# Automated truck terminal revs up global petrochem company's dispatch processes

## Client background

**Client:** A top global petrochemicals company

**Services**: Makes and supplies a whole range of petrochemical products that includes chemical solvents, polymers, lower olefins, ethylene glycols, etc., for industrial customers

**Geographies**: Presence in over 50 countries, with innovation hubs in five key geographies—the US, Europe, the Middle East, South East Asia and North East Asia

## Challenge

The petrochemicals major, which had a truck terminal at an industrial area in the eastern province of Saudi Arabia, was facing terminal management and dispatch management issues. They did not have the technology to track real-time entry and exit of trucks, throwing their traffic management completely out of gear. The duty guards would make manual entries and these manual records were then transferred to the field operation dispatch managers. In addition, human fatigue, resultant errors and guards' break time took the truck cycle time up.

The terminal, which supported a daily fleet of over 120 trucks that carried shipments to the industrial area, was in urgent need of a Dispatch Management System (DMS) that would provide controlled and monitored dispatches. The aim was to reduce truck cycle time, keep a track of parked trucks and their linked shipments details on a single screen, and bring down notification drafting time sans manual errors.

**Optimized haulage and deliveries via Dispatch Management System likely to take truck utilization rates up by 66% per day**

## Solution

Wipro partnered with the petrochemicals major to develop a comprehensive SAP-enabled truck terminal system, that helped the terminals integrate WebMethods and SAP Business Warehouse. Our solution comprised a mix of Dispatch Management System, Vehicle Registration Process and Automatic Number Plate Recognition System, enabled by smart phone and tablet-friendly mobile applications.
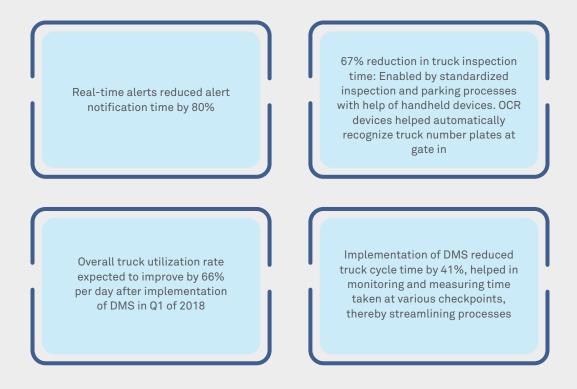
**Here are some of the solution highlights:**

- The Dispatch Management System allowed fleet and dispatch managers to access the system over Web browsers, thus eliminating need for any user side of installation or set-up

- Real-time integration with SAP (Fanar) system for shipment information and Optical Character Recognition (OCR) system for automatic truck recognition and processing

- The truck terminal system was built using Microsoft ASP.NET MVC 5, Microsoft SQL Server as the backend database server and WebMethods for integration with SAP

- .NET Framework 4.5 and MVC 5 were used as they had the inherent capacity to support next generation applications and services

We followed the V Model (Wipro's quality process model) for application development.

## Business impact

With the truck terminal system in place now, the dispatchers can oversee full day activities, pick-ups, changes in schedule. The system can track fleet and get real-time data on location and routes, thereby optimizing deliveries and responding rapidly to unexpected delays.

Real-time alerts reduced alert notification time by 80%

67% reduction in truck inspection time: Enabled by standardized inspection and parking processes with help of handheld devices. OCR devices helped automatically recognize truck number plates at gate in

Overall truck utilization rate expected to improve by 66% per day after implementation of DMS in Q1 of 2018

Implementation of DMS reduced truck cycle time by 41%, helped in monitoring and measuring time taken at various checkpoints, thereby streamlining processes

"The truck terminal system drastically brought down the truck cycle time and has the potential to improve truck utilization rate by 66%."

**Chandansinh Parmar**
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