

# Fintraffic Road Road Traffic Management Centre

ITS Estonia @ TMC Helsinki, 31.3.2023  
Jani Laiho, Fintraffic Road





**Road traffic is everyone's business**



## Road Traffic Management

- Fintraffic's Road Traffic Services is responsible for the management of road traffic on all Finnish roads at any time, all year round.
- We provide and develop service solutions that help guarantee the safety and smooth flow of traffic throughout the Finnish national road network.
- Our services include the control and management of road traffic, roadside technology, road weather services, product and service development related to road traffic, and systems for handling traffic situation information.



# Roads as figures

There are some

**810**

km of highways and approximately

**5,350**

km of pedestrian and bicycle paths

Bridges number approximately

**14,900**

Of personnel traffic

**92%**

and of goods traffic

**69%**

travels by road

There are approximately

**78,000**

km of state owned roads in Finland

(Overall ~454,000 km)

# Fintraffic Road as figures

**~90**

Employees

**~14,000**

Traffic bulletins/ year

**~150,000**

calls/ year

**~90,000**

Messages to road maintenance/ year

There are some

**~500 km**

of highways with VSL / VMS

**~700 pcs**

Road weather stations

**~1,200 pcs**

Cameras (Road weather condition & traffic surveillance)

**~500 pcs**

Traffic monitoring stations

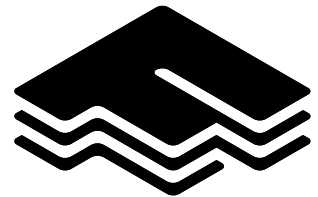
**~650 pcs**

Traffic lights

**~1000 pcs**

Automatic traffic surveillance stations

# Road Traffic Management Centre and its tasks



# Road Traffic Management Centres

**Road Traffic Management Centres are located in three cities:**

**Helsinki, Tampere and Turku.**

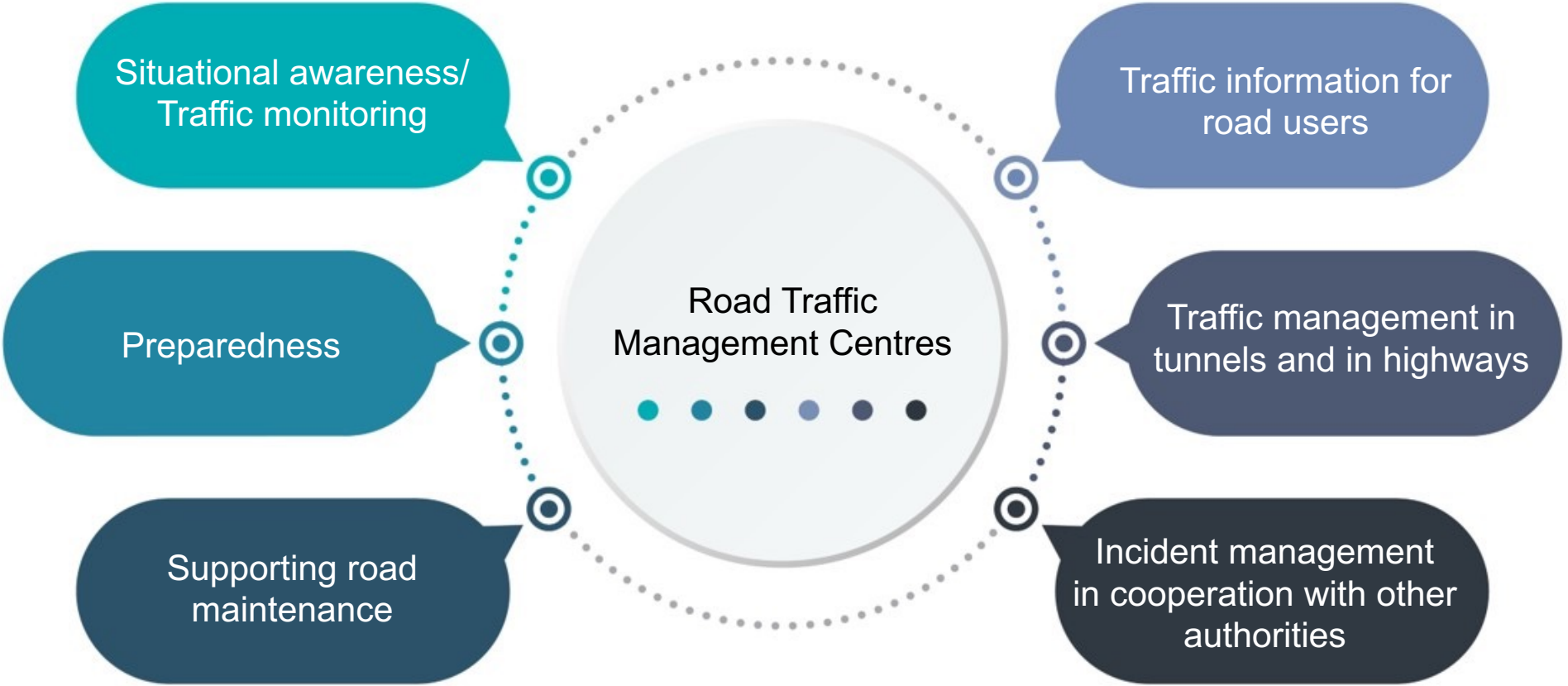
- 24/ 7/ 365
- There are also other authorities working in the premises of the Traffic Management Centre

