Efficient traffic monitoring and forecasting

Luca Paone - PTV Group

Umovity

DIFFICULTIES

- **High Management Costs**: Traditional systems often entail significant ongoing expenses.

- **Substantial Hardware Investment**: Wide-ranging coverage requires considerable hardware resources.

- **Manual Monitoring**: Current methods are time-consuming and require extensive manpower.

- **Project Uncertainties**: ITS projects face prolonged timelines and uncertain delivery outcomes.

PTV FLOWS

- Cost-effective, and hassle free cloud based solution for real-time traffic management. Available in **84 countries**

- The system helps to **proactively** manage traffic, thus reducing the length of delays, improving safety, and increasing the efficiency of the transport system.
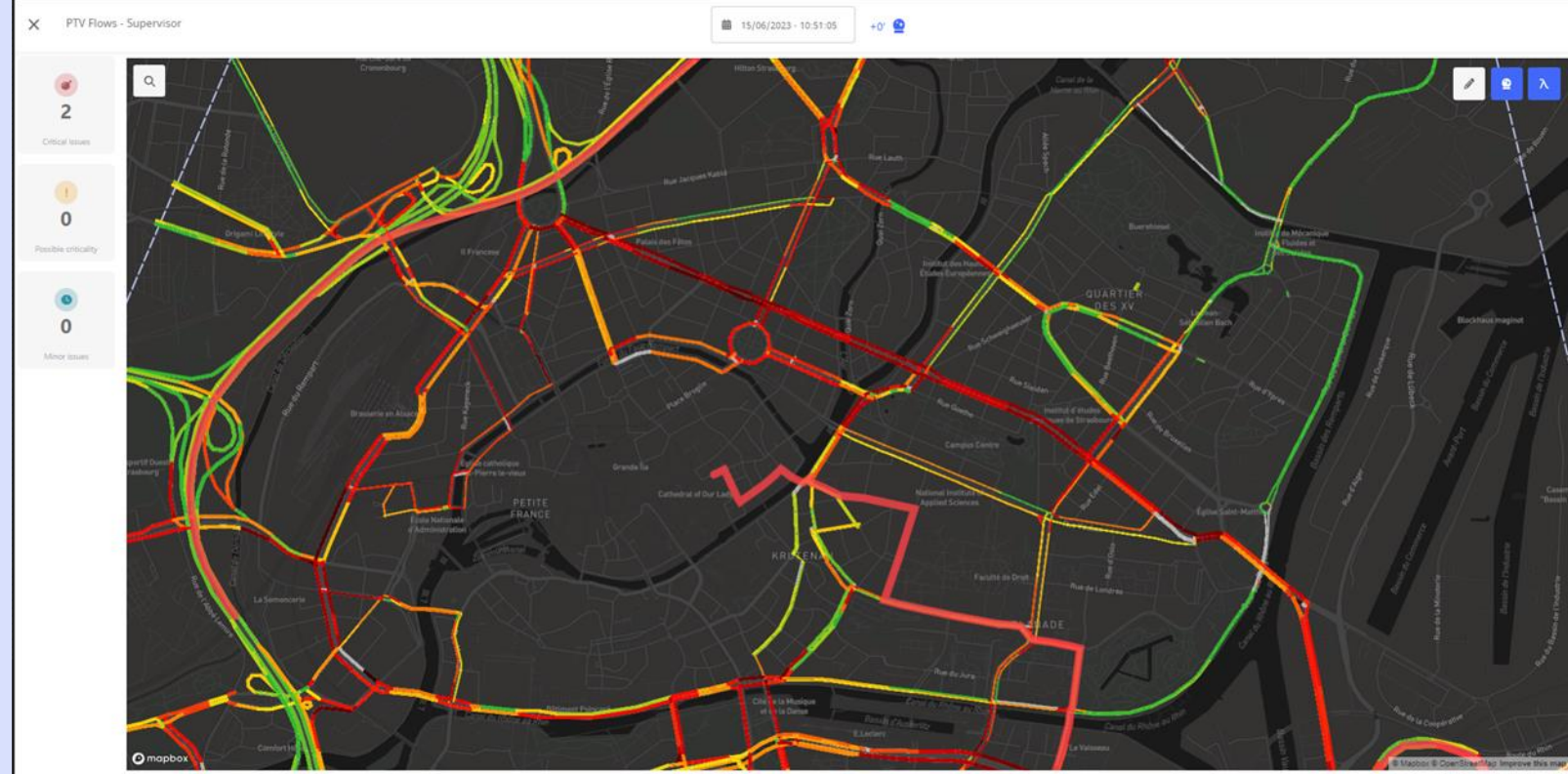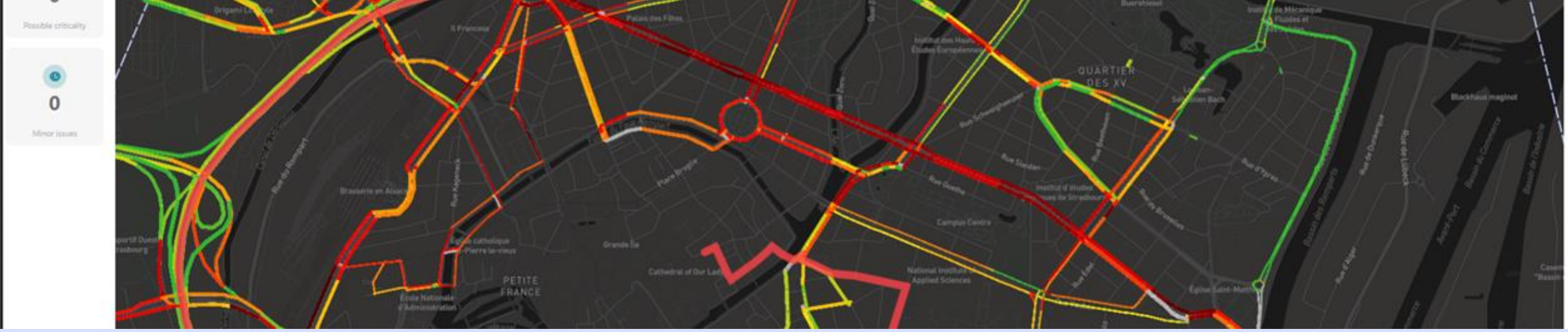

