An ERTICO Innovation Platform

TM 2.0

ENABLING VEHICLE INTERACTION WITH
TRAFFIC MANAGEMENT

2018

⊙ About TM 2.0

TM 2.0 provides a discussion forum around the topic of interactive traffic management for all relevant stakeholders in the entire Traffic Management Procedure value chain.

Launched in 2011 by TomTom and Swarco, the TM 2.0 ERTICO platform was formally established on 17 June 2014 during the ITS Europe Congress in Helsinki. It now comprises 40 members from all ITS sectors, focusing on new solutions for advanced interactive traffic management.

⊙ Key Objectives

The platform aims to agree on common interfaces, principles and business models, which can facilitate the exchange of data and information between road vehicles and Traffic Management and Control Centres.

The ultimate goal is to improve the total value chain for consistent traffic management and mobility services while avoiding conflicting guidance information on the road and in vehicles.

"Society is going through major changes. People's attitudes are changing, which is reflected in more conscious sustainable behaviour with the expectation of being able to use all the available resources in a flexible way to fulfil their objectives.
This also has its effect on mobility and intelligent transport systems. People want to use information from many sources to make decisions and act upon them through the digital possibilities available.
This means rethinking the interaction between users and traditional public management structures. This is the challenge that TM 2.0 has taken up: harmonising the interaction between all the stakeholders to achieve a good balance between personal and societal objectives."

Klaas Rozema, TM 2.0 Chair

Traffic Management:
Traditional Situation

The Road Operator or Public Authority has traditionally been **measuring** the traffic and then, based on these measurements, tried to **influence** traffic via road signs and announcements.

The Service Providers on the other hand were better placed to **guide** the traffic.
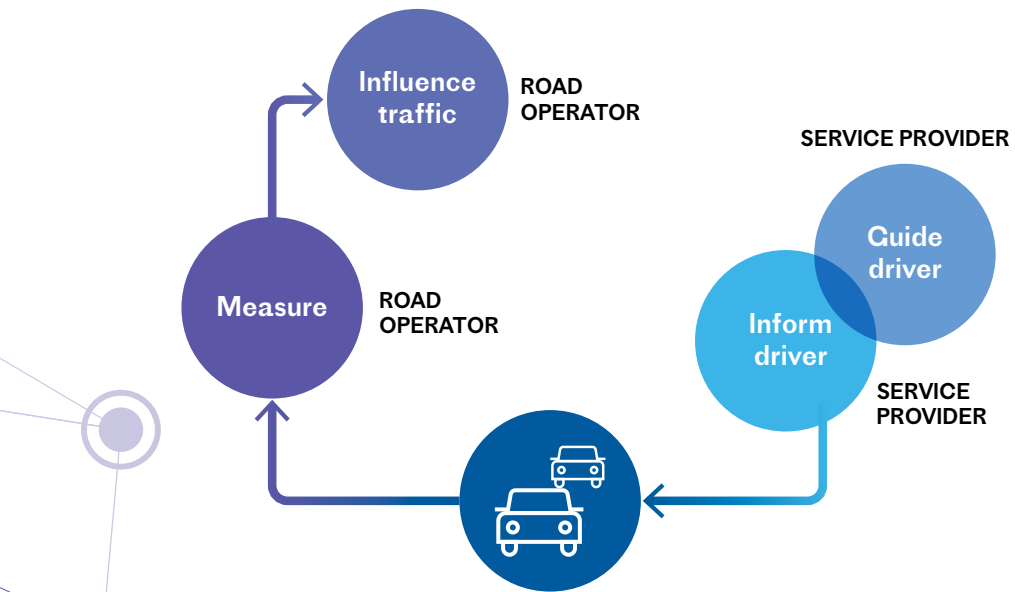
"The digital transformation and new developments on automated and connected mobility solutions are currently major headlines regarding our mobility future.

But without rethinking and redesigning Traffic Management - towards more predictive, reliable and open solutions, that are built on common interfaces, standards and cultures - we will not succeed in creating integrated transport and mobility services. Based on new tools and principles for cooperation, developed in TM2.0 and defined in our Masterplan, we create synergies between digital infrastructure, connected vehicles and new service ecosystems."

