

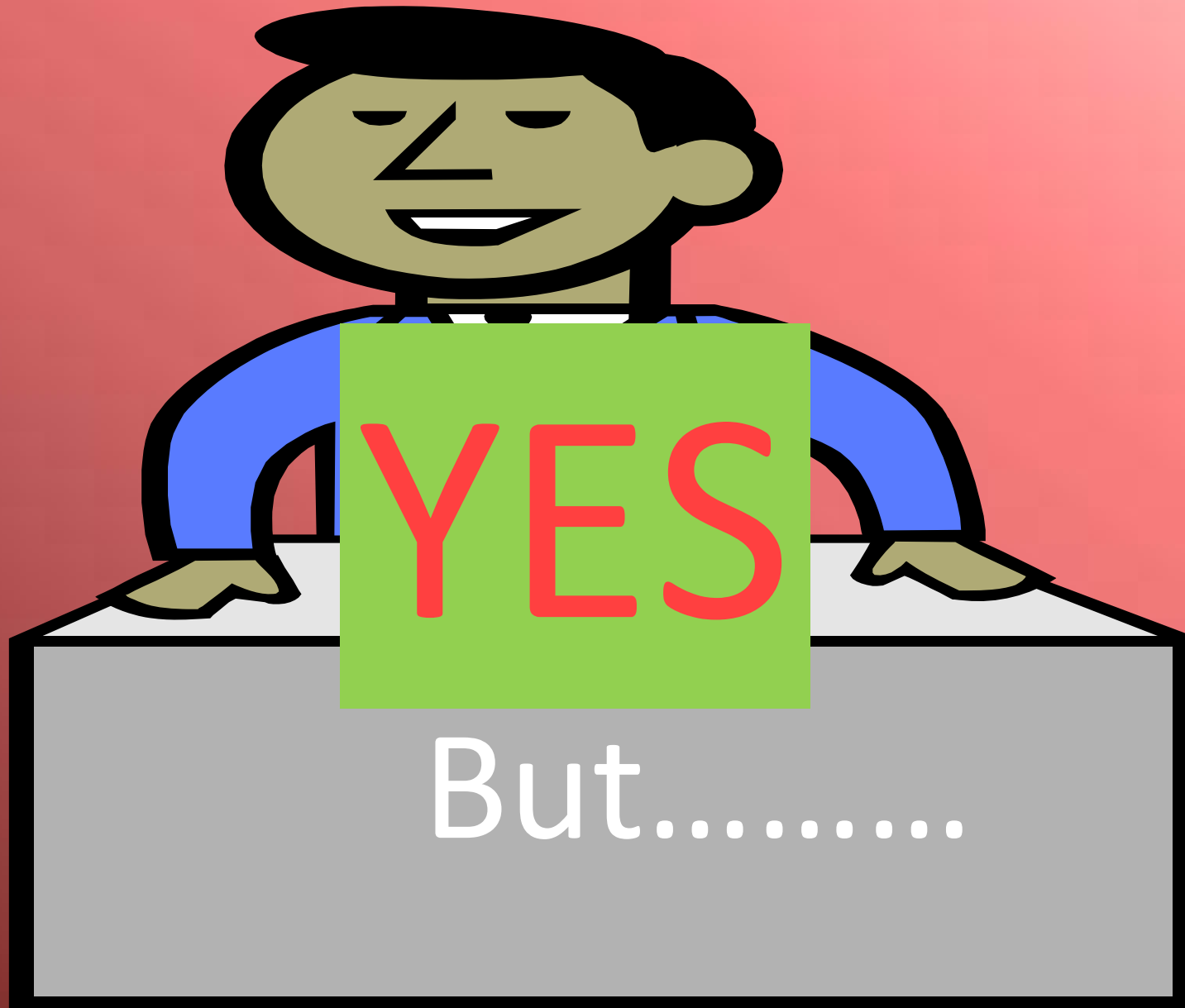


The Future of Network Management – Evolution or Revolution?

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YES

But.....



