CIVITAS
Sustainable and smart mobility for all
2030

General trends and policies in traffic and demand management for sustainable mobility

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Outline

1. Cities challenges & Traffic Management SoA
2. Traffic Management & ITS
3. Trends in Traffic Management
4. The new approach & how to achieve it

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Cities' challenges

- Improve city liveability
- Reduce CO2 and improve air quality
- Reduce noise emissions
- Improve transport accessibility
- Improve safety
- Manage uncertainties & impact of climate change

- Boost economic growth
- Unlock spatial opportunities
- Enable smoother, seamless journeys
- Boost public transport
- Boost active travel
- Boost electromobility
- Better transport data

All the above are related to the every day challenge of Reducing congestion

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Traffic Management today

Basic types of Traffic management interventions (solutions)

- Distribute Traffic in an effective way across the network
- Increase throughput
- Manage the inflow traffic
- Prevent anomalies
- Control the speed
- Prioritize user groups
- Enforcement

Long history (London 1868 - Eindhoven 1968)

- Multiple measures & technologies at roads & in-car today (c-its)
- Traffic Data available due to digitization:
  - Public: national Access Points & Data lakes
  - Private :GPS probe data
- Coordination & interoperability
  - at level of network and
  - Cooperation among technology providers

Technology providers offers systems to manage & control the flow of traffic

SIEMENS swarco PEEK

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Traffic Management & ITS

Traffic Management & control is the technology response to manage the available road capacities & the transport demand in the city and alleviate congestion.

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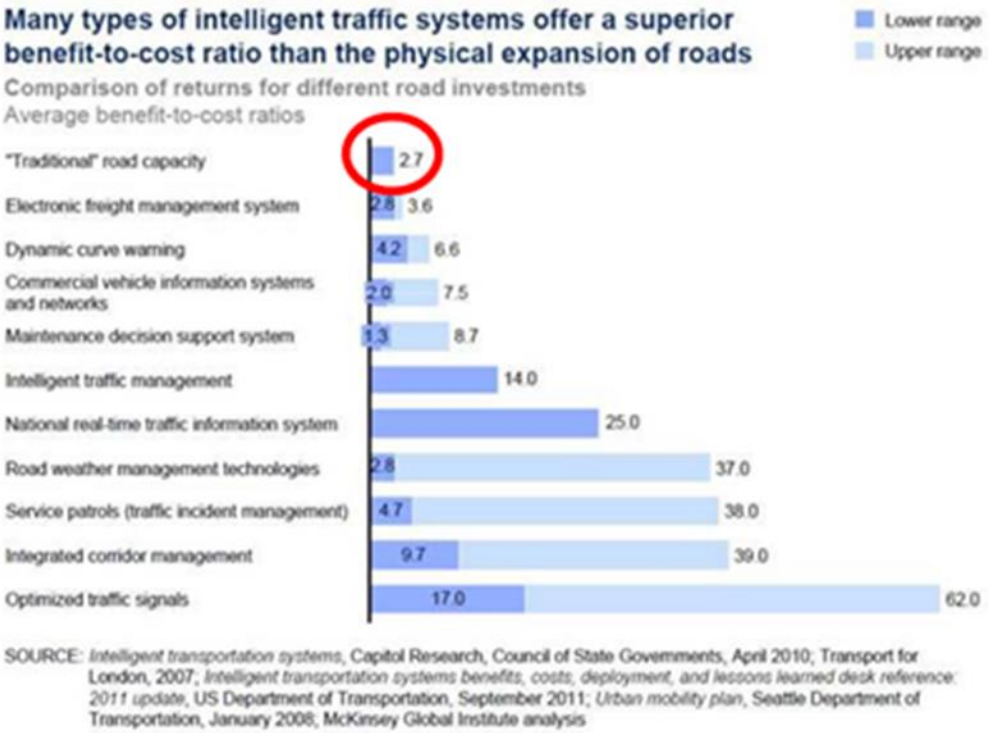
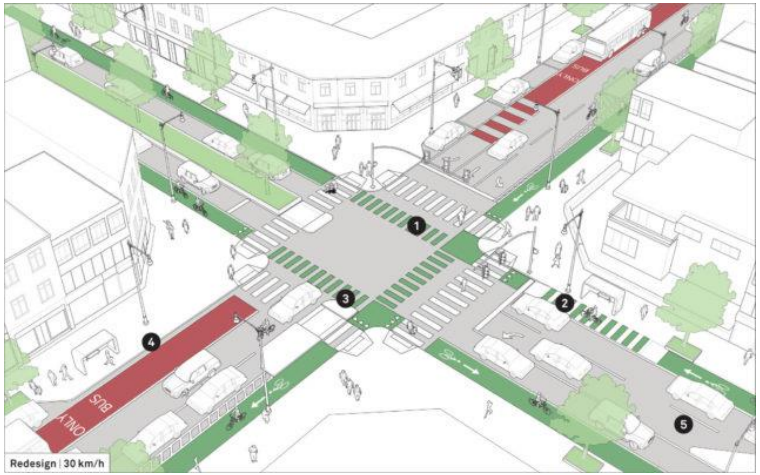
Traffic Management & ITS