Continuous monitoring of current and future traffic conditions

**Easily collaborate and share alerts, information, traffic incidents**

Analysis, inspection and extraction of historical data

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FEATURES

- Offered as a subscription service

- Accessible via **Web GUI** and **API** services

- Cloud first, no IT costs

- Automatic activation (<**1 hours**) and network update

- Native integration of standard data (FCD and maps)

- Self-learning traffic forecasting

- Definition of KPIs and personalized alerts on corridors

- Automated alert sharing by email

- Probe density* - 2024 roadmap

- Historical analysis* - 2024 roadmap

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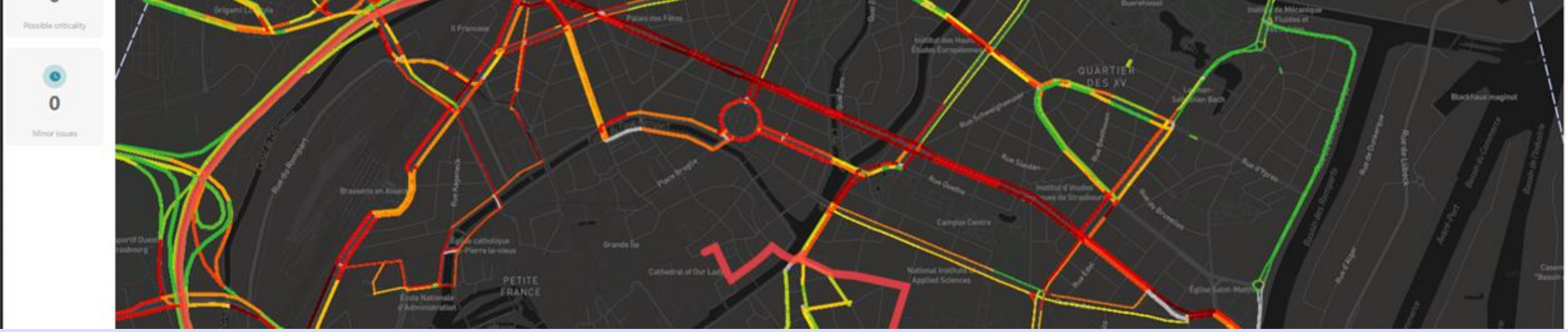
TECHNICAL BENEFITS & AUTOMATIONS

- Automatic provision of a TomTom network from Model2go (& OSM in the future)

- Automatic configuration of the instance (map, driving side, timezone, TomTom feed selection&activation) resulting in ZERO professional services needed

- Automatic creation of OpenLR code for each link (for the output)

