

# MOBILITY AND SAFETY



**Mobility and safety** is a set of modules in Metropolis, which allows, among other things, to monitor the occupancy of parking lots, events in bus bays and at bus stops, and provides a mobile application which acts as a guide to free parking spaces and handles resident reports. It also makes it possible to keep advanced statistics related to the different aspects of movement of objects in the urban space (buses, cars, single-track vehicles and pedestrians).

## Video monitoring and analysis of bicycle paths and traffic routes

In the analytical module, one can define areas of interest and the lines intersection of which increases the value of the counter after detection of a specific object to be observed, e.g. a child leaving a safe playground. In addition, it examines which sections of bike lanes are used the most by cyclists. In the mobile and web applications, all bicycle paths can be viewed, along with a preview of the number of cyclists who used the path in specified time intervals (during last hour, day, week). Such information is very important from the point of view of the planned investments, e.g. of new bicycle paths

## Car Park Monitoring

On the basis of the data on car park occupancy collected from the existing parking zone system (e.g. parking meters, ticketing devices and issued subscriptions) or a targeted zone (equipped with inductive sensors and/or implementation of video analytics) in the city, the system shows occupancy of the zone through any media such as smartphones, variable message signs or websites. The information made available this way significantly reduces the number of vehicles waiting for a free parking lot in the city center, which has a positive impact on air quality and reduces vehicle traffic. The mobile application will inform residents or tourists about the available lots in a specified car park, and at the same time navigate them to their destination.



## Intelligent monitoring module for bus stops

This module was created primarily to increase the comfort and safety of commuters by introducing dedicated software and hardware tools for the management of the bus stop infrastructure.

One of the main functions of the module is the identification of stopping vehicles, or vehicles in the vicinity of the bus bay. Supervision of the vehicle parking time in the bay and detection of unauthorized parking and stoppage within the city area is also possible. Thanks to video cameras equipped with recorders as well as dedicated software for registration plate recognition and parking time analyses, the System can recognize vehicles and divide them into pre-defined categories.

## Module - Resident reports

Thanks to the resident report module, available from the mobile application, the relevant services can be informed about incidents in the city: damaged road surfaces, disabled street lights, etc. In three simple steps, the User can define the issue, categorize it and add attachments in the form of photos with comments, at the same time sending the information on the current location of the incident directly to the relevant services.

The official shall be given access to the panel, where submitted reports will be presented in tabular form. The official can view incidents, review past incidents, and filter them according to the time and place of occurrence.