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ITS & traffic management solutions

- Reactive traffic management and control
- Predictive Traffic management and control
- Public Transport and emergency vehicle priority
- Traveller information systems & services
- Parking management and information
- Red light & parking enforcement
- Dynamic route guidance
- Floating vehicle data
- Road user charging
- Fleet Management Systems
- Demand-responsive transport
- E-ticketing
- E-payment
- Mobility as a Service

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ITS & traffic management within the SUMP

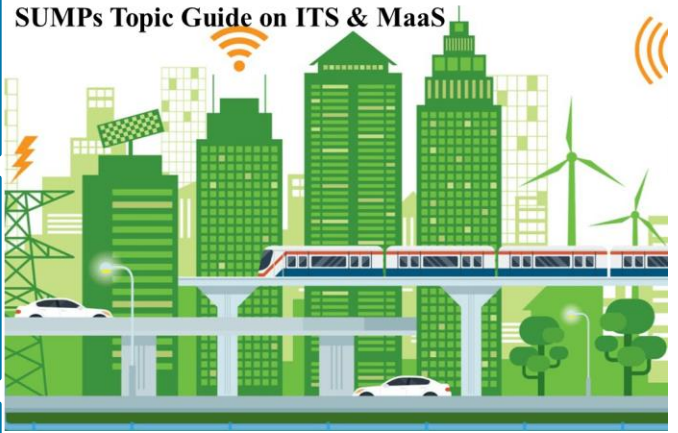
Implementation & integration is not an easy task

Phase 1: Preparation and analysis of mobility situation
> **Involve the ITS ecosystems into planning process (ITS vendors, network managers, end-users)**

Phase 2: Strategy development
> **Identify and assess impacts of ITS solutions'**
> **Utilize expert knowledge (e.g. in targeted trainings)**

Phase 3: Measures planning
> **Traffic management measures**
> **Mobility management measures**
> **Funding sources (incl. PPP schemes)**

Phase 4: Implementation and monitoring
> **Utilization and interoperability with existing systems**
> **Innovative procurement**



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Trends in Traffic Management

..follow urban mobility trends

Societal trends

- individualization,
- Active mobility,
- aging,
- virtual society/mobility
- flexibility of demand

Organizational & policy trends

- PPP, DBFMO-contracts, DITCM),
- Internationalization e.g. EC ITS-action plan, ITS Directive
- Green Deal & Cities Agenda

Economic trends

- economic crisis,
- On demand economy
- regionalisation vs globalization of economy

Act for resilience

Uncertainties management

- Climate change risks to cities
- Pandemic
- Future modal demand

Technical developments

- Dynamic traffic information systems,
- driver assistance systems, cooperative systems,
- autonomous automated cars
- Big Data Analytics & AI
- incident and event management
- penetration rate of the above
- standardizationTraffic Management