- Automatic map matching of TomTom speeds on the network

- Automated model update

- Automatic calculation of travel times on corridors taking into account the forecast

- Automatic calculation of percentiles on corridor travel times (e.g. 95p for unusual TT detection)
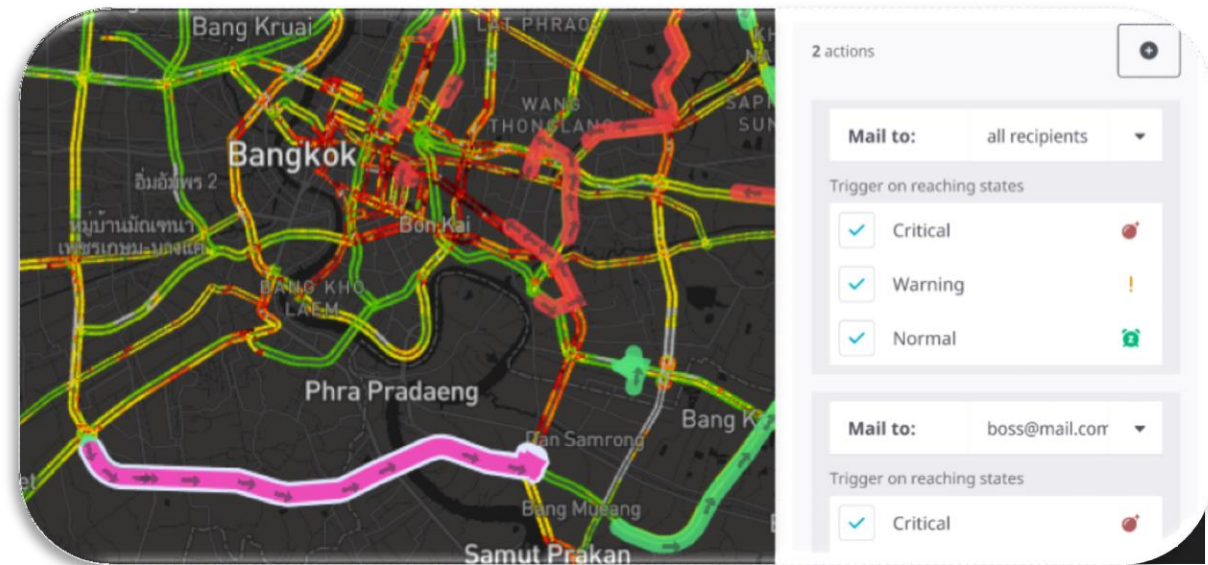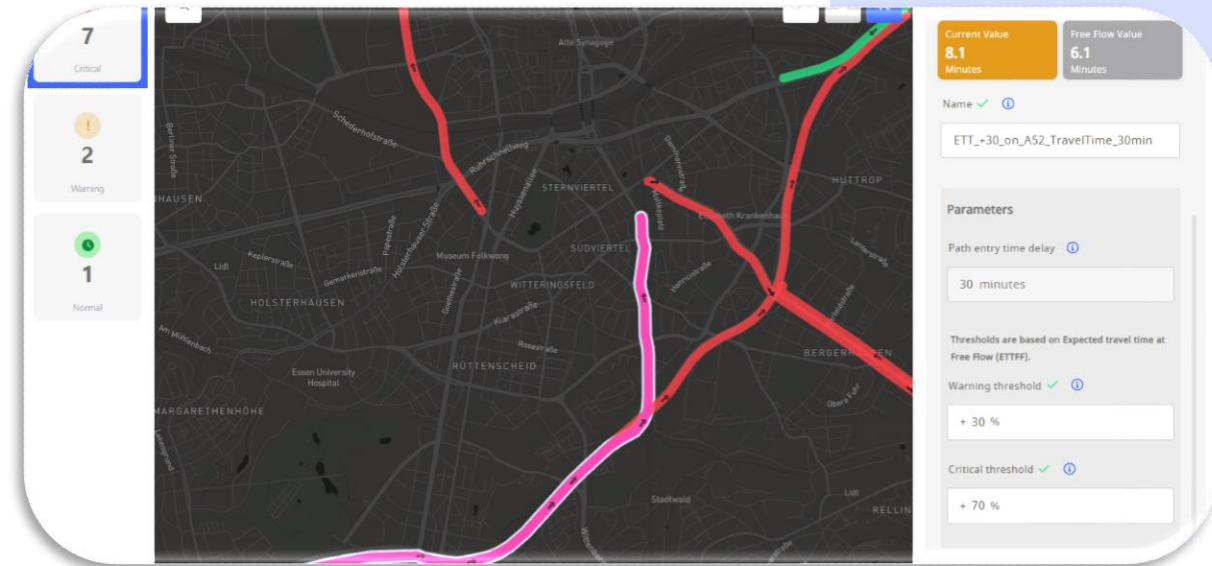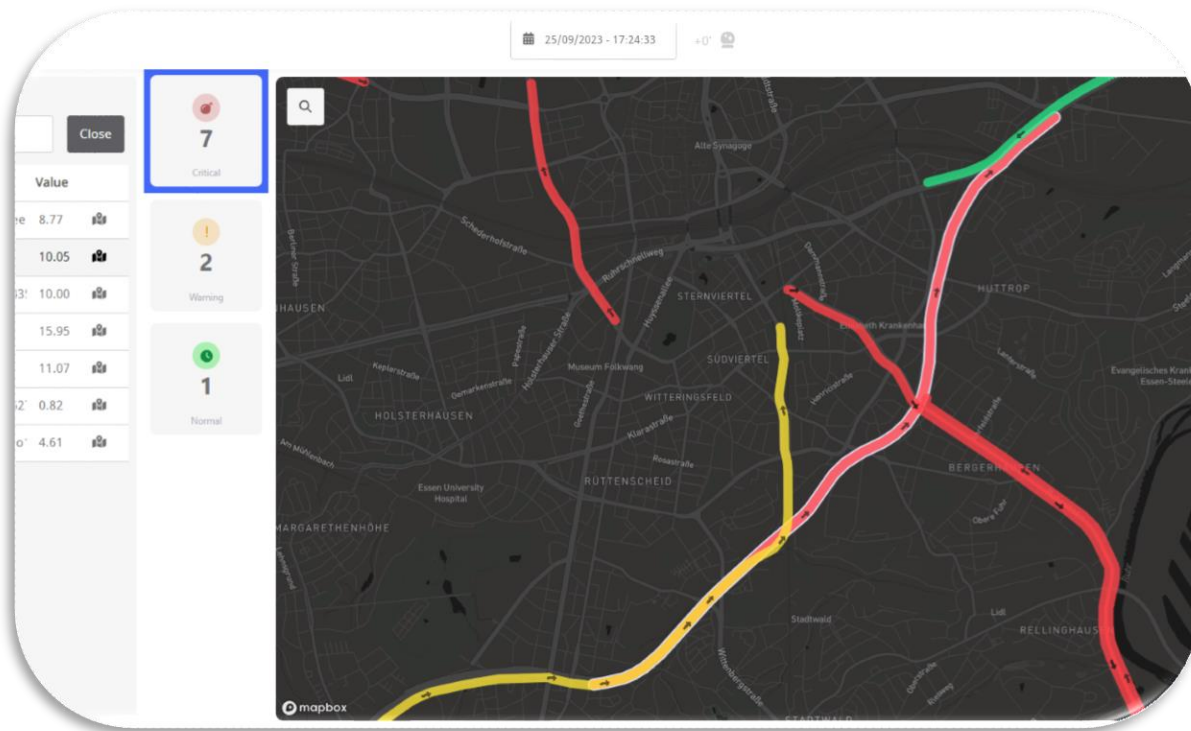