Martin Russ, TM 2.0 Chair

TM 2.0 towards Interactive Traffic Management

The Road Operator under the TM 2.0 concept of Interactive Traffic Management sends its Traffic Management Plans as these are decided by the Public Authorities to the Service Providers operating in the area, who then send tailor-made information to their customers with regards to routing provided via the in-car navigation device.

TRAFFIC MANAGEMENT PLAN

Visual guidance along route

ROAD OPERATOR

SERVICE PROVIDERS

END USER
drivers of cars, buses, trucks
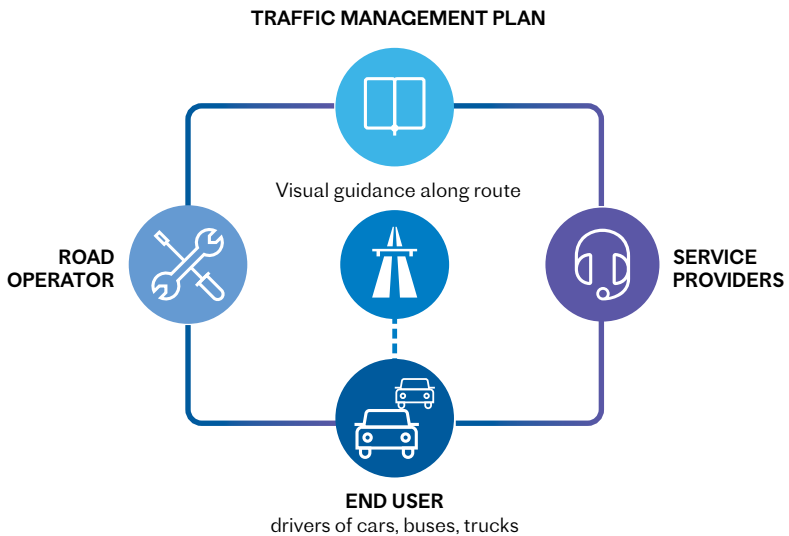
Coherence of:

- ◉ **Traffic management plans** provided by road authorities
  with
- ◉ **Dynamic traffic information** provided by traffic service providers
  with
- ◉ **Guidance** provided by navigation service providers

'Increased public-private collaboration in European traffic management brings enormous gains in terms of effective and more individualized traffic management. Our TM2.0 platform paves the road by inviting European Traffic Management frontrunners to jointly discuss and sketch future collaboration schemes at strategic, tactical and operational levels. The outcomes from our platform will prove essential in tomorrow's traffic management."

Jop Spoelstra, Leader of Task Force 15

◉ The TM 2.0 Process

- ◉ **Collect data** from all available sources feeding into the traffic management

- ◉ Data is fed into the statistics and modeling exercises performed by the Public Authorities when managing traffic. This is where we go into **data processing**

- ◉ **Implementation** of traffic management under the concept of TM 2.0 involves all means of information transmitters working towards informing and guiding the driver. **All** show the same information and follow the coherence principle.
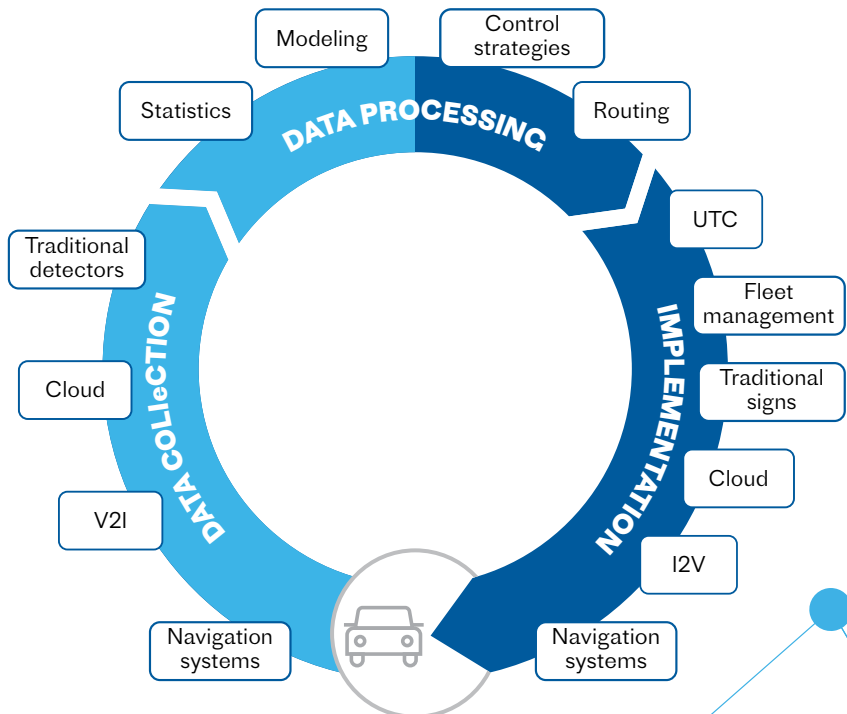
⊙ TM 2.0 added value for stakeholders

