EXPONENT
TECHNOLOGY SERVICES
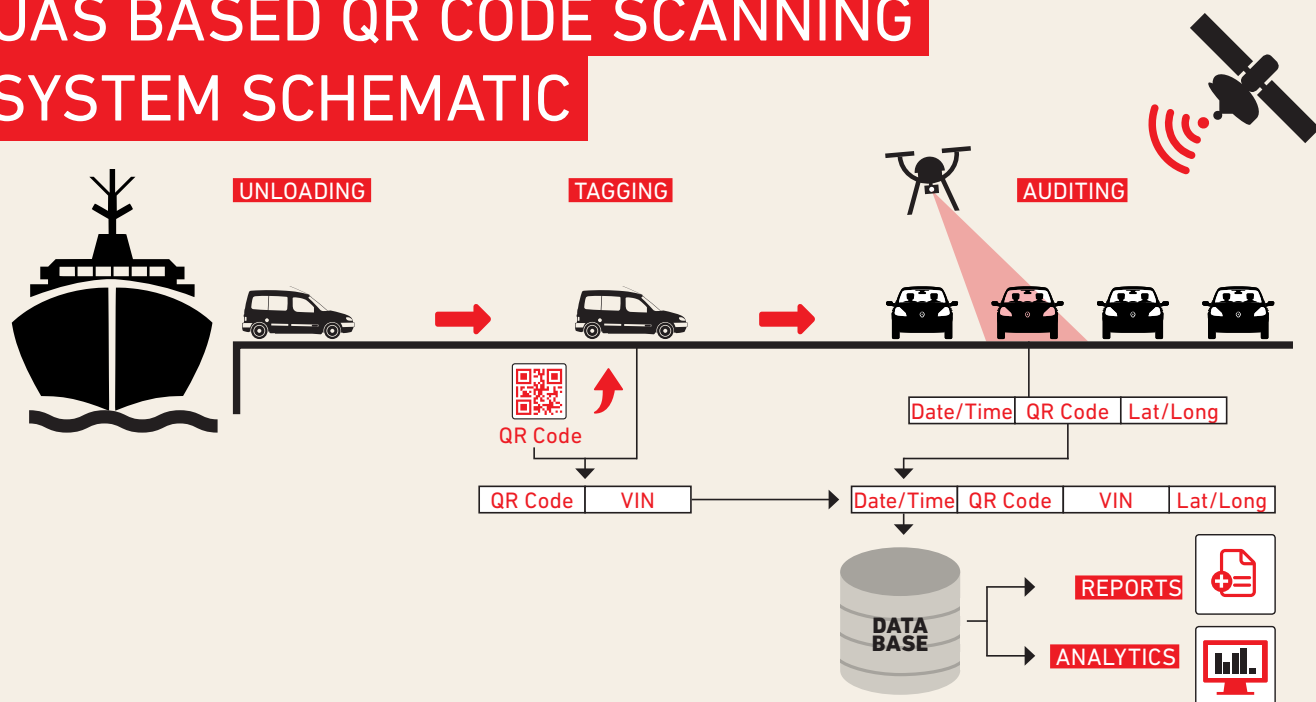
ASSET TRACKING

THE CHALLENGE

As of today, cars must pass through most countries via sea ports and move into storage yards for distribution – utilizing very little technology. With a bill of loading, a port must track thousands of cars at a time-based on no universal or international standards, utilizing mostly man power and archaic human error based systems to track multimillion dollar cargos. They must be delivered in the best of condition in the shortest amount of time, all of which is extremely time consuming and bureaucratic. Our case study was tracking 45,000 cars across 250,000 sqm of port based car storage yeards.

THE SOLUTION

In order to minimize additional overheads, Exponent brought together some of the brightest minds and optimized the process through the application of both commonly available RFID and drone technologies. To this end and after 9 months development, port operators, or car distribution companies finally could possess a solution that highly improves their entire supply chain through to customer delivery. Based on a slim lined black box based operational improvement that can be bolted onto any existing manual or semi automatic systems allowing for up to date asset tracking information at the click of a button. The solution was able to improve efficiency by an average of 86% with a cost saving of greater than 1 million AED per month with the benefit of no further late charges or damaged stock through misplaced or moved stock.

UAS BASED QR CODE SCANNING SYSTEM SCHEMATIC

UNLOADING **TAGGING** **AUDITING**

QR Code

QR Code	VIN

Date/Time	QR Code	Lat/Long

Date/Time	QR Code	VIN	Lat/Long

DATA BASE

REPORTS

ANALYTICS

IMMEDIATE IMPROVEMENTS

01 300 runners (1.2 mil Aed/month)
02 size of yard (250K sqm = 45k car capacity)
03 no reseller claims for late delivery
04 minimal damage to stock

05 improved delivery time
06 more accurate asset information
07 Increased yard efficiency

THE TECHNOLOGY

QR CODE

LOWEST COST REUSABLE TAGGING SYSTEMS

Both low cost and reusable tags, QR codes maximize yard efficiency through the increased accuracy and removal of human error. QR is a 2D label that can be printed and reusable by the customer to tag all assets within their yard location.

CLOUD ENGINE

CLOUD STOCK SYSTEM SECURES DATA IMPROVES EFFICIENCY

With the advent of cloud, customers can securely share all asset data to both divisions and customers as required selecting which data to share to whom.

DAMAGE TRACKING

ON SITE DAMAGE RECORDING FOR IMMEDIATE ACTION

Asset damage can be recorded on the spot and relayed back to head office for corrective actions and coverage.

80% IMPROVEMENT
in time to dispatch
< 2 days instead of >10

96% REDUCTION
in hours to find a car
<1 hour instead of >24 hours

AED1M COST SAVING
in overall monthly cost >AED 1 million per month

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