HIGH SPEED WEIGH-IN-MOTION

Project References
The Ministry of Transport for The Kingdom of Saudi Arabia is committed to improving road safety and protecting their bridges and highways from the damage caused by overweight vehicles.

TDC Systems were commissioned to supply 20 high speed Weigh-in-Motion (WIM) Systems for overweight pre-selection with integrated Automatic Number Plate Recognition (ANPR) for enforcement at strategic locations across the Kingdom.

The system combines TDC’s HI-TRAC® 100+ WIM and HI-TRAC® ANPR Cameras with the precision of Kistler Lineas® Quartz WIM Sensors. The WIM sensors are installed on the highway 1km ahead of the low speed enforcement weigh stations.

The system calculates the axle and gross vehicle overloads and takes an image of the vehicle licence plate together with a contextual overview image. Each time an overloaded vehicle is detected, it is diverted into a Weighing Station for inspection and enforcement.

To meet the needs of the customer on this project, TDC Systems integrated Kistler Lineas® Quartz WIM Sensors with the industry standard HI-TRAC® 100+ WIM/ANPR System. As a combined solution it provides the accuracy needed to identify and weigh vehicles within very high enforcement tolerance.

The project was managed in partnership with the reputable Shibh Al Jazira Contracting Company whose Head Office is in Riyadh.
As part of an on-going strategic programme of works, Transport for Greater Manchester (TfGM) are developing network performance measures and interventions to reduce congestion throughout the area and to protect the authorities infrastructure.

TDC Systems were commissioned to supply 3 high speed Weigh-in-Motion (WIM) Systems with integrated Automatic Number Plate Recognition (ANPR) for enforcement at strategic locations across the TfGM area.

The system combines TDC’s HI-TRAC® 100+ WIM and HI-TRAC® ANPR Cameras with piezo-electric WIM Sensors located at key entry points in to the TfGM area. The system calculates the axle and gross vehicle overloads and takes an image of the vehicle licence plate together with a contextual overview image.

TfGM use this information to contact offending operators and advise them of any infringements to regulations. TfGM are also in discussion with the UK’s vehicle enforcement authority, the Driver and Vehicle Standards Agency (DVSA), to share the information captured by the ANPR system such that direct enforcement measures can be applied.

**Contract Reference**
TC538 Traffic Data Collection and Services Contract

**Client**
Transport for Greater Manchester

**Contact Name**
Mr Tim Morris
ITS Group Operations Manager

**Address**
Greater Manchester Urban Traffic Control, Transport for Greater Manchester, 2nd Floor Piccadilly Place, Manchester, M1 3BN

**Telephone**
+(00)44 161 244 1812

**Email**
timothy.morris@tfgm.com
The object of the Department of Transport's ATDC system is to provide continuous "fit for purpose" traffic data, on a vehicle by vehicle basis. The data is used to produce both quarterly and annual National Statistics on Traffic and therefore needs to adhere to guidelines prescribed by the Code of Practice for Official Statistics. The quality of the data is dependent on the ATDC outstation sites being maintained to a high standard.

TDC provides this maintenance of the ATDC sites, both National & London. The National ATC System comprises of 237 ATDC core census classifiers (outstations) at 225 sites throughout Great Britain. The London ATC system comprises 59 classifiers (outstations) at 54 sites, covering all classes of roads, located throughout Greater London.

A number of the ATDC sites in England and Wales are enabled to collect Weigh-in-Motion (WIM) statistics that are used to determine the movement of freight around the roads network. The DfT also liaise closely with the UK Driver and Vehicle Standards Agency (DVSA) who use the information to target the enforcement of offending vehicles.

In addition to the maintenance of the ATDC sites, the WIM enabled sites undergo a bi-ennial calibration using an HGV with prescribed axle weights. This ensure that the resulting weight data is highly accurate and as outlined above “fit for purpose”.

