

The ROADflow logo, consisting of the word 'ROADflow' in white and light blue text above a graphic of white and blue horizontal lines representing a road.

**ROADflow**

The NSL SERVICES GROUP logo, featuring a stylized 'R' icon in yellow and green, followed by the letters 'NSL' in large green font and 'SERVICES GROUP' in smaller green font below it.

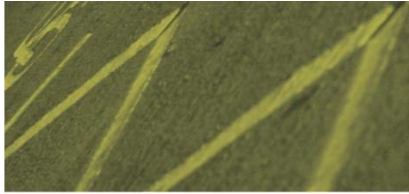
**NSL**  
SERVICES GROUP

## **Automatic Digital Enforcement System for Traffic Management**

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## • **Attended (Manual) Enforcement**

- Fixed CCTV Assets: Contravention Capture and Review in Back Office
- Fixed or Portable CCTV Assets: Capture and Review via Wi-Fi/Fixed Lines in Local Reception Vehicle
- Mobile CCTV: Contravention Capture and Review in Vehicle

## • **Unattended (Automatic) Enforcement**

- Fixed Solution: Automatic Evidence Pack Capture, Review in Back Office via fixed communications lines
- Mobile Solution: Automatic Capture, Review in Back Office via USB, Wi-Fi

# MOBILE CCTV Case Study



- Mobile CCTV Concept Developed by SEA and Transport for London via TfL's Digital Traffic Enforcement System (DTES) Programme.
- Replacement of Analogue Technologies with Digital Improves Data Collection and Incident Review Efficiencies.
- Supported TfL goals of Enhanced Compliance to yield improved Safety, Journey Times, Bus Reliability and Reduced Congestion.
- Integrating a Number of COTS Technologies, Smart Car Enforced TfL's Red Routes from March 2006 – March 2009.

# MOBILE CCTV

## Broadening the Concept



### Advances in Technology: Mobile CCTV

- ANPR Detection of Vehicle
- Rapid Comparison of Time and Position (GPS) with Database of Enforceable Areas/Effective Times
- Evidence Pack Generated comprising:
  - Close-Up Image (IR)
  - Configurable Context Images (**V**)
- All images overlaid with location, time and frame count.
- Automatic Check against Exempt Vehicle Lists/Persistent Offender Lists
- Evidence Pack Compatible with Local Authority Back Office Review Systems
- Full Audit Trail
- Manual Triggering Option Available



- **Unattended:**

- Specific No Stopping Zone Enforcement (Schools, Bus Stops and Crossings)
- Bus Lane Enforcement
- Residents Parking Enforcement
- Timed Bay Enforcement
- Persistent Offenders Enforcement

- **Attended:**

- General Parking Enforcement
- Other Moving Traffic Offences (Yellow Box Junction, Banned Turns)
- Environmental Crime and other 'Stop and observe' Applications



- **Mobile**

- Enhance Communications (eg 3G) for Real Time System UpDates/Downloads to optimise Cashless Parking and Residents Parking Integration
- Hi-Resolution Digital Cameras
- Blue Badge ID (when RFID chips introduced)

- **Fixed:**

- Hi-Resolution Digital Cameras
- Video Analytics for Automatic Detection of Moving Traffic Offences