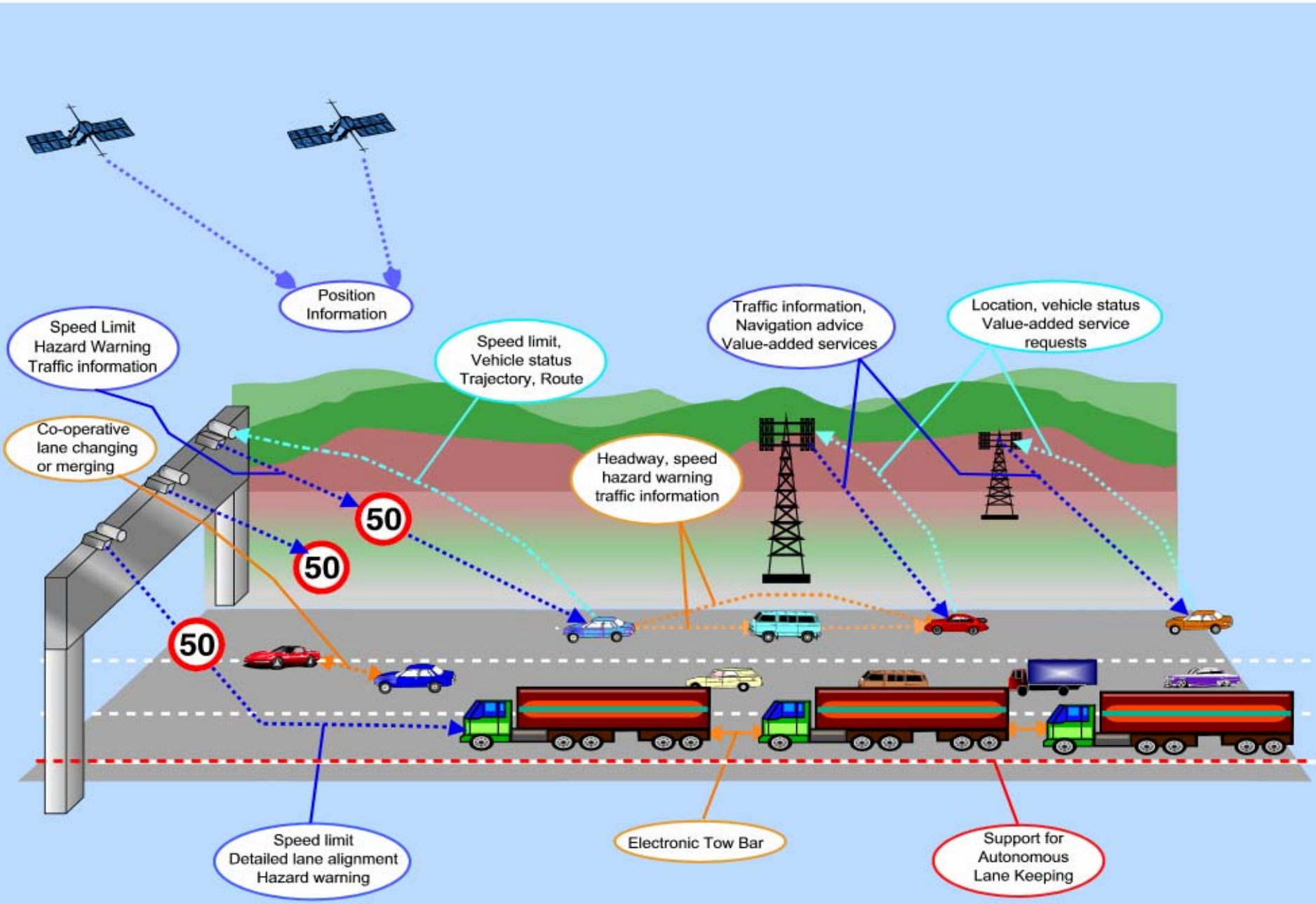
Policy Implications of CVIS

Workshop

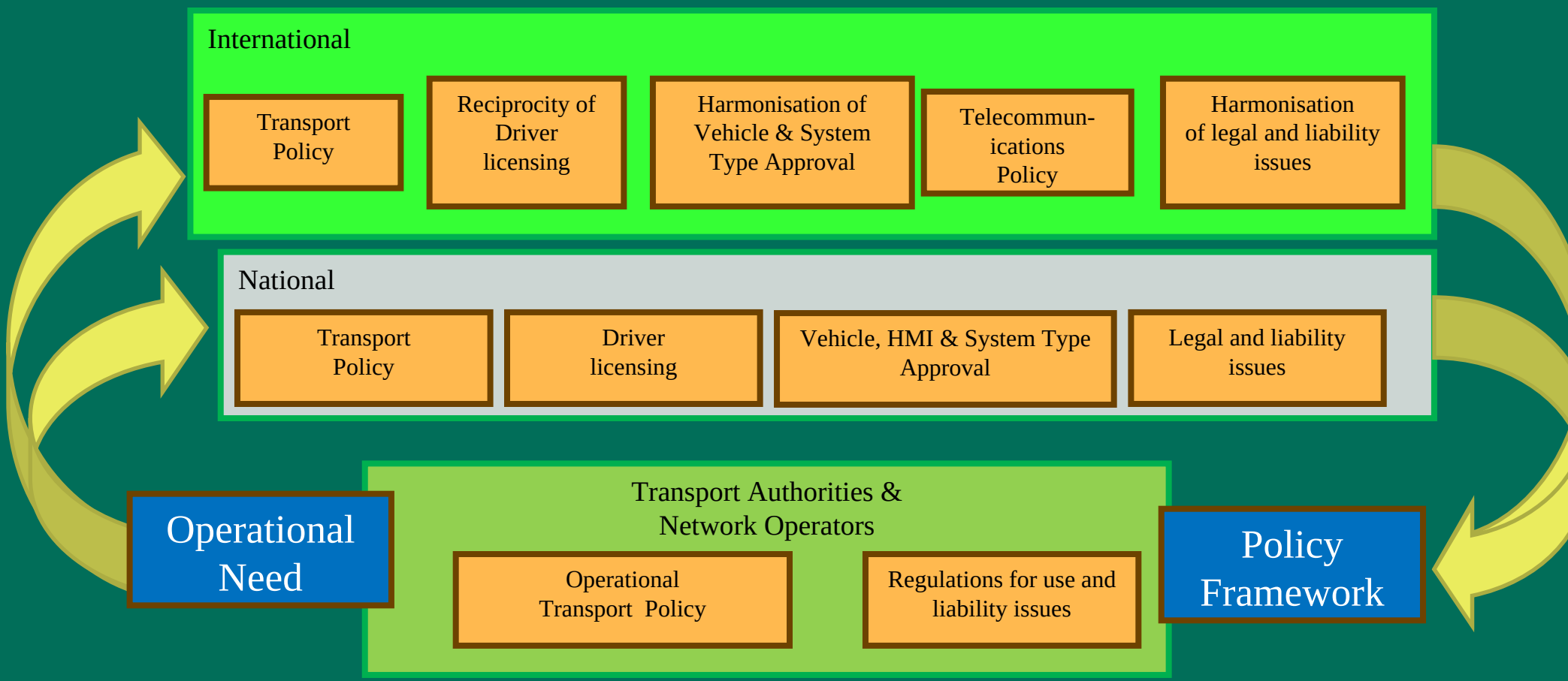
14 September 2007

Brussels


Position Information
Speed Limit
Hazard Warning
Traffic information
Speed limit,
Vehicle status
Trajectory, Route
Traffic information,
Navigation advice
Value-added services
Location, vehicle status
Value-added service
requests
Co-operative
lane changing
or merging
Headway, speed
hazard warning
traffic information
50
50
50
Speed limit
Detailed lane alignment
Hazard warning
Electronic Tow Bar
Support for
Autonomous
Lane Keeping

Objectives

- To ensure the MAJOR areas of policy have been identified
- To confirm the MAJOR issues have been identified
- To consider the relative priority of the issues
    - Impact on deployment
    - Timing
- To consider ways that the issues can be addressed
    - Who should lead?