Sources

- London Traffic Systems Vision
- Co-operative Vehicle Infrastructure Systems
- MESSAGE
- MAINSPRING





High-level Goals

A Centre of Excellence

Best Practice, Knowledge base,
Partnerships, Research & Development

In-depth Understanding of
the Network

Data Collection, Network description,
Shared data access, Knowledge Tools

Policy Responsiveness and
Flexibility

Changing Policy, Geographic diversity,
Impact of policy

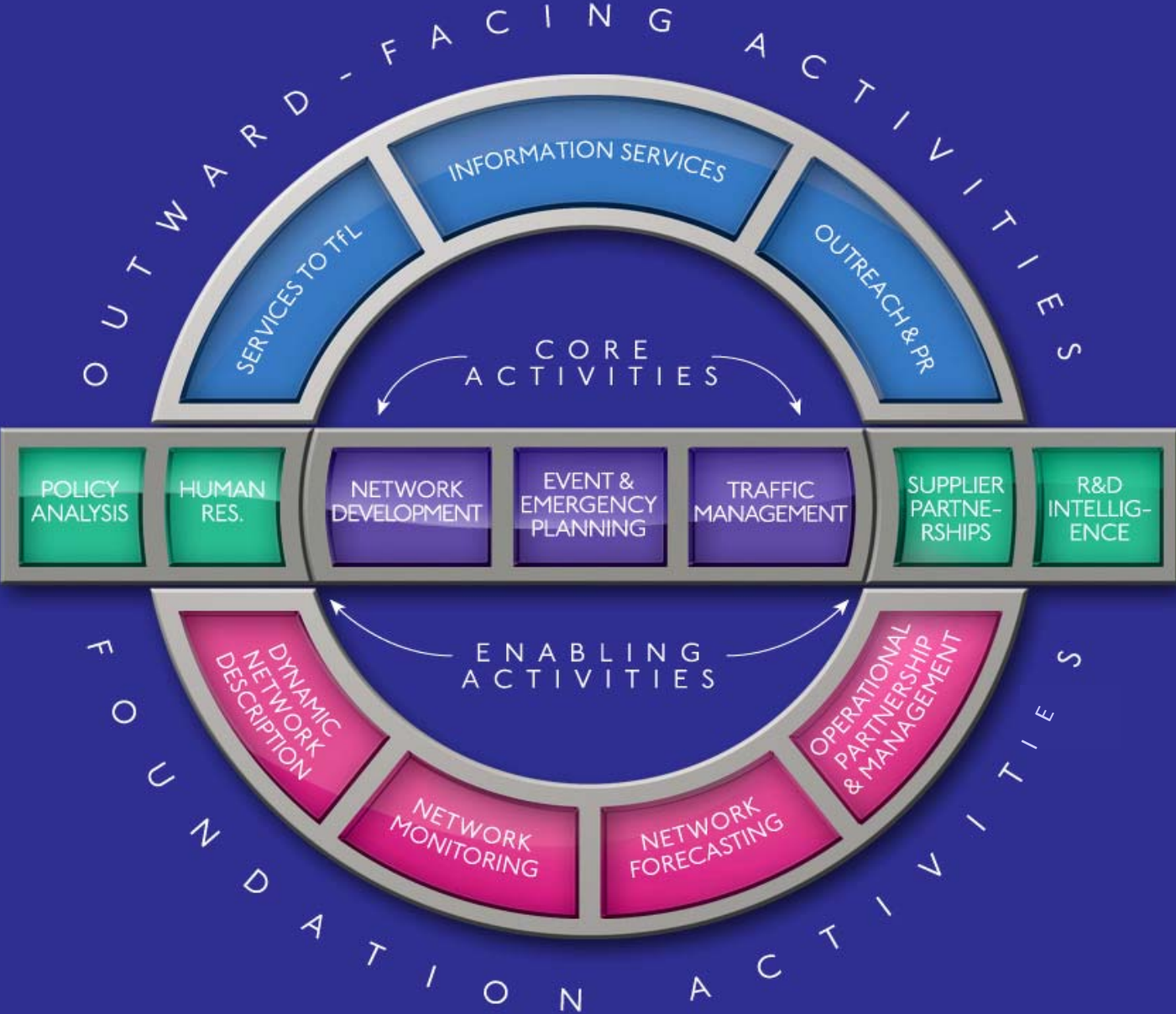
Means to manage Street
Space

Co-ordinated actions, Advanced control,
Dynamic allocation of street space

Informed Choice and
Compliance

Enable choices of mode, route
understanding of rules and restrictions

Business Activity Model



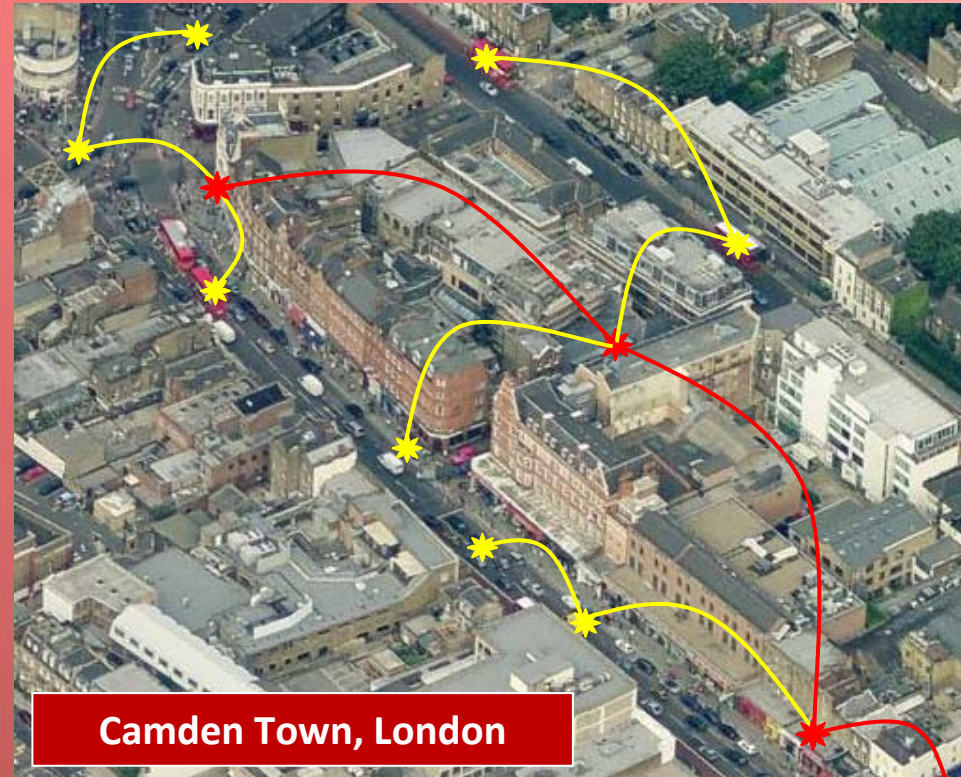


