

# VERONA SELECTS NEDAP SENSIT FOR REAL-TIME PARKING MONITORING

In Verona Nedap's SENSIT wireless parking sensors were integrated with the Wes Park software from Project Automation. The city of Verona has positively evaluated this combination in an initial project. The installation proved to offer a valuable parking service to citizens and tourists. Additionally, on-street parking capacity is managed more effectively as well.

Parking is a major issue in all urban centers, due to the ever increasing lack of space and simultaneous growth of motorists wandering around in search of a parking spot. This causes air pollution, traffic jams and road insecurity. This effect is even more visible in historical and touristic centers, like Verona. Here parking spaces are even more scarce due to narrow streets and the to be preserved historical heritage.



By introducing Nedap's SENSIT sensors, Verona does not need to consider creating additional parking spaces. Sensors improve the utilization of the city's existing parking bays. Nedap's SENSIT system consists of wireless parking sensors that detect in real-time whether or not a single parking bay is occupied and how long it has been occupied. This information is used to guide motorists to available parking spaces, which increases traffic flow in cities and decreases pollution. Additionally, parking utilization is optimized and enforcement is done more efficiently.

## A new approach to parking management

Located in Northern Italy, the UNESCO World Heritage city of Verona attracts around 2 million tourists per year. Many sightseers visit the city for a day from the nearby Garda lake and Dolomites mountains. Since motorists in Verona are usually not familiar with the city's roads and traffic regulations, they often are in desperate search of available parking spots as close as possible to the tourist attractions. In these situations parking spaces are valuable assets that need to be managed effectively. Environmental, social and economic pressure force Italian Municipalities to plan and execute parking management in a new way. Because of these challenges, AMT, the service company managing Verona Urban Parking Plan, was in search of innovative solutions to exploit parking spaces in the city center. The parking service to citizens and tourists should be optimized, the management should be more effective and the exploitation needed to be more profitable.

## Accuracy, reliability and performance

To evaluate technologies and solutions that could support Verona in this ambitious goal, AMT initiated a project in Piazza Viviani, a central area in the city centre. The area includes on-street parking bays that are reserved for residents in certain time periods. These bays are available for public parking in the remaining time. Additionally, the area includes several parking bays reserved for mobility impaired drivers. This pilot project solely focused on monitoring the usage of individual on-street parking bays to enable AMT to evaluate core functionality of the technology. The project also provided the city with accurate and significant data to support planning of strategic and operational activities related to parking management.

The city selected Nedap SENSIT after intensive testing of the accuracy, reliability and performance in providing real-time occupancy data for each single parking space.

### Multiple purpose parking spaces

In Verona, the occupancy data collected by Nedap sensor network combined with information acquired from existing Parkeon parking meters, feeds the WesPark software of Nedap's Certified Partner Project Automation, which provides a comprehensive parking management solution.

With the acquired data, the city is currently able to provide real-time occupancy monitoring of the involved parking bays. This facilitates guiding motorists to available parking places via multichannel infoparking applications (VMS, mobile apps, sms/mail push services,), helping the city to reduce congestion, create safer streets and a more attractive city centre for visitors and residents.

By integrating the different technologies in a dedicated management system, the benefits and versatile opportunities for parking management became instantly visible by:

- The facilitation for payments, combining traditional parking meters and mobile systems
- The safeguarding of mobility impaired people's, residents' and pass owners' right to park in reserved spaces through automatic recognition of passes and permits
- The prompt recognition of irregularities and abuses (missing payments, overstay, unauthorized parking in reserved bays, ...)
- The planning and managing control and enforcement activities
- The historical data analysis for decision support
- The operational and diagnostic monitoring of technology equipment
- The synergy with other traffic regulation policies (e.g. limited access areas)

The new parking management solution has been available via web in SaaS (Software as a Service) mode for AMT during the experimental period, with extremely positive feedbacks. The pilot system can now easily and incrementally evolve to a fully operational solution by covering other on-street parking areas and by activating other parking management functional modules in the application.