The TM 2.0 Concept is based on the belief that there should be a win-win solution for all actors involved.

City administrators / traffic managers	Drivers	Traffic information service providers
Avoid congestion and traffic collapse	Avoid congestion: more relaxed driving	Provide best route option for the destination (not only fastest)
Avoid unnecessary emissions	Receive relevant regional information in-vehicle	Provide information that goes beyond congestion
Improve TMP complementing or replacing loop detectors and enhancing accuracy	Improved road safety through smoother traffic flow	Provide solution (best route option) not the problem (congestion info) well in advance
TMP measures reach driver directly		
FCD-enabled TM even in roads with no ITS (scalable)	Best route options aligned with TMPs	Regional information becomes part of an integrated service

Levels of cooperation between Road Operators, Road Authorities and Service Providers under the TM 2.0 concept

LEVEL 00

TMP and FCD exchange, both optimize their own process

LEVEL 01

Display or discard the public strategic route after evaluation by SP, user decides

LEVEL 02

Compulsory display as option of public strategic route, user decides

LEVEL 03

Mandatory takeover of public strategic route. RA decides

LEVEL 04

Load balanced routing, traffic will be distributed according to individual destinations and free capacity slots on different routes. Perfect alignment of Road Operators/ Road Authorities and Service Providers
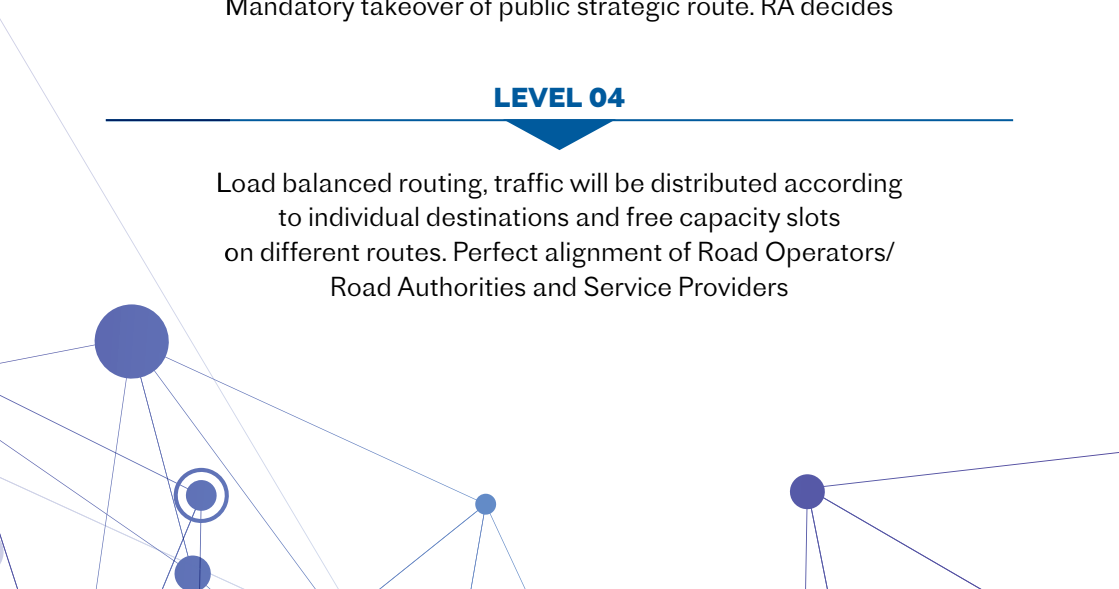
◉ Optimizing Traffic Management