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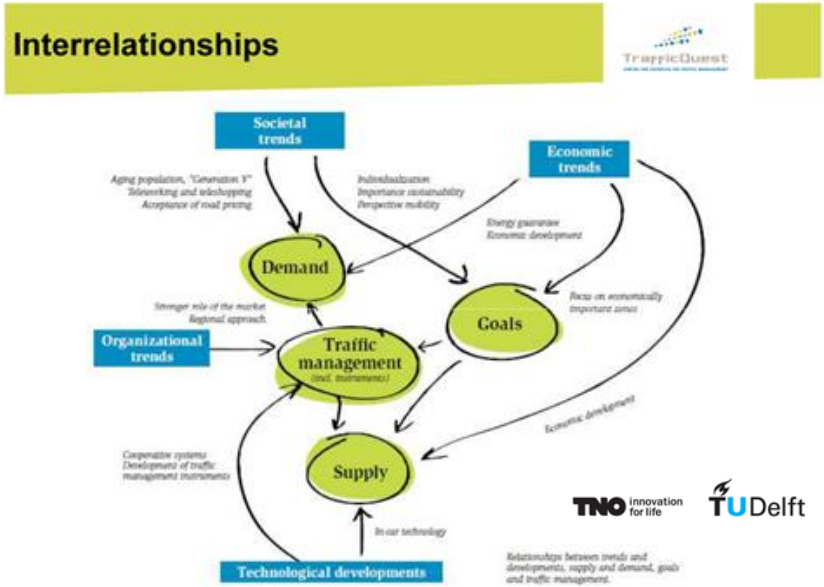
Trends in Traffic Management

Traffic Management is at the center of the approach to achieve efficient and innovative response to the complexity of future cities mobility



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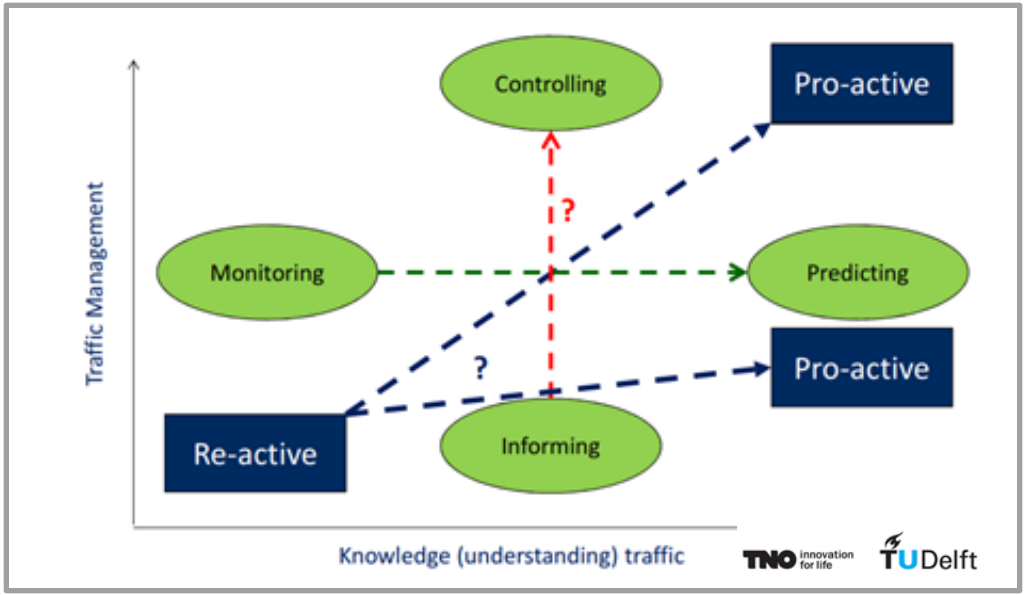
Trends in Traffic Management

- Knowing & understanding the traffic is important for proactive traffic management & congestion solving
- Sensors & Data collected are useless if are not examined based on focused questions of the cities related to problem solving .
- Traffic Management will be in the future dynamic and provided as a service depending on cities needs



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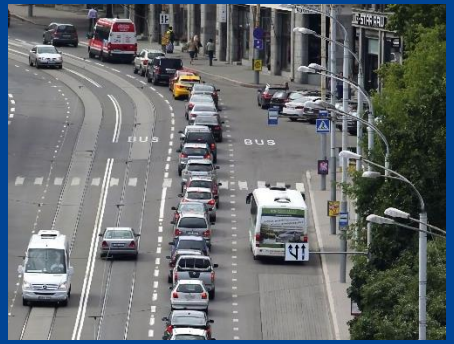
Trends in the ITS & traffic management domain



Multimodal traffic management (incl. soft modes)