MONITORING
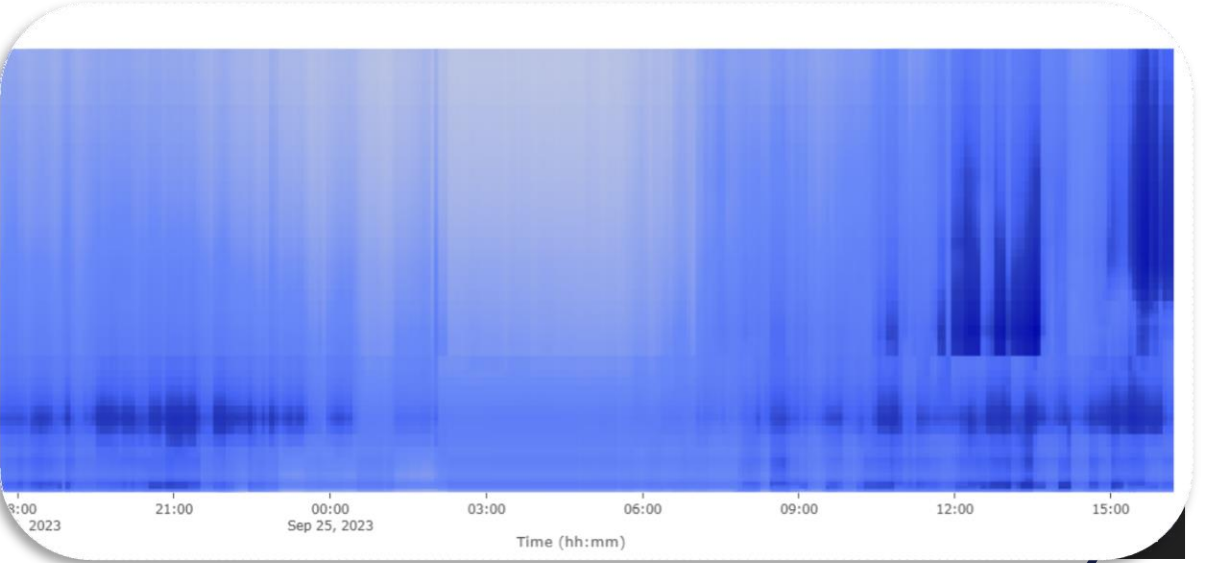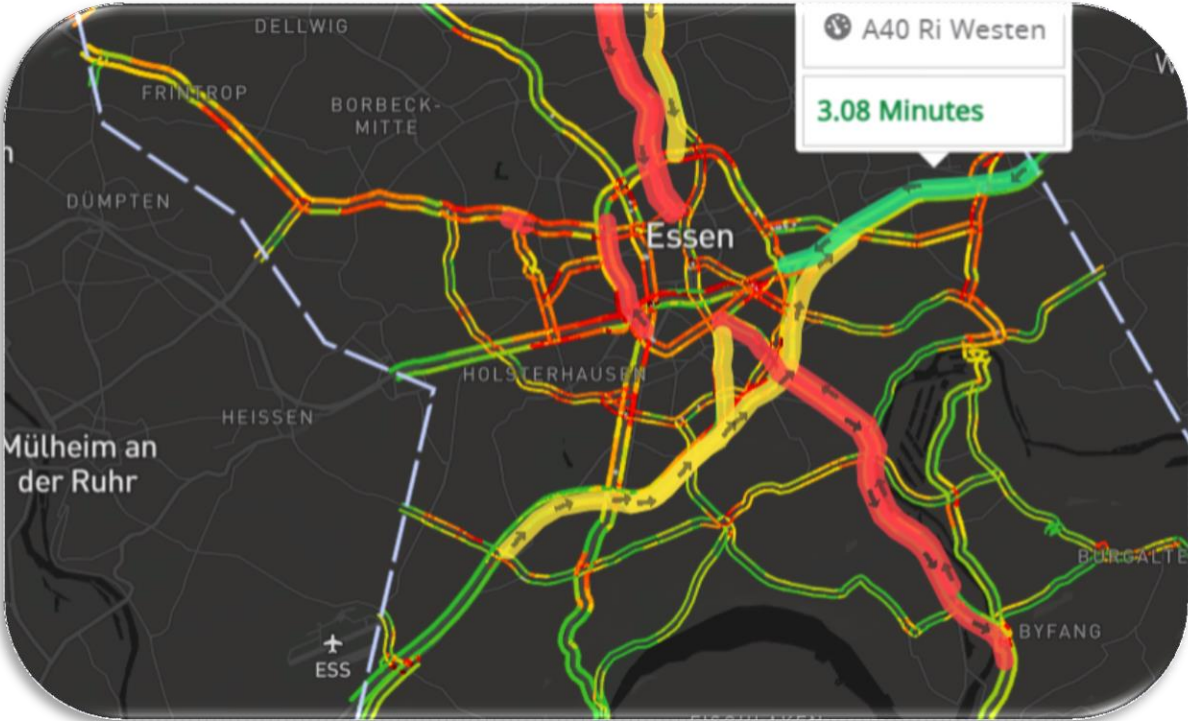
FORECAST