## **Objective:**

- To promote traffic safety and make traffic smoother
- Situational awareness concerning road network
- Monitor prevailing traffic and road weather conditions
- Cooperation with road maintenance and other authorities
- Boost the management of incidents and minimising impacts on traffic
- Traffic information
  - VSL/ VMS, open data ([digitraffic.fi](http://digitraffic.fi)), web/ mobile ([liikennetilanne.fintraffic.fi](http://liikennetilanne.fintraffic.fi) + app), radio
- Traffic management
- Enhance the flow of information between authorities in case of traffic incidents



# Safety and smoothness through traffic management



**Traffic management influences** the smoothness and safety of traffic by ways to even out traffic demand and aim for the efficient use of the capacity of traffic network.



# Helsinki Traffic Management Centre

- Partner organisations in the same centre



**POLIISI**



ILMATIETEEN LAITOS





# Large urban regions require active cooperation in traffic management

The aim is to reduce traffic congestion in urban areas, improve the reliability of transport and delivery chains, keep road users aware of the available means of transport options, increase the use of public transport, improve air quality in cities and decrease the need for heavy traffic infrastructure projects.

- Incident management combining different forms of traffic, passenger information and traffic light control are hardwired to regional traffic management centres.
- Park & ride is promoted through real-time information services.
- Cooperation makes it possible to enhance the quality and coverage of the situation snapshot.
- Compatible and interoperable regional traffic management systems and services increase synergy benefits and provide savings.



# Road traffic incident management – prevention, forecasting and minimization of spill-over effects

Road traffic incident management refers to the (prevention), detection, management and elimination of incidents in traffic.

## At the strategic level

- Aiming to prevent incidents or reduce their number or consequences through long-term measures (infrastructure, speed management, advance communication...)

## At the tactical level

- An incident that has taken place is managed in the best way possible – the aim is to minimise or completely eliminate the impacts of incidents.
- Planning, coordinating and agreeing on the measures and cooperating with other authorities and stakeholders is essential.

## At the operational level

- Creating a situation snapshot and deciding on the measures to take based on it in cooperation with other authorities (exchange of information is key).
- Measures to support safety and operability by the traffic authority is essential in addition to primary activities at the accident site.
- Efficient incident management requires cooperation, communication and jointly agreed operating models between the authorities/partners.



# TMC, Operational use – “TLOIK”

- Integrated UI and ICT platform for road traffic management

Map/  
GIS tool

Duty tool

Traffic mgmt  
tool

Integrated  
VoIP  
solution

Camera tool

Construction  
tool



# Operational use – TLOIK, Benefits

- Operational from one ws, location independent
- One coherent UI
- Modularity
- Technical harmonization
- Centralized alarms and alerts
- Prioritizing of tasks
- Enables Network level traffic management
- Risk management
- WebLOIK; provides a view of TLOIK's information for other authorities
- WebKeli; road weather data for road maintenance
- Enables new services for road traffic in the future