Integrated fleet & traffic management

C-ITS & CCAM enabled traffic management

National Access Points & Mobility data spaces

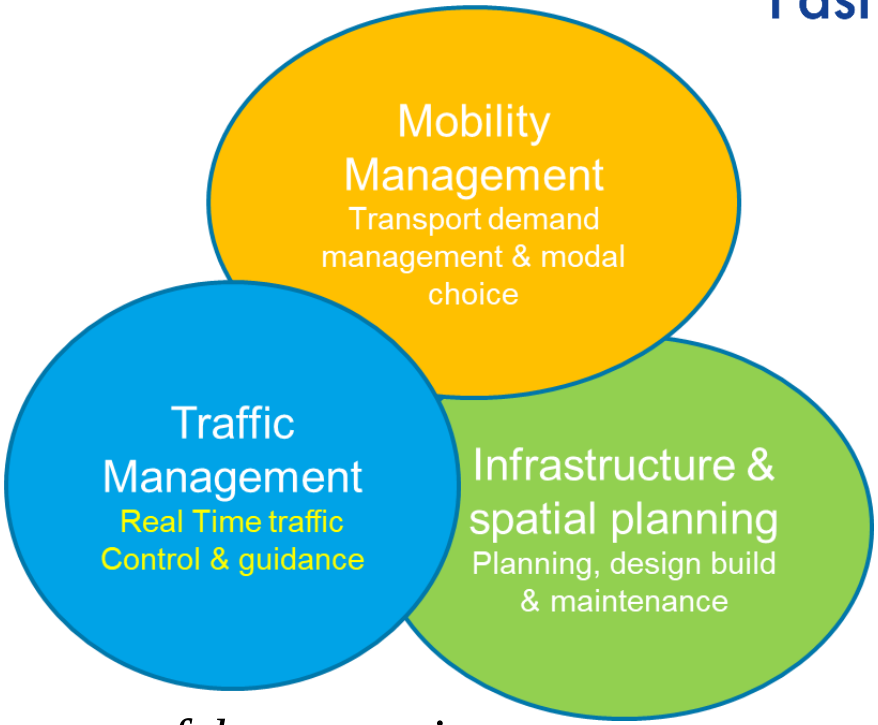
Socially inclusive traffic management

Cybersecure multimodal transport systems

The new approach & how to achieve it

3 discrete activities need to be coordinated :

- **Traffic Management**
- **Mobility Management**
- **Infrastructure & activity Management**



Follow an ecosystem approach for successful cooperation

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The new approach & how to achieve it

- **KNOW**: Collect Data from different sources & Understand our city situation through data analysis
- **PREDICT**: Develop modeling & Prediction capability for short & long term predictions of the traffic situation and of transport demand
- **OPTIMIZE**: Integrated Traffic management approach for network capacity optimization
- **RETURN VALUE**: New generation services guiding the citizens based on their location and prove sustainability of city traffic operation
- **EXPLOIT INNOVATION**: Develop new business models and collaborate with industry and service providers or neutral parties for securing good monitoring operation and continuous adaptation of traffic management Infrastructures & services

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The new approach & how to integrate innovation

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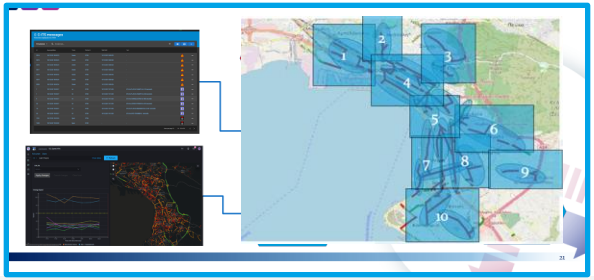
Ecosystem Living Lab approach

Disruptors & solutions providers



Public Private & Academia Partnership
Integrated network traffic optimization solutions Thessaloniki

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ITS-related EU policy framework

EU ITS Directive 2010/40/EC
Framework for the deployment of ITS

Delegated Regulation 885/2013 SSTPAs

Delegated Regulation 886/2013 Minimum safety information

Delegated Regulation 962/2015 Real time traffic information

Delegated Regulation 1926/2017 Multimodal information

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EU strategy on C-ITS

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