

Nedap's SENSIT enhances smart truck parking at the Royal Commission for Yanbu, Saudi Arabia

The Royal Commission for Yanbu (RCY) in Saudi Arabia is focused on smart city technologies, which contributes to smart city transformation across the Kingdom. Saudi Arabia aims to transform 10 cities into smart cities in the Kingdom. Part of the smart city program is to reduce truck traffic by allocating designated truck parking areas in the suburbs. The smart parking sensors of Nedap, leading specialist in parking sensor technology, were implemented to monitor, control and provide accurate parking data on the occupancy of the truck parking at RCY. IDEX Services was the implementation partner of this project.



Transformation to a smart city

The Royal Commission for Yanbu Headquarters is located in Riyadh, was established on 21st September 1975 as an autonomous organization of the Saudi Arabian Government. In line with vision 2030 and as part of the smart city concept, RCY was looking for a smart parking technology, which could accurately monitor and control the availability and usage of parking spaces with real-time information. It also needs to help the operator to efficiently manage the parking facility to reduce violations and misuse like overstay.

Parking facility at Industrial cluster

One of the busiest industrial cities on the western side of Saudi Arabia is Yanbu Industrial City. As a result, there is inflow of a lot of trucks into the city on a daily basis. To avoid traffic issues resulting from trucks parked at undesignated areas while waiting for their turn to enter the industrial zone to deliver or pick up goods, RCY came up with a Rest-Zone parking hub. This parking hub was located at the industrial cluster beside the city ring road to host all types of trucks. The zone offers different services for truck drivers such as restaurants, a mosque, rest-area and other services.

Detecting occupancy of individual outdoor parking spaces

Nedap's business partner IDEX Services was selected to implement the parking system at RCY based on their expertise in parking management, access and security solutions. IDEX Services had supplied, installed, commissioned and handed over the PGS sensors and the parking meters. The project is realized in partnership with Nedap, based on their proven track record and market leadership in accurate occupancy detection by the use of sensors in combination with the software services of IDEX Services.

Nedap's [SENSIT sensor](#) is designed to survive the harsh environmental condition and traffic load of the truck parking. SENSIT detects the occupancy of individual outdoor parking spaces in real-time using dual detection technology. This technology ensures highly accurate parking data and concurrently transfers data to the smart city platform of RCY. The information is used to optimize utilisation of parking capacity and to detect possible parking violations in the zone based on parking data.

Seamless integration for efficient parking enforcement

The SENSIT parking data is integrated into Huawei OceanConnect IoT platform to generate simple GUI, reports and big data analytics. The platform is used to connect cloud & IoT services into one unified platform in smart city projects. SENSIT software API enabled seamless integration with Metric Group parking meters to detect overstay by measuring payment and stay duration per bay. The customized mobile payment app and enforcement system is developed for the Royal Commission to ensure a total parking solution.

"Nedap's SENSIT smart parking sensors has helped to operate the facility efficiently, reduce violations using enforcement, and have fairly predictable revenue generated, which is used for the development and maintenance of parking zones across RCY." – IDEX Services