Mobile Environmental Sensing System Across a Grid Environment

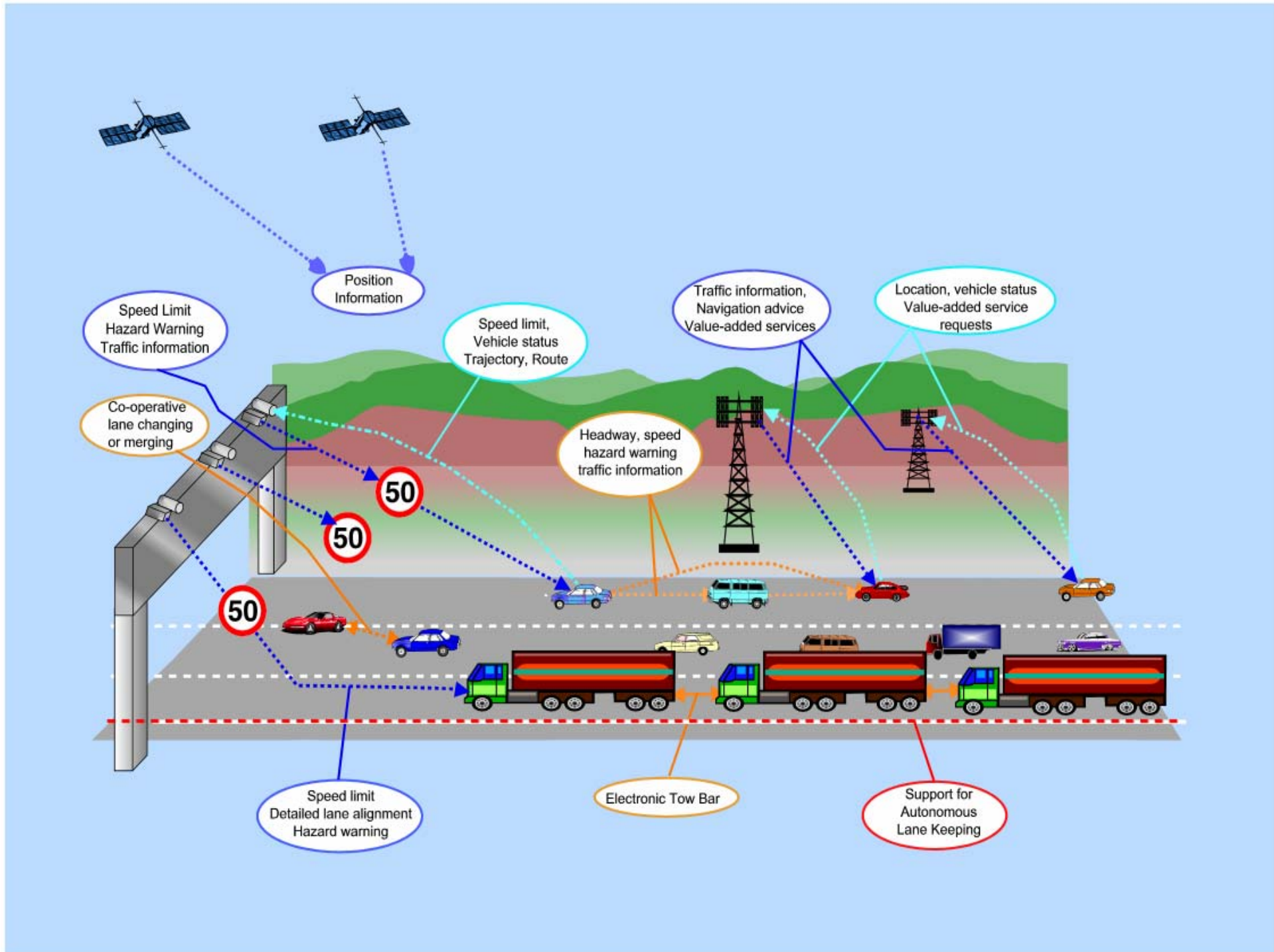


MESSAGE – Project Overview

- Heterogeneous fixed and mobile sensors on infrastructure, vehicles and people
- Sensors communicate via wireless and wired networks
- Positioning via GPS + wireless ranging
- Integration of processing along the data path
- Multiple application studies in different local contexts

