Kapsch TrafficCom

Ras Al Khaimah

Multi-Lane Free-Flow Truck Tolling

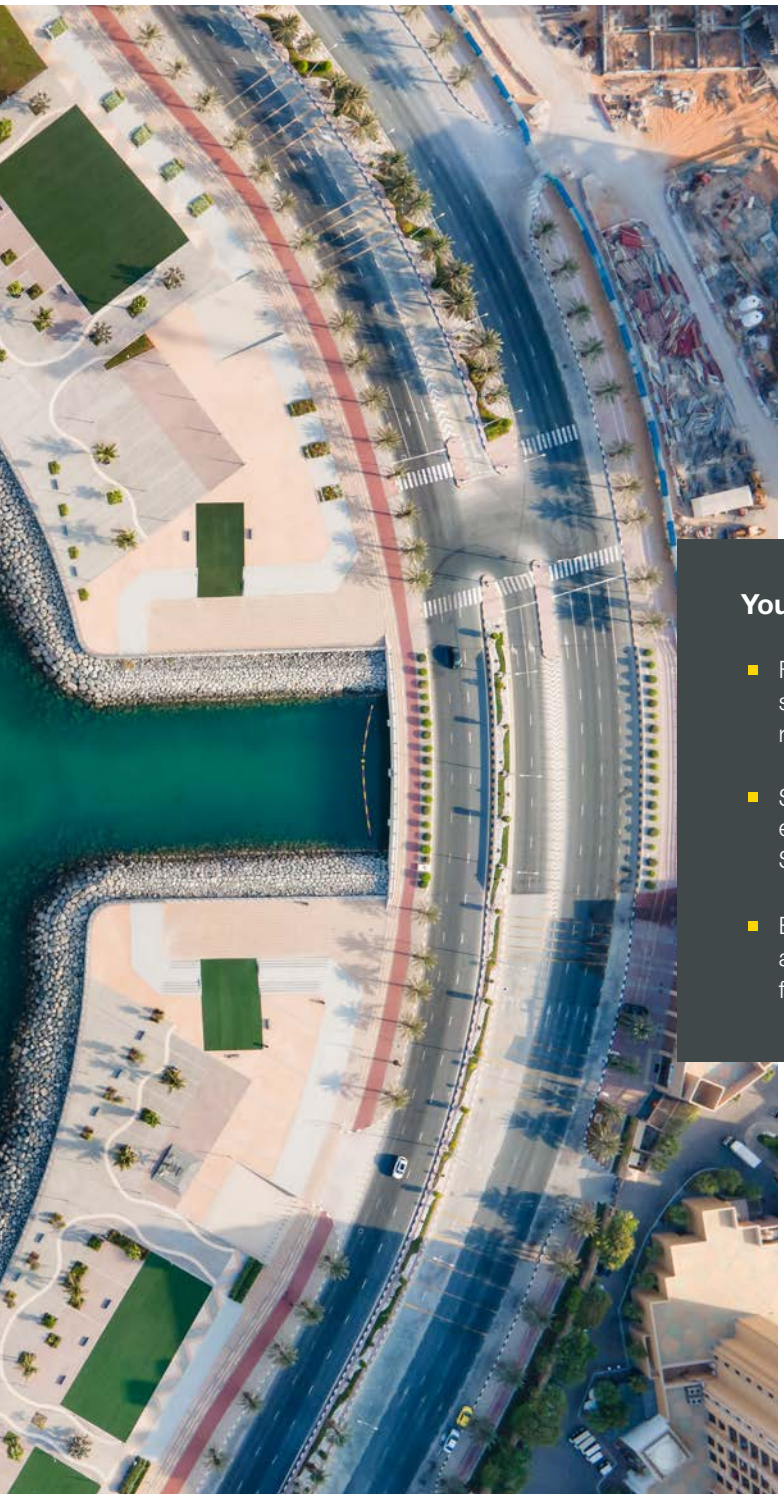
in 2018, Kapsch TrafficCom was awarded a contract where the end customer was Public Services Department of Ras Al Khaimah (PSD) to implement a new end-to-end truck tolling system. This initiative aims to modernize and streamline tolling operations, contributing to faster goods delivery and reduced congestion on the highways.

Innovative solutions contribute to a healthy world without congestion.

The Ras Al Khaimah MLFF Tolling project is a strategic initiative of the Public Services Department (PSD) to realize an advanced, barrier-free tolling system. The selected technology provides the level of integration, scalability, and resiliency desired by the Public Services Department (PSD) to manage critical road networks more effectively and safely. Additionally, the system offers a modern ICT framework and a standards-based platform that supports the timely and cost-effective deployment of future services and innovation modules to meet the evolving needs of Public Services Department (PSD) road users, and other stakeholders.

Project Scope:

- Deployment Sites: The tolling system has been deployed at 5 different sites in Ras Al Khaimah.
- Transaction Volume: The system processes over 1 million transactions per year.
- Technological Integration: The project utilizes the Kapsch vehicle detection and classification sensor (nVDC) along with Weigh-in-Motion (WiM) and RFID technology to accurately determine vehicle tolling class.
- Seamless Experience: The system is integrated with a web portal and a mobile app, providing a seamless experience for both commuters and the authority.



The Challenges:

- Environmental Conditions: Designing a system robust enough to withstand extreme weather conditions like heat and sandstorms.
- Delivered complex business model catering the client's system expectations."

The Solution:

- Kapsch TrafficCom implemented a cutting-edge tolling solution using multi-lane free-flow (MLFF) technology. This innovative approach allows trucks to seamlessly pass through toll plazas without stopping, thereby improving traffic flow and reducing travel times for goods transportation.
- Designed to endure extreme environmental conditions such as intense heat and sandstorms, the system ensures reliable operation under challenging circumstances.
- Moreover, the solution incorporates the Kapsch vehicle detection and classification sensor (nVDC) in conjunction with Weigh-in-Motion (WiM) and Radio Frequency Identification (RFID) technologies. This combination accurately determines vehicle tolling class, ensuring precise and efficient toll collection processes.
- To enhance user experience and operational efficiency, the system is fully integrated with a user-friendly web portal and mobile application. This integration provides commuters and authorities with a seamless experience, facilitating convenient access to tolling services and real-time information.

Your Added value:

- Faster Goods Delivery: The barrier-free tolling system ensures faster delivery of goods by road.
- Smoother Traffic Flow: The MLFF technology ensures smoother traffic flow on the Public Services Department (PSD) highway network.
- Enhanced Logistics: The improved traffic flow and reduced travel times enhance logistics for businesses operating in the region.

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