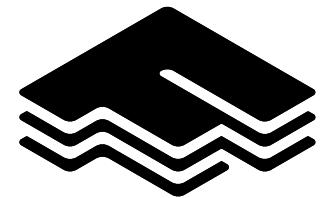


# TLOIK, Lessons learnt

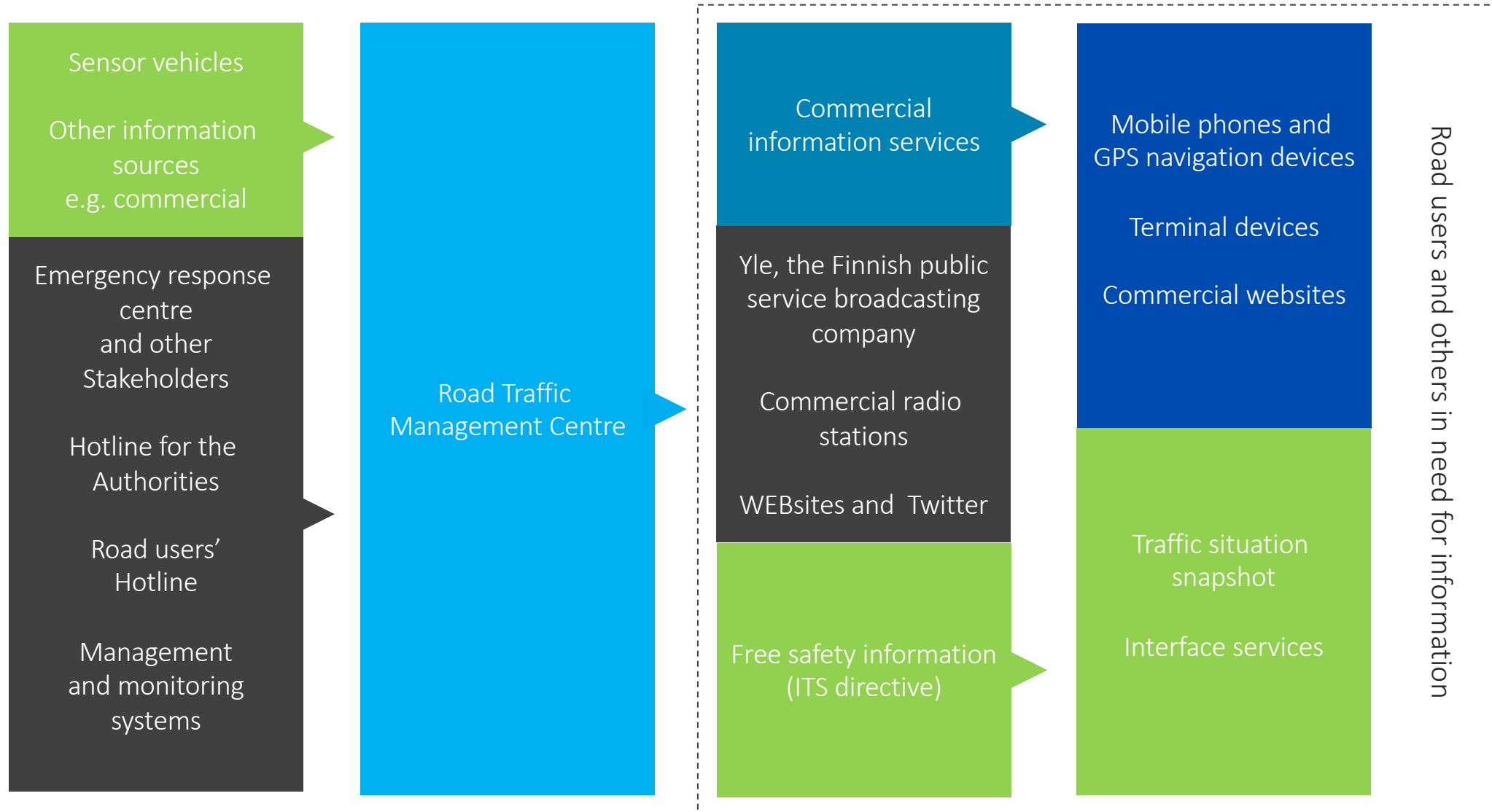
- Question everything, have no doubt to ask for arguments, don't take anything for granted
- Technology is not the answer to everything
- Development of processes
- Involve users from the beginning
- Get the tech you really need
- Roles
- Model of decision making
- Pricing model; fixed, hours, target
- Exit plan
- Specifications
- Testing
- SLA's



Collecting and distributing information  
– Situation snapshot of road traffic



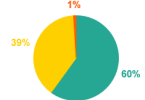
# Road Traffic Management Centre's communication channels now and in the future