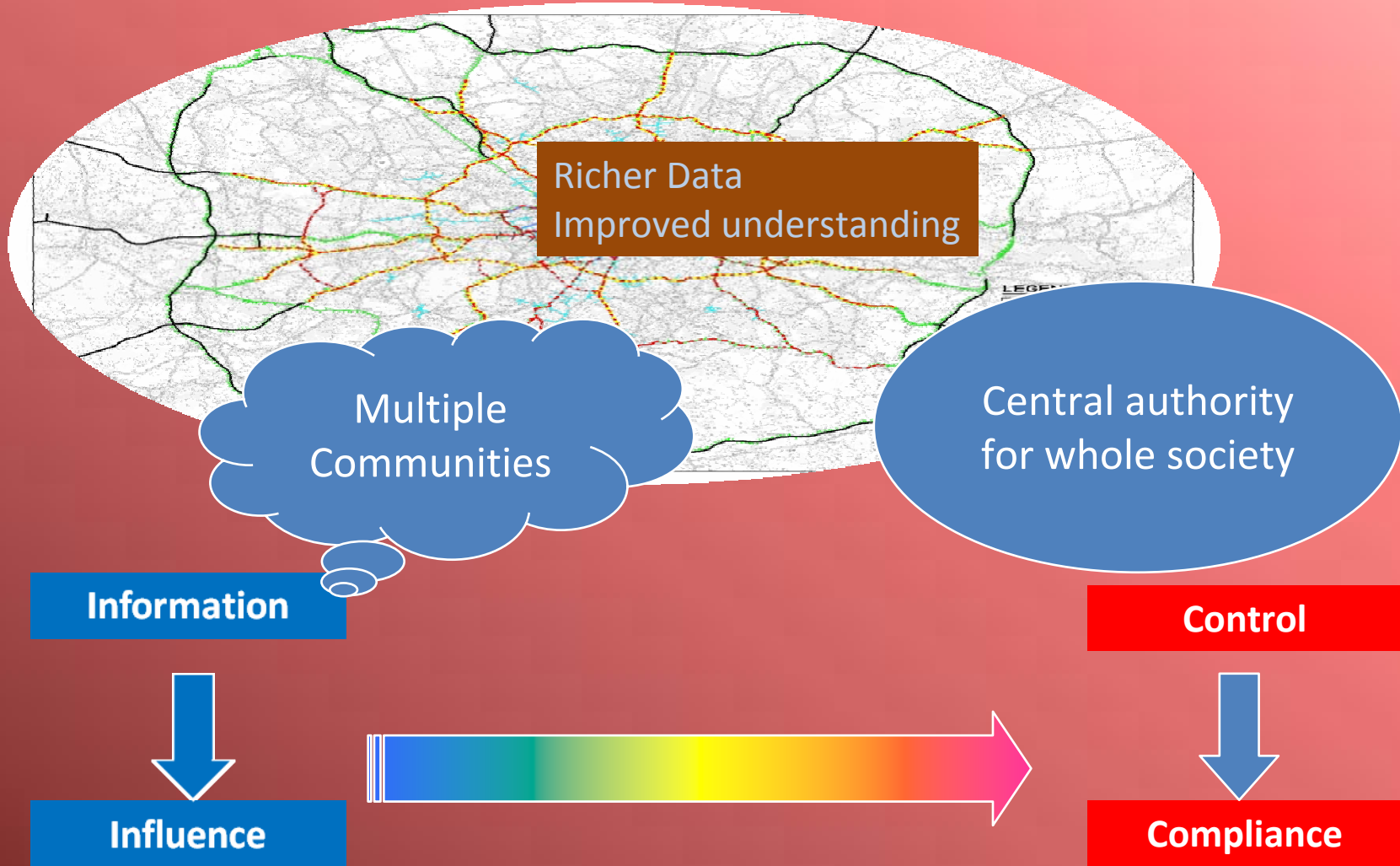


Processing





Information v Control

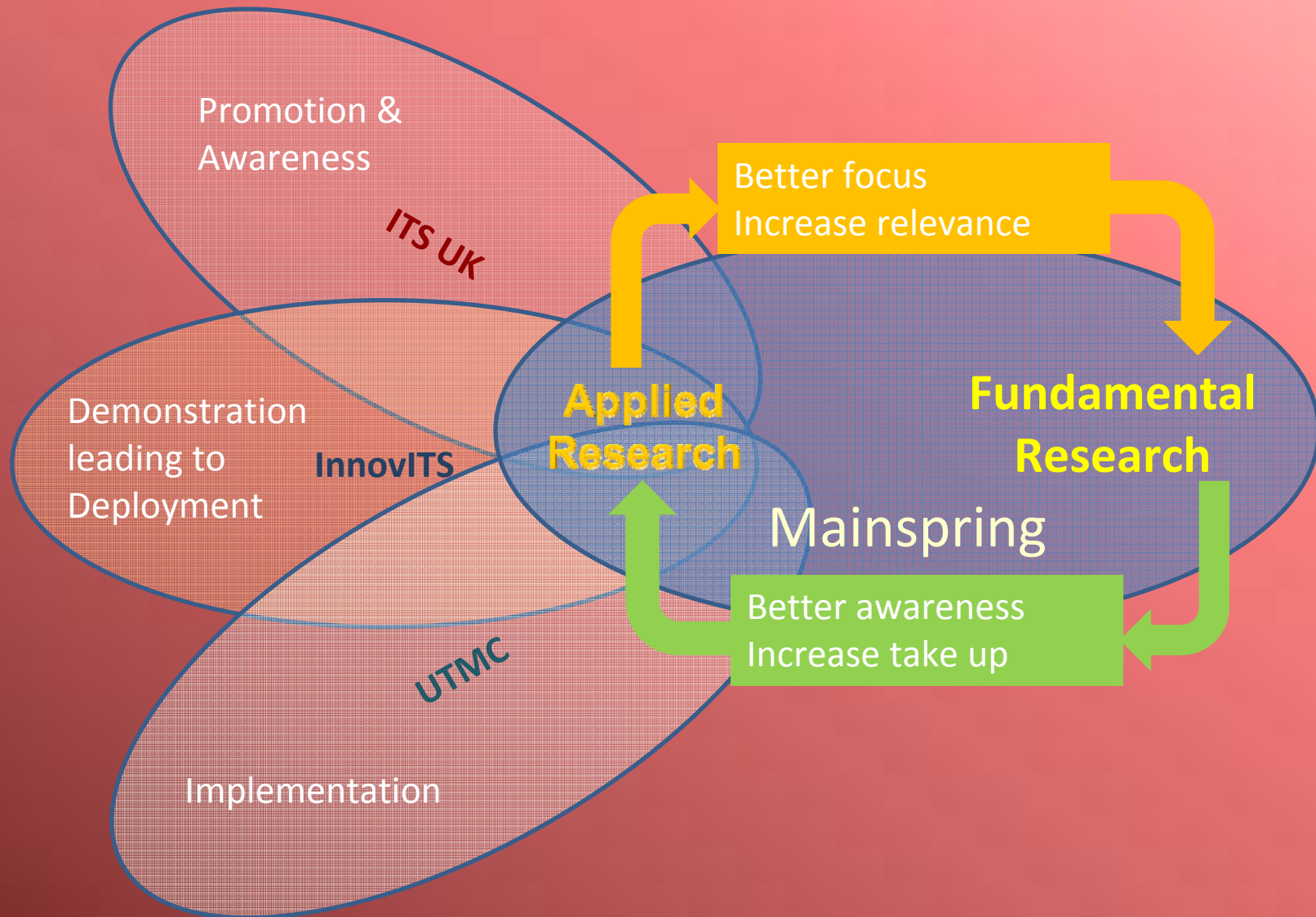




Management of Integrated
(transport) Networks - Structured
Programme of Research Into the Next
Generation



Mainspring position





Users can:

- Accurately plan their journeys.
- Understand the impact of their choices.
