London’s Intelligent Traffic System

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Transport for London
Transport for London

Traffic management
- 580km of major roads (including bridges and tunnels)
- 6,000 traffic signals
- Congestion Charging Scheme

Expenditure in 2009/10 = £9.0bn per year

Walking

Docklands Light Railway, Tramlink and London Overground

Expenditure in 2009/10 = £9.0bn per year

Taxis
- 22,000 black cabs
- 44,000 minicabs

River Services

London Underground
- 3m journeys per day

London Buses
- 8,500 buses
- 6m journeys per day

Cycle Hire
3m since launch in summer 2010

Dial-a-Ride
Proposal 30 – Mayor’s Transport Strategy

‘TfL will introduce measures to smooth traffic flow to manage congestion (delay, reliability and network resilience) for all people and freight movement on the road network’

- Move away from reducing congestion
- Move towards improving reliability and resilience
- and people movement
- and recognition of freight

With no scope for new road building and limited budget for big road projects, ITS technology plays a key roll in achieving this objective.
### Traffic Directorate - Intelligent Traffic System programme

#### Critical Issues addressed by this programme

- Obsolescent Infrastructure
- Degraded JTR
- Increased congestion
- Incomplete data for Road Management
- Fragmented Systems
- Limited control of Moderate events
- Subjective decision making
- Inadequate traffic information
- Weak situational awareness

#### The programme delivers

**Data Management**
- Predictive Capability for corridors
- New data sources, gaps filled
- Decision support modelling to ORN

**Integration – One TfL**
- Efficient information transfer
- JTR monitoring integrated
- Journey time information integrated

**Operational**
- Real time disruption management tool
- Situational awareness system
- Effective Single User Interface
- Enhanced road user information

**Modernisation**
- Mapping tool upgraded for Olympics
- UTC/SCOOT upgraded and improved with emissions module
- Essential security, resilience, compliance
- Improved/maintained system availability

#### Benefits

- Policy responsive systems
- Reduced CO₂, NOₓ and P10’s
- Increased data utilisation
- Capability to manage moderate events (75% of disruption)
- Improved operational decision-making – focused interventions
- Improved JTR for all road users including buses and freight
- Improved predictability of JTR
- Improved ability to interpret traffic impact
- Objective situational awareness
- Improved road user satisfaction and information
- Reduced costs of obsolescence and fault fixing
- Improved performance measurement.

#### Challenge by 2012

- Operation of road network during Olympics
- MTS proposals 30, 31, 33

#### Challenge by 2031

- 1.25m Population increase
- 750,000 Additional Jobs
- 14% increased traffic demand

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*Figure showing the framework of the Intelligent Traffic System programme, detailing critical issues and the programme's deliverables along with their benefits.*
1. Prioritise investment: Focus on key areas

- Improve our modelling capabilities
- Better management of our network
- Improve journey information
Prioritising Investment

Congestion Management Areas

Legend
- Congestion Management Area Pinchpoints
- Congestion Management Area Segments
- Transport for London Road Network

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Prioritising Investment

Corridor Management

Key
- Major Junctions
- Airport
- M25

Corridor
- A1
- A1 / A41
- A10
- A12
- A13
- A2
- A2 / A20
- A20
- A205
- A21
- A23
- A24
- A3
- A3 / A205
- A316
- A4
- A40
- A406
- A41
- Bishopsgate Cross Route
- Blackwall Tunnel
- City Route
- Farringdon Cross Route
- Inner Ring
- Southern River Route
- Western Cross Route
• 15 miles linking Bucks with Paddington
• Mainly 3 lanes, with three 2-lane sections
• 70 signals
• 80 opportunities for improvement identified
Focus on key areas

2. Improve our modelling capabilities: improve data capture and prediction

Better management of our network

Improve journey information
Example - ONE Model

At present: Oversaturated 31 junctions
Focus on key areas (improve data capture and prediction)

Improve our modelling capabilities

3. Better management of our network

Improve journey information
Lane rental and forward planning

1. Lane Rental
2. Data heat map
3. Engineers’ areas
### Focus on Journey Time Reliability

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Real-time Command and Control

- MetroComm (Metropolitan Police Traffic and Transport)
- London Streets Traffic Control Centre (LSTCC)
- CentreComm (London Buses)
Focus on key areas (improve data capture and prediction)

Improve our modelling capabilities

Better management of our network

4. Improve journey information
Notifying and engaging the road user

- Live web information
- GPS applications
- Traffic Radio

www.tfl.gov.uk/trafficnews
Releasing Traffic Data

http://data.london.gov.uk/

Welcome to the London Datastore
## Expected benefits from ITS investment

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