SMART BUS SHELTER
OPEN CITY CLOSER TO PEOPLE

FOLLOW THE RIGHT WAY
Nowadays, among full on digitalisation, all cities and towns are facing many challenges and the requirements of citizens who expect their needs to be met. The main deficiencies decreasing citizens’ quality of life include the inaccessibility of information, missing Internet connection, higher criminality in the streets, damage to property and many other things. Cities and towns are looking for efficient and affordable ways to eliminate these problems.

OMS offers the integration of many functions into one unique system - CitySys. It is an innovative and effective solution for cities and municipalities which, via its Smart products, meets the demands of the citizens. Our Smart Bus Shelter is one of innovative products within innovations and IoT technology.

This smart bus shelter can be installed in any part of the city, municipality or heir vicinity. With its flexibility and tailored adaptation, it can easily and effectively fulfil a large number of assigned tasks and thus improve the quality of life of citizens.
FUNCTIONALITY

The main advantage of the Smart bus stop is the possibility of simple and fast replacement of the existing obsolete bus stop with our new multifunctional bus stop. Installation of the smart bus stop ensures a multifunctional public space for its users and increases the level and accessibility of new services for visitors and citizens.

The bus stop offers many integrated functions, such as the sale of public transport tickets via integrated payment devices, locking of bicycles, sale of food and beverages, monitoring of air quality and noise levels, security camera, heated benches and seats, Wi-Fi connection, advertising space and accessibility of various information via Smart Kiosk.

All the information and services are easily accessible even for children and disabled people. Stereo speakers enable easy access to necessary information even for visually impaired citizens.

Smart Kiosk integrated in the bus stop offers an additional vast amount of information available for citizens. The interactive Kiosk is a computer terminal providing access to information and applications for communication, commerce, entertainment or education. It can be installed within the Smart bus stop or even separately in the street.

The Kiosk enables the connection of people with the city infrastructure and significantly supports their engagement. Information about the city together with the map and history of the city and streets bring a new perspective for tourism and increased knowledge about the history. Timetables for all public transport lines are commonplace. Travel planning thus becomes a simple aid for effective travelling and support of the use of public transport as well as the reduction of the number of vehicles in the streets. The possibility to publish information about offices, schools and hospitals belong among the other great functions of this product. Since it is an information channel accessible to all the citizens, even children - setting of accessible and blocked sites is one of the inevitable requirements of today. Based on the requirements, every Kiosk can have various set and integrated functions. The configuration of the functions is simple and easily adaptable. The bus stop can be managed via remote administration. The city or municipality can collect all the gained data and analyse them for enabling further efficient operation.
SOFTWARE

Our software can be connected to many devices. The operator can collect information from many bus stops from a single place. It offers many smart services that can be integrated into the device at any time. CitySys uses a widget system which enables users to manage and adjust the graphical interface according to their needs. In addition to the visual, it also manages the gained data and events and uses them for further analyses. This system was developed in a user-friendly design to enable easy and problem-free navigation for every user. Interactive system map shows all the available devices on the map in which it is possible to monitor the state of the device, camera records for safety, information about solar panel, or information statistics about the displayed sites of the Kiosk. The system has many functions which ensure easy operation, fast access to data as well as the collection of very important statistics.
CitySys is an open platform integrating many applications which create the smart city. The collection, transfer and evaluation of data are secured via a complex management system CitySys based on the ThingsBoard IoT platform in the OPC standard. Open Platform Communication (OPC) represents a series of specifications from suppliers and developers of the software which define the interface between the clients and servers including real-time access to data, monitoring of crisis situations, access to historical data and other applications. Its hardware offers a direct connection through standard interface and protocols, specifically: Powerline, Bluetooth, KNX, Z-Wave, ModBus RTU/TCP, BACnet IP, EnOcean, DMX, M-Bus, GSM, 1-wire, and DALI. It also offers the standardized interface REST API. Communication between lamps is carried out through the electrical system. This means that the communication signal is transferred through the standard 230 V supply network. With regard to the connection to systems of third parties, i.e. with systems already integrated in the city, the CitySys is open for communication protocols MQTT, JSON, XML, XMPP, SMTP and RSS. The collected data are stored in a cloud server.
SMART CITY STRUCTURE

All the city areas from which the data are collected can be divided into several modules: infrastructure, environment, society, quality of life, citizen and smart technologies. Modules have assigned applications which can evaluate, manage and adjust the collected data. CitySys is a platform which integrates all the applications into a single smart system.