

Keeping highways moving with Active Traffic Management



Serco's Active Traffic Management Expandable Modular Control System (ATM EMCS) will be piloted on a 17km section of the M42, will provide flexible management to make the best use of existing road space and help alleviate congestion.

Serco has been contracted to develop and deliver a new control system that will manage the ATM trial area and allow the Highways Agency to trial new and innovative network management concepts.



The Active Traffic Management project operates on a 17km section of the M42, between Junctions 3A and 7, making the best possible use of existing road space and help control congestion.

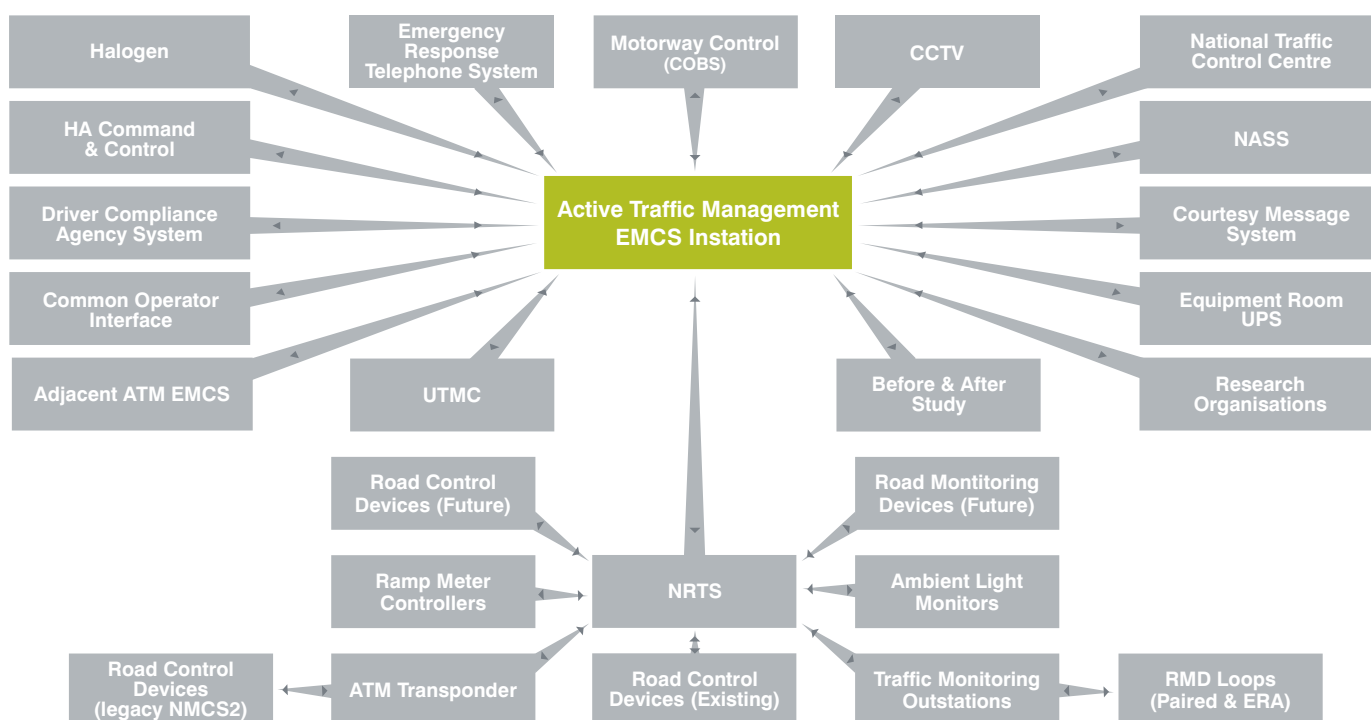
The objective is to:

- Reduce congestion
- Reduce the impact of accidents/incidents
- Reduce driver stress
- Provide more reliable journey times

- Increase information for the driver
- Maintain current safety levels

The ATM Expandable Modular Control System will provide the Highways Agency with a framework that will allow for the development and deployment of Operational Regimes (OR), which the system will automate. These operational regimes will provide functionality such as hard shoulder running, 3-lane variable speed limits and lane marshalling. The OR concept allows the HA to quickly develop and try out new methods for

Innovative solutions for traffic management



Serco will be providing the TIMS product that delivers a highly configurable user interface and the ability to define Operational Regimes as Action Plans. Serco will also be providing the configuration, integration, deployment and ongoing support of the system.

network management without the need for costly system enhancements.

The system will be delivered in 3 phases with safety firmly in mind and will therefore be developed under the IEC61508 framework for safety engineering. The system updates are planned to occur at

approximately 6-month intervals, which will add new interfaces to external systems such as command & control. Serco will also provide 3 years of post development support services once the first delivery is complete and the Highways Agency (HA) have options for two further 1-year extensions to this service.

The project has just completed the high-level design phase and the HA have requested additions to the system including:

- **Management of Access Management (aka Ramp Metering) equipment**
- **Interface to legacy roadside signalling equipment**
- **Monitoring of Emergency Refuge Areas**
- **Interface to Ambient Light Monitoring roadside equipment**



Enabling safe, swift travel

Integration of Systems

The ATM pilot scheme combines a number of motorway technologies to maximise their benefits. Building on best practice and experience from the UK and around the world, ATM combines proven technology, infrastructure and procedures with new and innovative ideas.

These make the best use of the existing road space, providing additional capacity for vehicles, with the aim of reducing congestion and the need for motorway widening.

ATM can be thought of as a 'tool-box' of technologies and procedures, which can be used on their own, or together, to provide solutions to specific problems.

The control system has been future-proofed to allow expansion, both in terms of additional functionality and full-scale national deployment, dependent upon the requirements of the Highways Agency.

The ATM EMCS will provide the following:

- Traffic Monitoring
- CCTV Surveillance
- Incident Detection
- Incident Management
- Variable Message Signs (VMS)
- Lane Control Signals
- Variable Speed Limit Signs
- Driver Information
- Historical Log generation