In TM 2.0 Service Providers do not compete on the information but on its quality and on how to best route customers while taking the priorities of public authorities into account

In exchange, the public authorities open their information on their traffic management plans and measures to all cooperating Service Providers

TM 2.0 provides an informed view of the road network that leads to optimization of Traffic Management
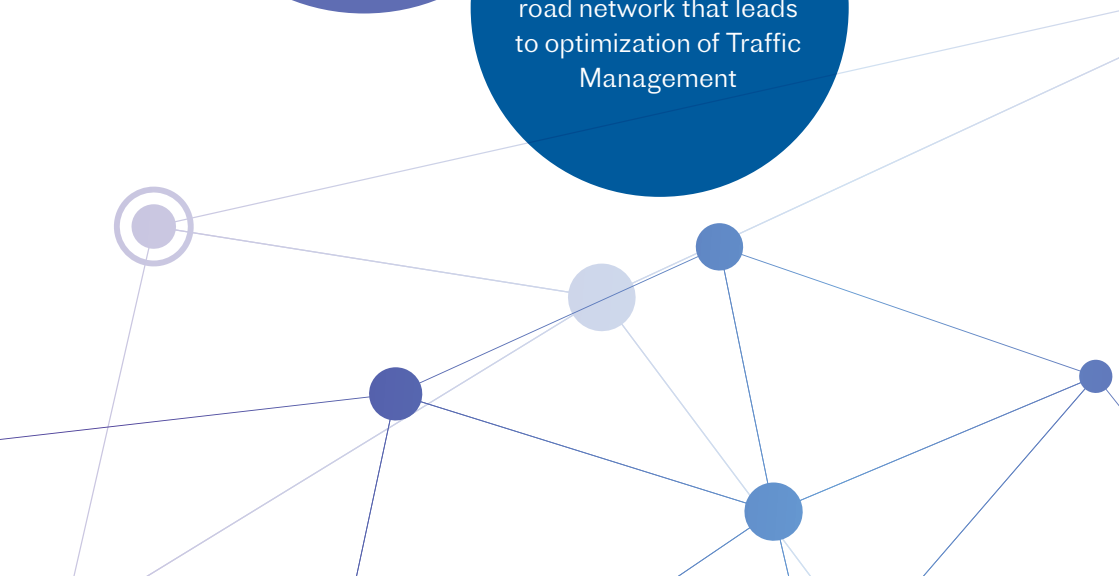
◉ TM 2.0 task Forces

TM2.0 sets up Task Forces with specific missions for a limited duration, ensuring a strong focus on results and recommendations, which in turn inform the work of future Task Forces.

All reports from past Task Forces can be found on **tm20.org**.

TF1: Viability Analysis and Recommendations (2014-2016)

TF2: Barriers and Enablers (2014-2015)

TF3: Principles for Data (2014-2015)

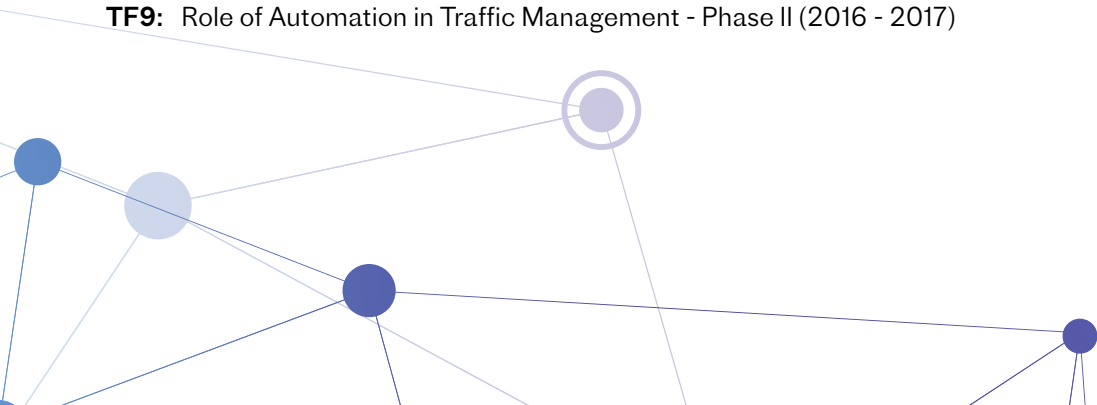**TF4:** Deployment Steps (2014-2016)

