

eFlow is the barrier-free tolling system on the M50 that uses overhead cameras and detectors to automatically record electronic tags and vehicle number plates so that motorists can pass through the toll point at normal driving speed, thereby avoiding toll queuing. eFlow is operated on behalf of the National Roads Authority by BetEire Flow, a consortium made up of the French toll operator Sanef and French tolling system designer CS (<http://uk.c-s.fr>). CS engaged Carra to implement their free-flow tolling technologies.

### **Customer's Challenge**

Year-round, all-hours accuracy and consistency of ANPR reads and toll tag reads at 120 Km/hr, often in adverse weather conditions on a 24 X 7 basis.

### **Carra's Services**

Implementation of sophisticated automatic number plate recognition (ANPR) and high speed tag reading systems on gantries over the M50, supported by a secure roadside computer and communications equipment room (the RSE). Installation of the RSE containing rack-mounted fault tolerant servers and communications equipment. Following the installation CS contracted Carra to provide a five-year all-hours maintenance and call-out engineering service that includes RSE maintenance cover as well as providing full-time ICT engineering at the eFlow back-office in Clonshaugh, County Dublin.

### **Benefits to our customer**

Carra provides trained (health and safety, traffic management, tolling system technologies), certified, fully equipped vehicles and tolling engineers to carry out a comprehensive preventative maintenance regime of tasks and reliably deliver within response times thus ensuring the accuracy and reliability of the eFlow free-flow tolling systems.

### **Our expertise**

Carra has a proven track record in providing reliable tolling maintenance services and solutions incorporating the best and most appropriate technology and methodologies helping them to minimise the costs of operating toll plazas by delivering impeccable customer service and managed quality. The equipment maintained includes rack-mounted servers and communication equipment, air conditioning system, UPS and standby generator, 26 gantry-mounted beacon tag readers, 18 ANPR cameras, 8 gantry-mounted over lane lasers for the vehicles detections and Classification (OSIS), 17 video cameras (VAS), 4 Cameras for the count/classification and 13 CCTV Cameras for the site safety.



[www.eflow.ie](http://www.eflow.ie)

Customer's challenge:

Accuracy and reliability of motorway-speed tolling systems.

Carra's services:

Installation of RSE and gantry-mounted high-speed vehicle detection equipment. All hours on-call and preventative maintenance tolling engineering, preventative and corrective maintenance, technology refreshment.

Customer's benefits:

Minimised cost of operation and maintenance and access to fully trained, certified, equipped and experienced tolling engineers.

Carra's Expertise:

High-speed ANPR tolling systems and technologies including traffic recognition, classification and counting technology, CCTV and laser triggering systems.