- travel safely, predictably and reliably.
- Be kept informed.
- Understand how to respond to information.
- Understand and accept control where required.

Vehicles (all modes) are:

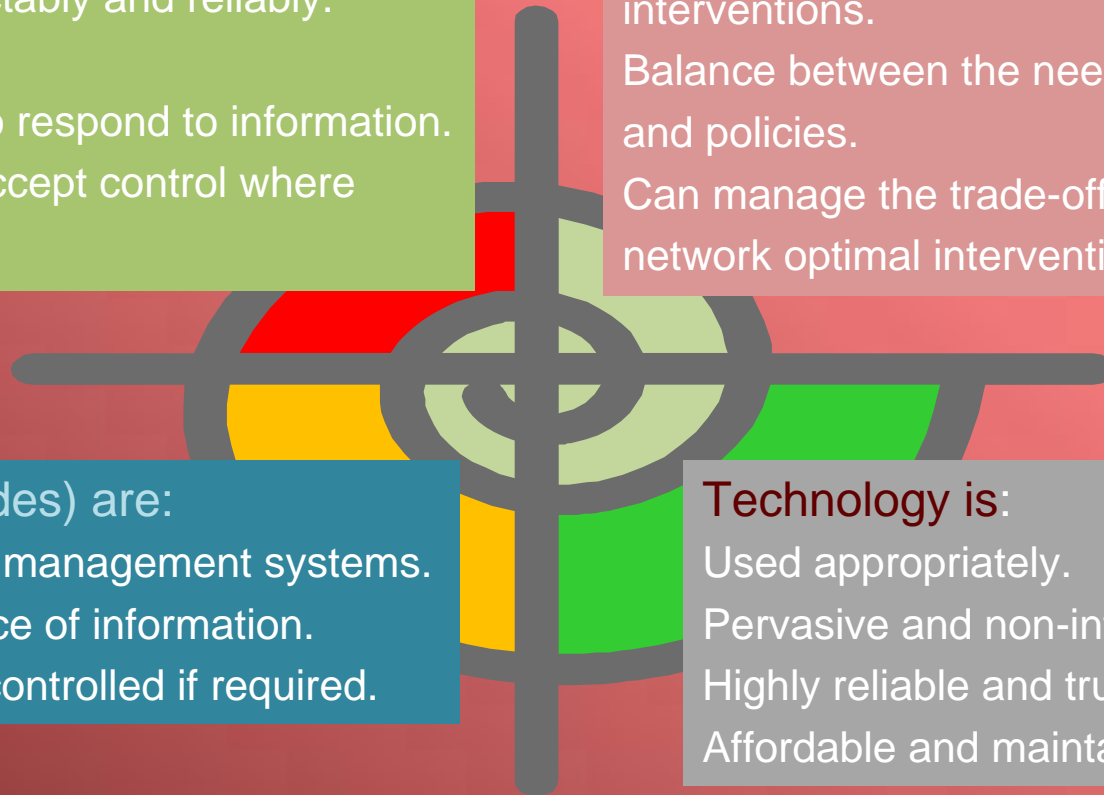
- Integrated into the management systems.
- A continuous source of information.
- Capable of being controlled if required.