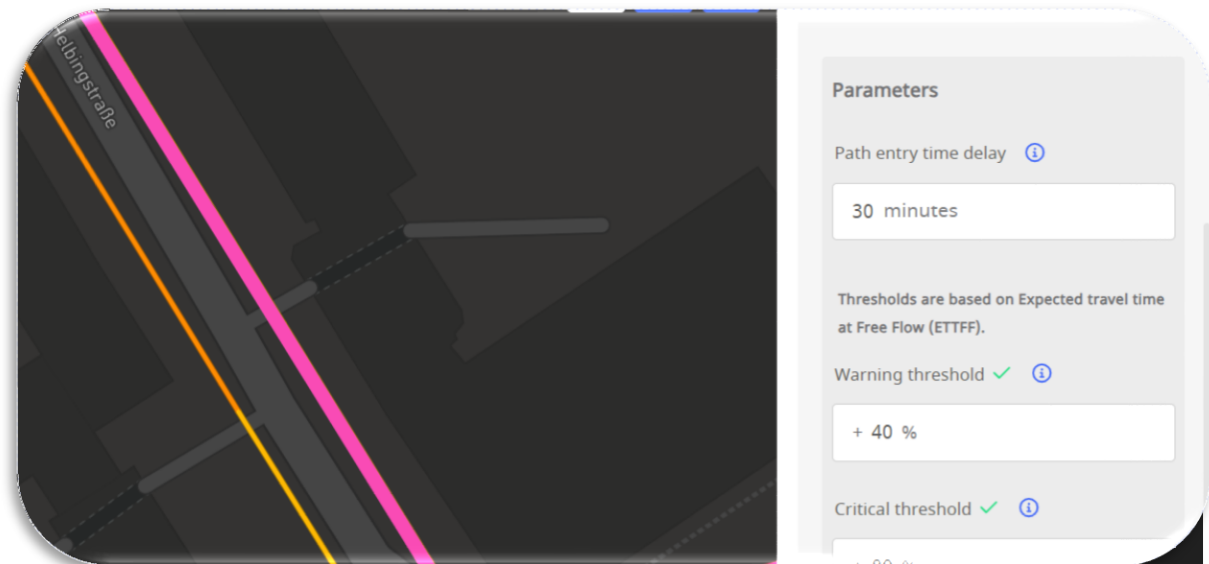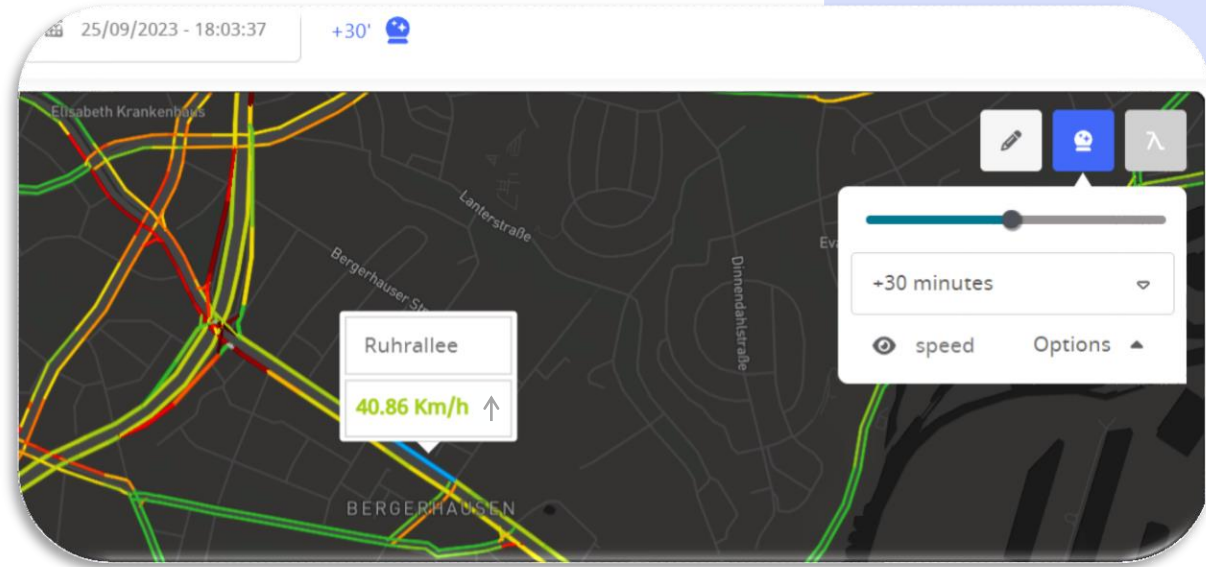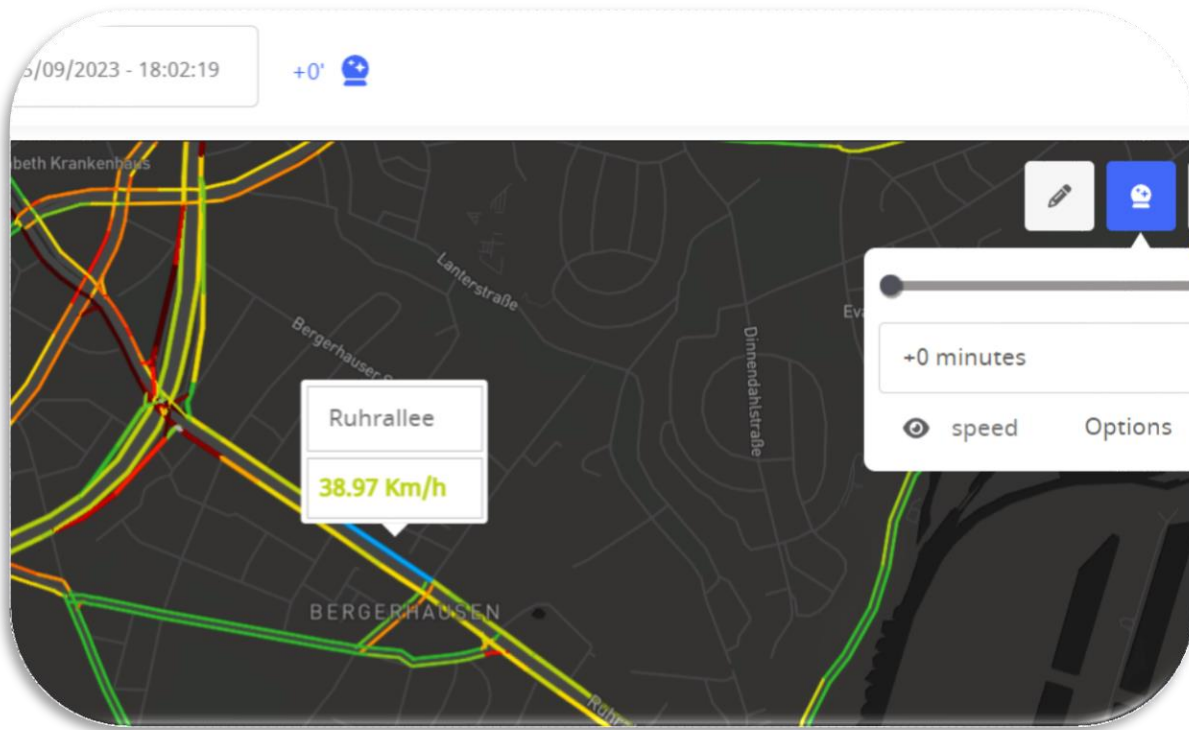
ALERTS & AUTOMATION

