

## Case Study: Highways Agency

### Highways Agency

Established in 1994, the Highways Agency (HA) is an Executive Agency of the Department for Transport (DfT). It is responsible for the operation and stewardship of the strategic road network in England on behalf of the Secretary of State for Transport. Its primary functions are to manage traffic, tackle congestion, provide information to road users and improve safety and journey time reliability, whilst respecting and minimising the adverse impact on the environment.

The HA's road network, ranging from motorways to single carriageway trunk roads (the major A roads), is valued at over £81 billion. It carries a third of all road traffic in England and two thirds of all heavy freight traffic. The network provides a vital service to commerce and industry and to the lives of individuals and communities.

The HA fulfils its role by working closely with its partners and contractors to deliver an efficient and sustainable network that meets the needs of all our customers. It has also forged strong links with other road administrations in Europe and around the world for the exchange of information, experiences and expertise.



### Using telematics to assist the road traveller with safety and reliability in mind

#### The challenge

The Highways Agency maintains, operates and improves the network of trunk roads and motorways in England. Over the last 20 years telematics has played an ever increasing role in providing a safe and reliable road service to road users in addition to providing improved travel information. As traffic volumes increase and better use is made of the existing road infrastructure the use of telematics becomes increasingly important.

To illustrate the scale of the challenge, more than 151 billion vehicle kilometers of journeys take place on England's network every year, with most congestion being caused by volume of traffic (65%), followed by accidents (25%) and roadworks (10%).

#### The solution

IPL has played a key role in the following telematics systems:

- Controlled Motorways and MIDAS (Motorway Incident Detection and Automatic Signalling) – IPL has provided extensive managerial and technical support of MIDAS, Controlled Motorways, Control Office Base Station (COBS) and Signalling since their inception.
- Message Signs – Starting with the trial on the M25 IPL has played a key role in programme management, specifications and procurement through to the commissioning of systems.
- Ramp Metering – As part of the M3/M27 pilot scheme IPL provided technical support to the prime contractor throughout the project.
- Active Traffic Management (ATM) – IPL is a key member of the ATM

Managing Consultants team and is responsible for the telematics stream.

- Network Active Traffic Management Subsystem (NASS) – IPL is the prime contractor for NASS which combines real-time traffic flow data with traffic modelling to identify potential traffic flow problems. It then experiments with various congestion control strategies and implements the most beneficial e.g. setting advisory message signs for the motorist.
- Closed Circuit Television (CCTV) – IPL is the software sub contractor for the 2nd generation CCTV trial system.
- Open Travel and Traffic Information Access Point (OTAP) – IPL is supporting the Highways Agency in their ISO/CEN standardization including modelling traffic data exchanges.

#### The highlights

The Controlled Motorways System was first introduced in 1995 on the M25. The scheme reduced injury accidents by 10 per cent and damage-only accidents by 30 per cent.

IPL is recognised as a "centre of excellence" for technical knowledge on Highways Agency systems and sub-systems. Some IPL staff have worked in excess of 10 years on Highways Agency assignments and nearly 100 IPL staff have experience on a variety of Highways Agency projects.

Our level of involvement in the Highways Agency's telematics systems has been such that our depth and breadth of knowledge of them is unparalleled, placing us in a position where both the Highways Agency and their other consultants and contractors treat us as a key source for information and guidance.

## About IPL

Founded in 1979, IPL has a long history of successfully delivering excellent value consultancy and end-to-end solutions to both the public and private sectors.

IPL's consultancy is renowned for its quality and value. Our consultants are talented and independent-minded individuals with extensive industry experience. We consistently exceed our clients' expectations through a combination of imaginative thinking, managerial and technical expertise and many years of systems engineering experience.

IPL's track record in end-to-end solutions development is exceptional. Our proven development methodology allows us to cut through technical complexity, manage risk and completely focus on delivery. We consistently deliver reliable, efficient and accurate systems to a precise schedule.

IPL is an ISO9001:2000/TickIT registered company having a permanent workforce of 240, revenues of ca. £21M p.a. and 40,000 sq ft of secure office space in central Bath.



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