**CONTACT NAME**
Stephen Reynolds

**ADDRESS**
DFT Department For Transport
1 Zone 3/28
Great Minster House
33 Horseferry Road
London
SW1P 4DR

**TELEPHONE**
+(00) 207 944 6397

**EMAIL**
stephen.reynolds@dft.gsi.gov.uk

**CONTRACT REFERENCE**
PPRO 04/05/21 – Maintenance of the Outstations of the Automatic Traffic Counting and Weigh in Motion Data Collection System
Transport Scotland has devolved responsibility for the monitoring of traffic across Scotland and included within over 800 monitoring outstations are 55 high speed weigh in motion (WiM) sites. These are located strategically across the network and include a number positioned at strategic river crossings and at locations where weight restrictions are applicable.

TDC systems industry standard HI-TRAC® 100+ WIM unit along with Class 1 piezo-electric sensors are used at all of the installations. Information from the sites is of use to design engineers in monitoring the life cycle of the infrastructure, particularly those sites at bridges where the data is used to assist in the calculation of bridge specific loading statistics.

In addition to the provision of the equipment and support to install the network of sites, TDC has been supporting Amey as Transport Scotland’s agent for Intelligent Transport Systems to undertake the bi-ennial calibration of the WiM system and complete pre-calibration maintenance visits to assess the operation of each outstation.

Further to this TDC maintains the integrated WiM and ANPR site on the Erskine Bridge where enforcement measures are in place.

**CONTACT NAME**
Tom McLean

**ADDRESS**
Transport Scotland
TRBO Network Operations
Buchanan House
58 Port Dundas Road
GLASGOW
G4 0HF

**TELEPHONE**
+(00)44 141 272 7380

**EMAIL**
ton.mclean@transportscotland.gsi.gov.uk

**CONTRACT REFERENCE**
Transport Scotland Operator and Infrastructure Services Contract

**CLIENT**
Transport Scotland / Amey
As part of recognition as a leading provider of ITS Solutions TDC is proud to announce recent contract awards for key clients in the traffic industry that include the provision of Weigh in Motion (WiM) technologies:

**REPUBLIC OF IRELAND NATIONAL ROADS AUTHORITY (NRA)**

TDC Systems in collaboration with Electroautomation have supplied one of the largest traffic monitoring contracts to be awarded in recent years. 280 traffic monitoring sites have been deployed as part of a major overhaul of the existing monitoring network which includes the commission of integrated WiM and ANPR at a selection of strategic sites.

**DEPARTAMENTO NACIONAL DE INFRAESTRUTURA DE TRANSPORTES, BRAZIL**

TDC Systems in collaboration with Tracevia Do Brasil have supplied 200 WiM systems across the country. TDC’s WiM capable HI-TRAC © EMU 3 was the technology of choice for the Brazilian authority and owing to the remote locations specialist cabinets were manufactured to mount the equipment at height to avoid them being tampered with.

**UK DRIVER AND VEHICLE STANDARDS AGENCY**

TDC Systems have recently been awarded a contract to supply approximately 20 Weigh in Motion enforcement stations across the UK as part of its strategic policy to improve safety on the national roads network.
Q-Free company, TDC Systems Ltd is an industry leader in the research, design, manufacture, installation and maintenance of Intelligent Transport Systems (ITS) across the world.

TDC was established in 1998 to deliver cutting edge, user-friendly and reliable Intelligent Transport Systems that meet the exact needs of its customers.

TDC Systems Ltd is a 24/7 global operation with Head Quarters in the South West of England and additional sites in the UK, Australia, Brazil, China and Thailand. Our customers are spread over 50 countries in the UK and Europe, North America, South America, Africa, the Middle East, China, South East Asia and Australia.

TDC Products and Services include:
- High and Low Speed Weigh-in-Motion Systems
- Bluetooth™ Journey Time Monitoring Systems
- Traffic Counters and Classifiers
- Cycle and Pedestrian Detection Systems
- Air Quality Monitoring Systems
- Sustainable Transport Initiatives

CONTACT US
TDC Systems Ltd.
30 Lynx Crescent
Weston Industrial Estate
Weston-Super-Mare
North Somerset
ENGLAND
BS24 9BP

T: +44 (0)1934 644299
F: + 44 (0)1934 644255
E: sales@tdcsystems.co.uk
www.tdcsystems.co.uk

Head Quarters
Q-Free ASA
P.O.B 3974 Leangen,
NO-7443 Trondheim
Norway
www.q-free.com

Members of the International Society for Weigh in Motion (ISWIM)