especially business travelers can plan their flight more efficiently. Passengers also have the opportunity to better calculate how much time they can spend after check-in before they need to go through security.

## TECHNICAL IMPLEMENTATION

The Wi-Fi tracking solution monitors passenger location and movements by configurable zones. For this purpose, insoft Locator Nodes are installed throughout the airport building. They detect Wi-Fi signals from the passengers' mobile devices and forward them to the insoft LocAware platform® for positioning. The devices are detected in a non-intrusive way without identifying the passenger. Since the MAC addresses of the mobile devices do not link to any individual user data, no personal data is collected.

Additionally, at checkpoints such as security controls, ultrasonic distance sensors coupled to the Locator Node detect each person going through the passageway, enabling accurate passenger counting.

A browser application gives airport operators access to the data. In addition, the insoft Analytics tool can be used to recall and evaluate historical data at any time and compare it with real-time data.

### **Imprint**

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