International
Transport Policy
Reciprocity of Driver licensing
Harmonisation of Vehicle & System Type Approval
Telecommun-ications Policy
Harmonisation of legal and liability issues
National
Transport Policy
Driver licensing
Vehicle, HMI & System Type Approval
Legal and liability issues
Transport Authorities & Network Operators
Operational Transport Policy
Regulations for use and liability issues
Operational Need
Policy Framework

Agenda

- Session 1: 11:30 to 12:30
  - **Vehicle Policy**
- Lunch 12:30 – 13:15
- Session 2: 13:15 – 14:00
  - **Transport Policy – Safety policy issues**
- Session 3 14:00 – 15:00
  - **Transport Policy – Efficiency and Environmental policy issues**
- Coffee Break 15:00 -15:15
- Session 4: 15:15-16:00
  - **Driver Policy**
- Close 16:00

Policy Implications of CVIS

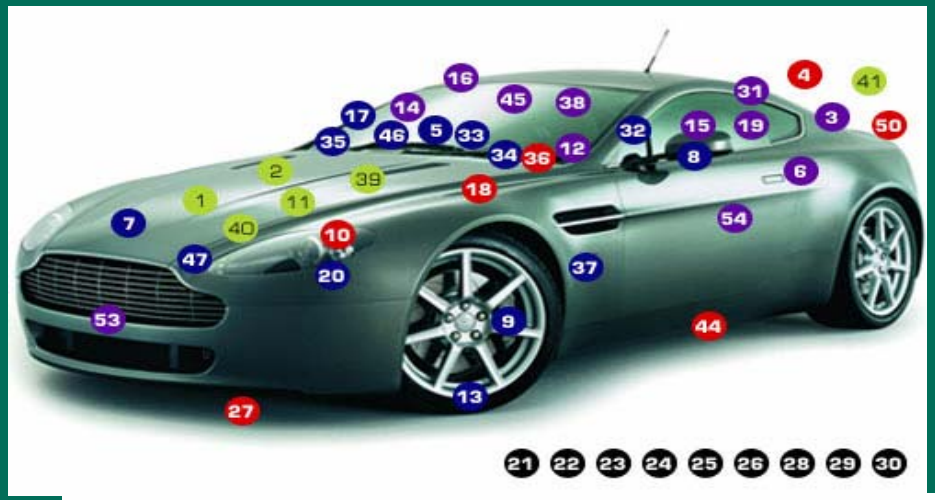
Workshop Session 1
Vehicle Policy

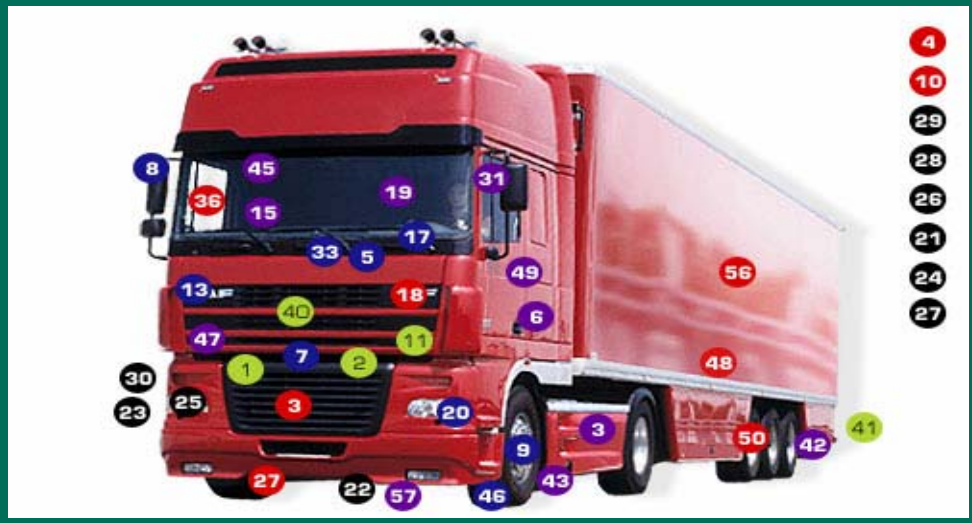
What comprises Vehicle Policy?