# <https://liikennetilanne.fintraffic.fi/>

## Traffic right now

### Road conditions



### Road traffic

98% of road traffic on main roads is smooth

1,38 km weight restrictions on the state roads. Additional information >

### Rail traffic

95% of commuter trains are in scheduled time

84% of long-distance trains are in scheduled time

### Air traffic

210 Arriving  
233 Departing

### Marine traffic

97 Arriving today  
107 Departing today

Region

Select

Transport mode

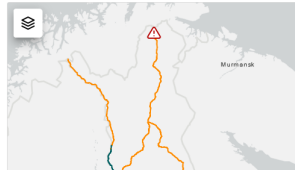
Road traffic

E.g. Kouvola

## Overall situation

Map legends

- Road traffic disruption
- Traffic incidents - Oulu
- Traffic incidents - Tampere
- Normal road conditions
- Difficult road conditions
- Very difficult road conditions



## Latest announcements

### Road traffic

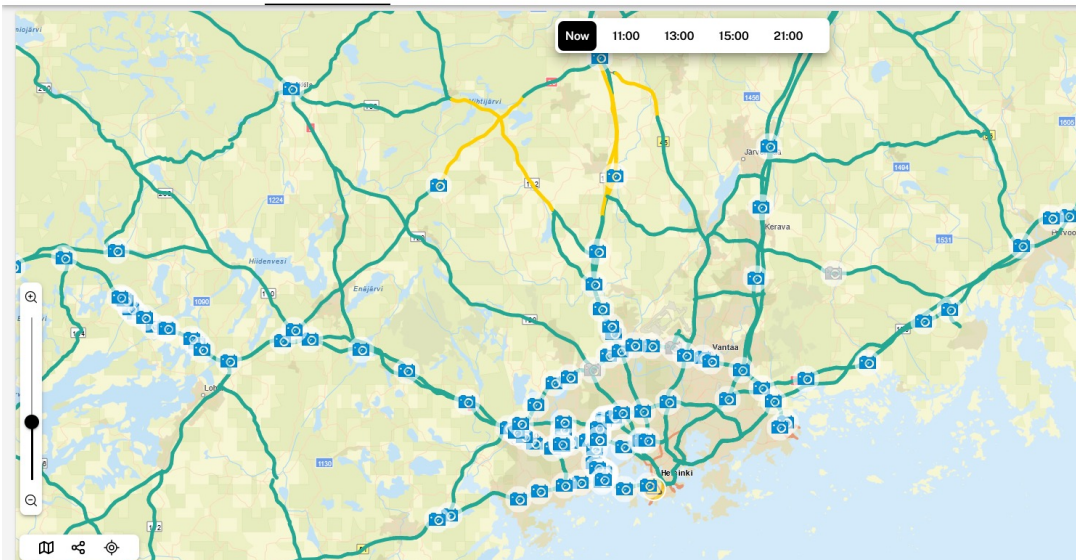
Traffic incidents | Tie 5, Lapinlahti. Ensitiedote liikenneonnettomuudesta. | 30.03.2023 at 09:13

Tie 5 välillä Kuopio-Iisalmi, Lapinlahti.  
Tarkempi paikka: Välillä Mäntylahti-Matin-Liisan asema.

30.03.2023 at 09:13

Traffic incidents | Tie 51, Helsinki. Liikennetiedote. | 30.03.2023 at 09:03

Rikkoutunut raskas ajoneuvo tiellä. Liikenne on jonoutunut.  
Tie 51 välillä Helsinki-Kirkkonummi, Helsinki.



### Show on map

- Roadworks - Oulu
- Parking areas - Oulu
- Weight limitations
- Road conditions
- Road weather stations
- Maintenance trackings
- Winter maintenance of street network
- Winter maintenance
- Variable signs
- Iceroads
- Traffic volume
- Road condition cameras
- Charging Stations
- Gas filling stations





# Feedback - <https://www.palautevayla.fi/>

## 🏠 Welcome to Traffic Customer Service

[Suomi](#) | [Svenska](#) | [English](#)

Here you can give feedback, suggest improvements and report issues regarding roads, railways and waterways.

Always contact the Road User's phone line 0200 2100 (24/7) if you encounter urgent problems that may endanger traffic.

The service includes only road, railway and waterway issues belonging to the state. In matters related to the street maintenance, you need to contact the municipality.