Network operators :

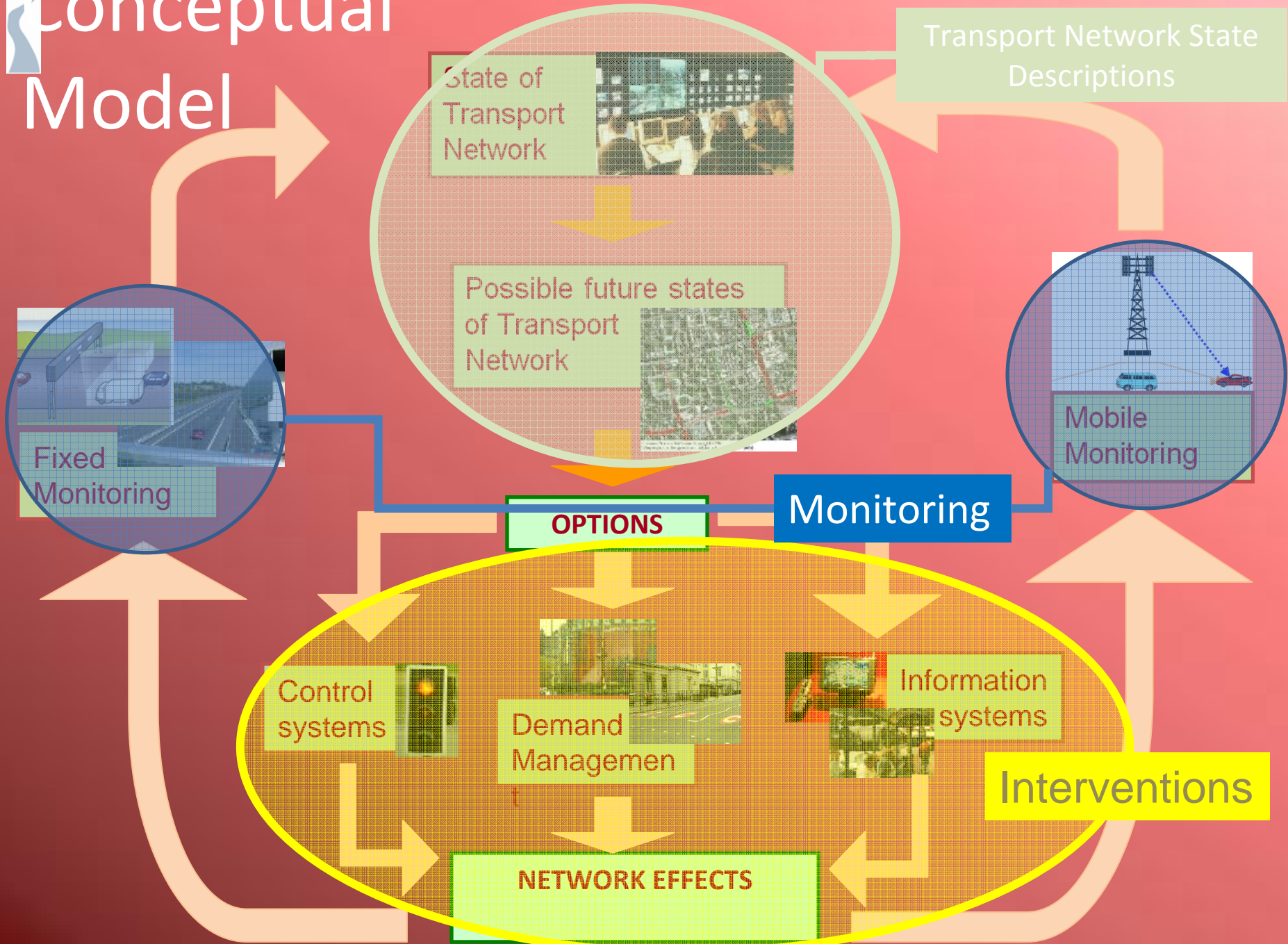
- Know accurately what is happening.
- Understand the impact of the interventions they can make.
- Can estimate the future impact of any interventions.
- Balance between the needs of different users and policies.
- Can manage the trade-off between user and network optimal interventions.

Technology is:

- Used appropriately.
- Pervasive and non-intrusive.
- Highly reliable and trusted.
- Affordable and maintainable.