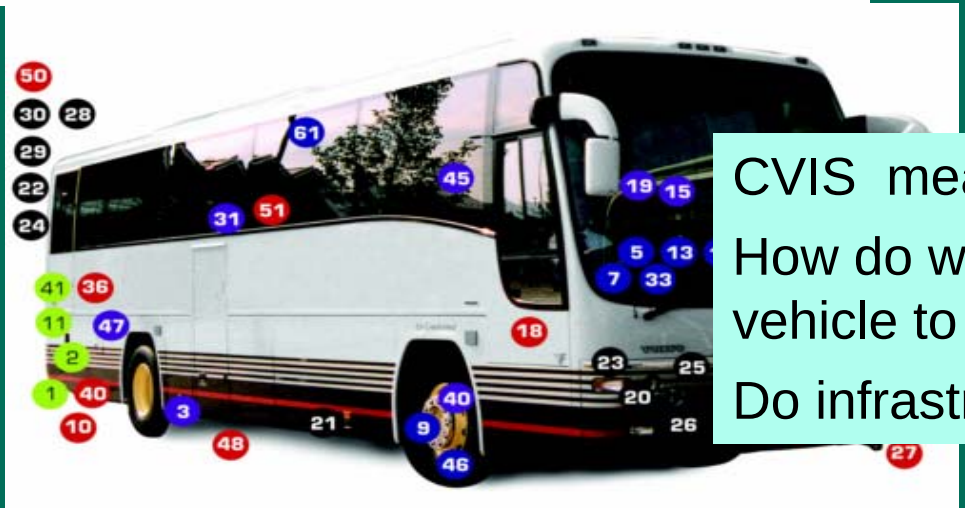
- Approval of construction and use
- Maintenance and Roadworthiness
- Human Machine Interface
- Telecommunications with vehicles

Approval of construction and use

- Currently “whole vehicle”







CVIS means vehicle is no longer a closed system

How do we “approve” vehicle to vehicle links and vehicle to infrastructure links?

Do infrastructure systems need matching approval?

Approval of construction and use

- Application will influence degree of approval
- Are current legal arrangements adequate?
- Can “unapproved” systems be prevented or isolated?
- Do we need International standards for approval to enable inter-operability?
- Who should be deriving answers to these questions?

Maintenance and Roadworthiness

Harmonised

- Minimum frequency
- Vehicle class
- Items to be tested

Not harmonised

- Standard for testing
- Cross-border recognition
- Electronic systems

Functionality and performance embedded in software

Periodic software updates: Release criteria

Backward compatibility:
Vehicle fleet has wide age profile

Human Machine Interface

Drivers are responsible for proper control of their vehicle

Criticality of information

Driver awareness of CVIS role

Trust in “information supply chain”

Are current ADAS standards applicable and adequate?

Are new mechanisms required to establish and manage “trust”?

Telecommunications with vehicles

- Implications of Wireless Access Policy for Electronics Communications Services (WAPECS)
  - Is it an enabler?
  - Are there any deployment risks?
- Interaction with personal mobile systems
  - Co-channel interference
  - Difference in technical standards and approvals.

Policy Implications of CVIS

Workshop Session 2
Transport Policy

SAFETY

Transport Policy: Road Safety

Department for Transport

ADAS

Driver

CVIS

Infrastructure Systems

Issues related to Road Safety (1)

- Potential for “risk compensation?
  - Compromises safety of other road users
- Relationship of system integrity to road safety?
  - Definition of “proper control” by driver
  - Graceful degradation
  - User trust

Issues related to Road Safety (2)

- Relationship to ADAS deployment?
  - Extend performance
  - Lower cost
  - ADAS as an agent for building “trust”
- Support for public sector priorities?
- Users perception of safety?
  - Application dependent

Issues related to Road Safety (3)

- CVIS as means of meeting traffic regulations
  - Enforcer v advisor
  - Legal status
  - Role of insurance industry