TF5: Value Proposition (2014-2016)

TF6: TM 2.0 Quantification of Benefits (2015-2016)

TF7: Role of Automation in Traffic Management - Phase 1 (2015-2016)

TF8: Exchange of Traffic Management Plans - Phase 1 (2015-2016)

TF9: Role of Automation in Traffic Management - Phase II (2016 - 2017)

TF10: Contractual Agreement and Schemes (2016 - 2017)

TF11: Exchange of Best Practices on Deploying TM2.0 (2016 - 2017)

TF13: Exchange of Traffic Management Plans - Phase II (2016 - 2017)

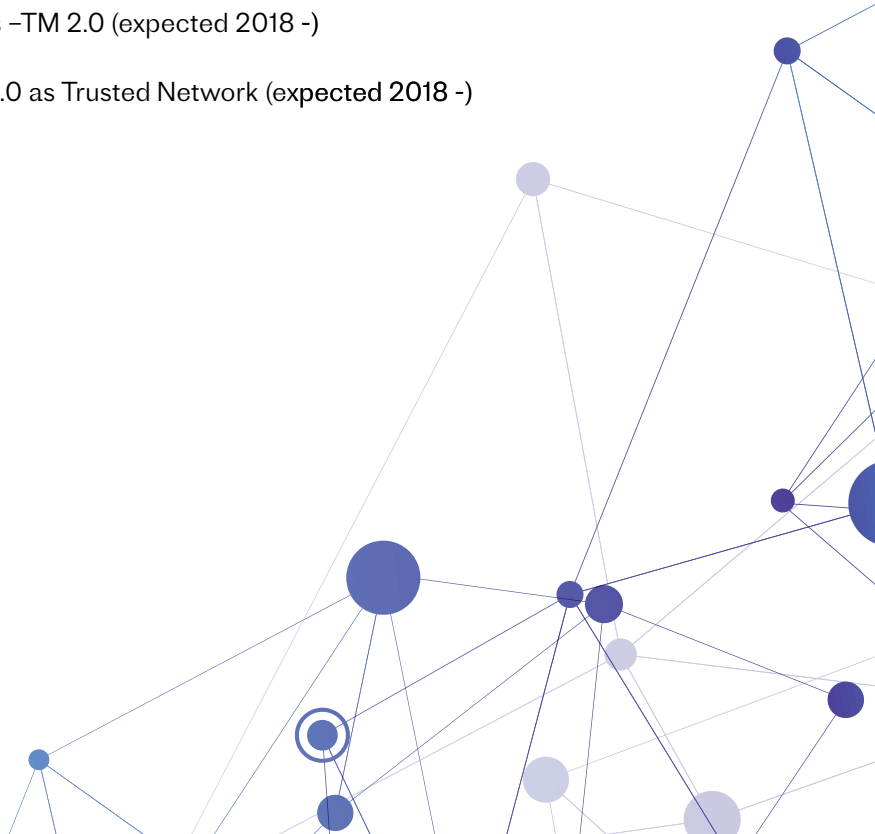**TF14:** Role of Automation in Traffic Management - Phase III (2017)

TF12: Traffic Management and links to other modes and interfaces (2017-2018)

TF15: Guidelines for Stakeholders: Public Authorities as Service Providers (2017-2018)

TF16: Masterplan (2017 -)

TF17: Maas –TM 2.0 (expected 2018 -)

TF18: TM 2.0 as Trusted Network (expected 2018 -)

TM 2.0 Members

PUBLIC AUTHORITIES

PROVIDERS

TRAFFIC & TRANSPORT

RESEARCH

SUPPLIERS

ASSOCIATIONS

VEHICLE MANUFACTURER

Join us

- ◉ **To help build the next generation of traffic management**

- ◉ **To meet and learn from like-minded enthusiasts**

- ◉ **To experience real-life implementation of C-ITS**

- ◉ **To learn and understand the perspectives of both public and private stakeholders**

- ◉ **To get involved in a variety of task forces providing short and long-term results**

For further information and membership enquiries please contact us at

www.tm20.org

E R T I C O
I T S   E U R O P E