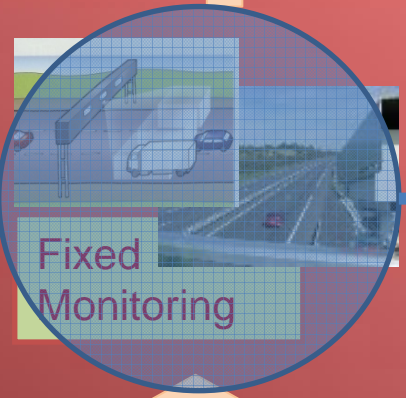
Conceptual Model



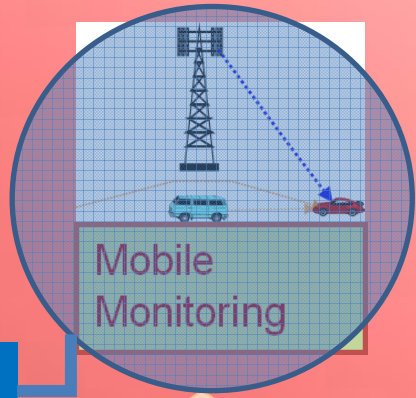
State of Transport Network

Possible future states of Transport Network

Transport Network State Descriptions



Fixed Monitoring



Mobile Monitoring

OPTIONS

Monitoring

Control systems

Demand Management

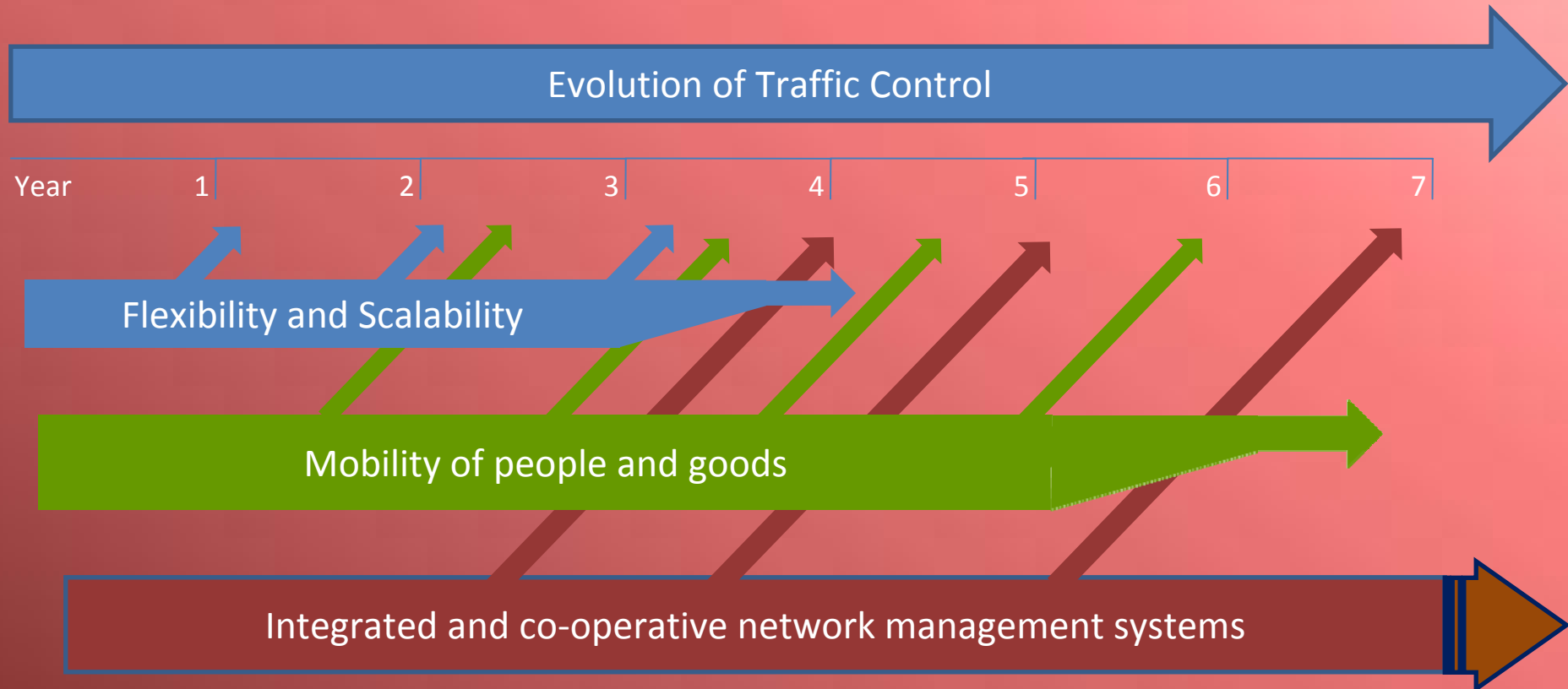
Information systems

Interventions

NETWORK EFFECTS



3 Key Strands





Role of UTMC?

Flexibility and Scalability

Cost -effective

Mobility of people and Goods

Key Enabler
Data exchange

Integrated and co-operative
network management systems

Heterogeneity
System to System



Thank You

Digital Ball still only at beta test!