Policy Implications of CVIS

Workshop Session 3
Transport Policy

Efficiency, Environment & Other

Transport Policy: Efficiency

Department for Transport

Location
Time
Speed
Origin
Destination
Emissions

Richer Data
Improved understanding

Individual Privacy

Altruism to help community

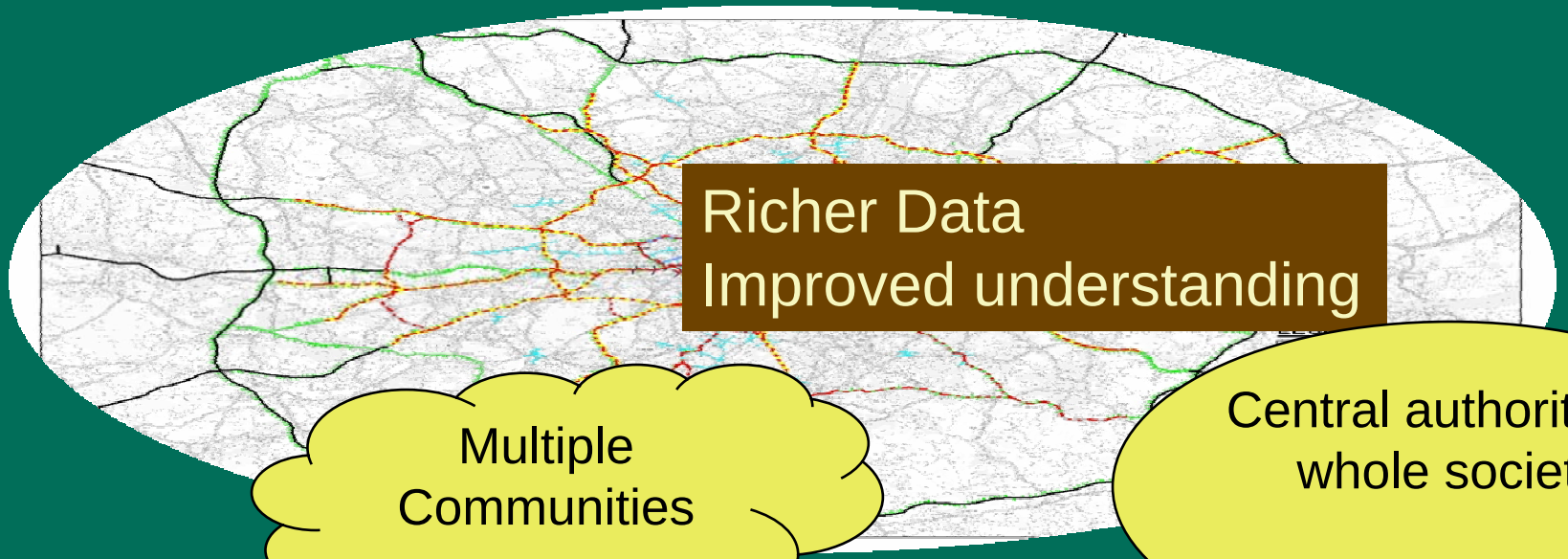
Obligation under civic or legal duty

Access & Sharing

Trust

Quality Control

Information v Control



Richer Data
Improved understanding

Multiple Communities

Central authority for whole society

Information → **Influence**

Control → **Compliance**

Environment and sustainability

- CVIS must be seen to support better operation of transport network not promote car use (HOV, PT priority, reduce accidents)
- Can CVIS have a positive impact on air quality and climate change?
    - Improved data collection
    - More fuel efficient driving
    - Emissions based charging

Public Transport

- Will CVIS undermine policies for modal shift?
- Can CVIS promote public transport
  - Enable reliable PT journeys with less impact on capacity for others
  - Enable more efficient operations
    - Assist drivers to be safer
    - Improved links to traffic control
    - Bus platoons?

Freight Transport

- Freight movement is economic necessity
  - Some part of trip will be by road
  - Increase in small deliveries as a result of internet shopping
- Can CVIS enable more efficiency and lower impact?
  - Routing and timing
  - Improved safety
  - Driver and operator licencing.

Policy Implications of CVIS

Workshop Session 4

Driver Policy

Role of driver in a CVIS environment

Driver Education

- Who should provide training for CVIS
  - Depends on application and consequences of incorrect use
    - Information, regulation, control
- Effect on driving skills as currently practised
  - CVIS makes vehicles safer and easier to drive
  - CVIS makes driving in “high stress” situations easier
- Common and intuitive interfaces

Driver testing and licensing

- Should certain CVIS applications require a “licence”?
  - What characteristics would need a licence?
  - Would CVIS licence be a subset (e.g. automatic transmission) or additional (e.g. Advance Motorist)?
- Can licensing be linked to access to CVIS enabled highways?
- Should standards for testing be international?