Tuesday, 02/27

Hi, Luca

Let's go! There is a lot to do today!

🌐

PTV Flows Supervisor

Manage traffic on your network

✅

PTV Flows Instance Configurator

Activate and configure your instance

👥

User Management

Invite, remove users and manage roles

🔑

API Keys

Manage your API Keys

❓ **Help Center**
Learn about this product's features

💬 **Support**
Get help from our support agents

👤 **Contact Sales**
Request individual pricing options

PTV Flows
Demo PM Roma South ✏️

Operator   Admin

ALCOBENDAS, SPAIN

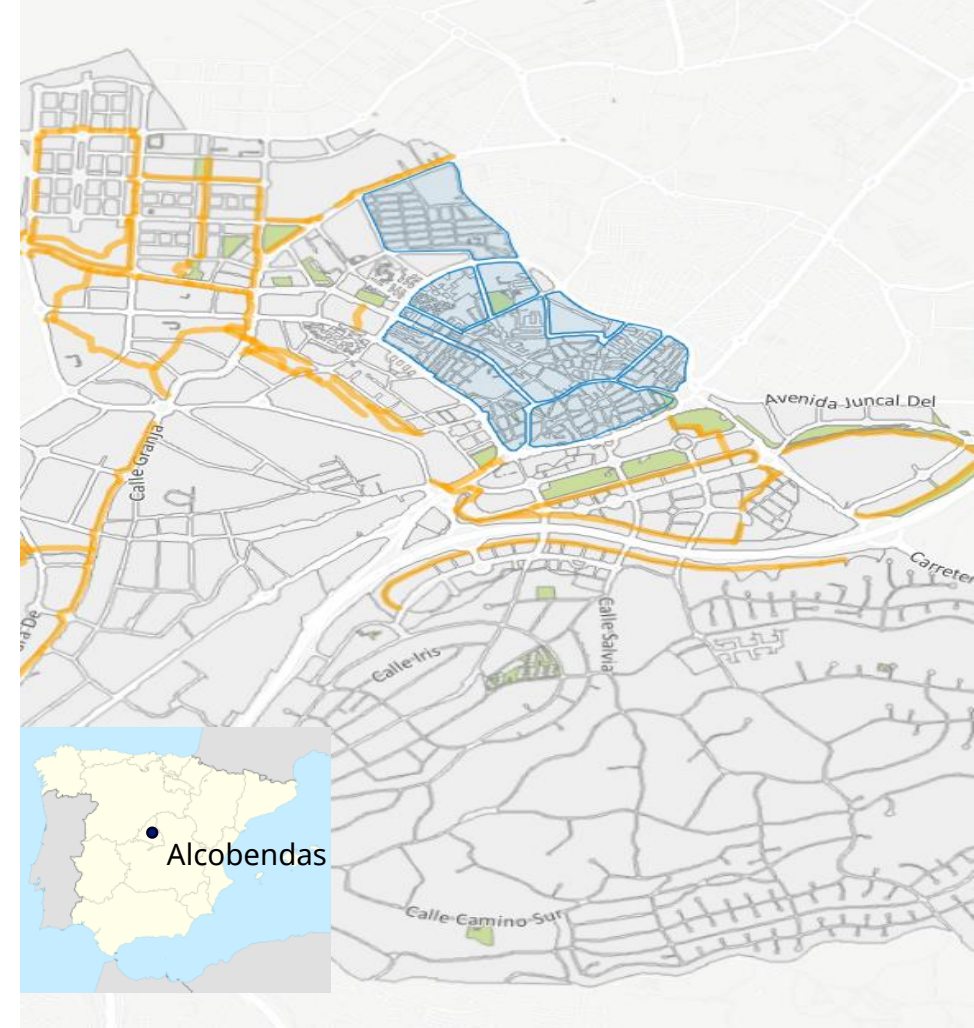**Objective:** delivery of the new TMC system for the city of Alcobendas

🟩 System integrator: TEVA GROUP

🟩 Use Cases:

- Traffic Monitoring - Effortlessly track traffic conditions in real-time,

- Forecasting - Leverage machine learning and algorithms to predict traffic patterns

- Information Dissemination - Provide timely traffic updates to stakeholders

🟩 Year: 2024-2026

SOME EXAMPLES OF USE CASES

Motorway network

- Network performance Indicators for the road authority
- Predictive alerts of queues for possible traffic rerouting
- Activation of reserved lanes based on predicted travel times

TMC – Police stations

- Comprehensive traffic monitoring and forecast for the whole network
- Traffic management with automatic alerts for 3rd part system (e.g. VMS);
- Timely notification of problems to stakeholders (e.g. urban police)

Construction site monitoring/ temporary TMC

- Real-time impact assessment of construction sites (through kpi)
- Queue monitoring around the construction site

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SOME EXAMPLES OF USE CASES

Pre/post studies

- Activate PTV Flows and monitor variations of KPIS before and after any intervention/roadwork/signal timings/etc
- Currently it requires the client to download data but we will add historical analysis features soon
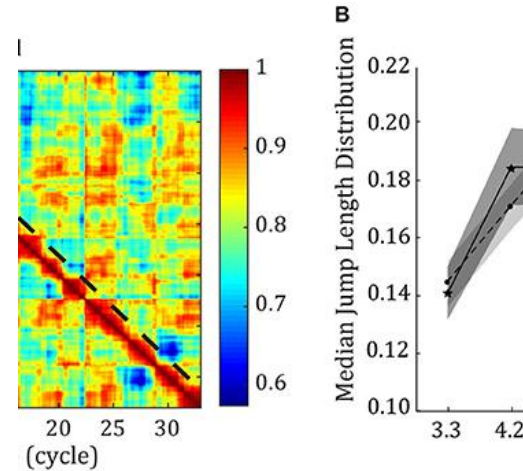
FCD tenders

- It requires evaluation of requested output that must be standard or a system integrator is needed
- Speed Estimation and forecast is always included

Event/ Transportation hubs/ PUT

- Congresses, Fairs, sport events, airports and other hubs need to monitor and inform people about reachability (to/from)
- PUT monitoring of corridors to improve arrival times

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Questions

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