### My feedback

📍 Location: Mestarintie, Espoo

• Topic

Open label

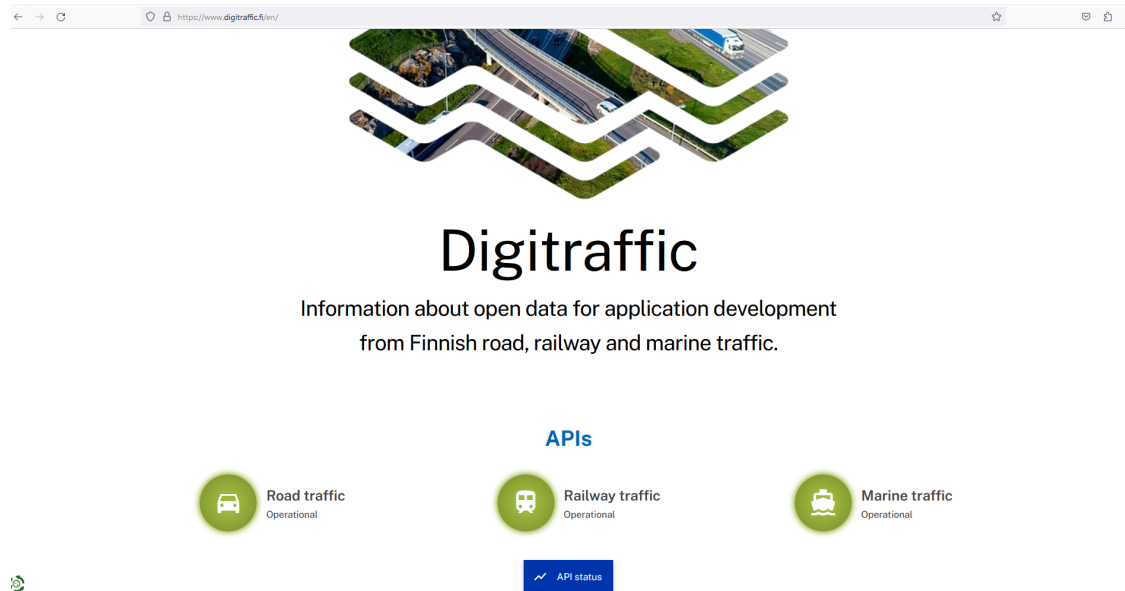
29.03.2023 19:33  
**Pavement damage**  
Contractor's message

29.03.2023 13:36  
**Message about halt**  
Contractor's message

29.03.2023 13:36  
**Message about halt**  
Contractor's message



# <https://www.digitraffic.fi/>



## • [General info](#)

- [Restrictions](#)
- [Supported and deprecated APIs](#)

## • [REST/JSON -APIs](#)

- [Swagger descriptions of APIs](#)
- [Weather cameras](#)
  - [Simplified and detailed information of stations](#)
  - [Data for all stations and for single station](#)

- [Weather camera image history for the last 24 hours](#)

## • [Current data of road weather stations](#)

- [Simplified and detailed information of stations](#)
- [Available sensors information](#)
- [Data for all stations and for single station](#)
- [Sensor history for the last 24 hours \(Beta\)](#)

## • [Current road weather forecasts](#)

- [Detailed ja simpler forecast road sections](#)
- [Forecasts of the forecast sections](#)

## • [Traffic measurement system \(TMS\)](#)

- [Documentation](#)
- [Simplified and detailed information of stations](#)
- [Available computational sensors information](#)
- [Data for all stations and for single station](#)
- [Statistics](#)
- [Raw data](#)

## • [Traffic messages](#)

- [Types of traffic messages](#)
- [Traffic messages DATEX II -APIs](#)
- [Traffic messages Simple JSON -APIs](#)
- [Traffic messages area geometries](#)

## • [TMC/ALERT-C location data](#)

- [TMC/ALERT-C location data](#)
- [Variable signs](#)

## • [Road maintenance information](#)

- [Maintenance domain](#)
- [Vehicle task types](#)
- [Vehicle tracking data](#)
- [Vehicle latest location](#)

## • [Walking and cycling counting site values](#)

- [All counters in GeoJSON](#)
- [More metadata](#)
- [Counting site values in json](#)
- [Counting site values in CSV](#)

## • [MQTT WebSocket APIs](#)

- [Topics](#)
  - [Current data of road weather stations](#)
    - [Weather station sensor measurement message](#)
  - [Current data from TMS stations](#)
    - [TMS station sensor measurement message](#)
  - [Traffic messages](#)
  - [Road maintenance information of latest location](#)
    - [Road maintenance tracking message](#)
  - [A simple JavaScript WebSocket client](#)



# Thank you for your time and attention!

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