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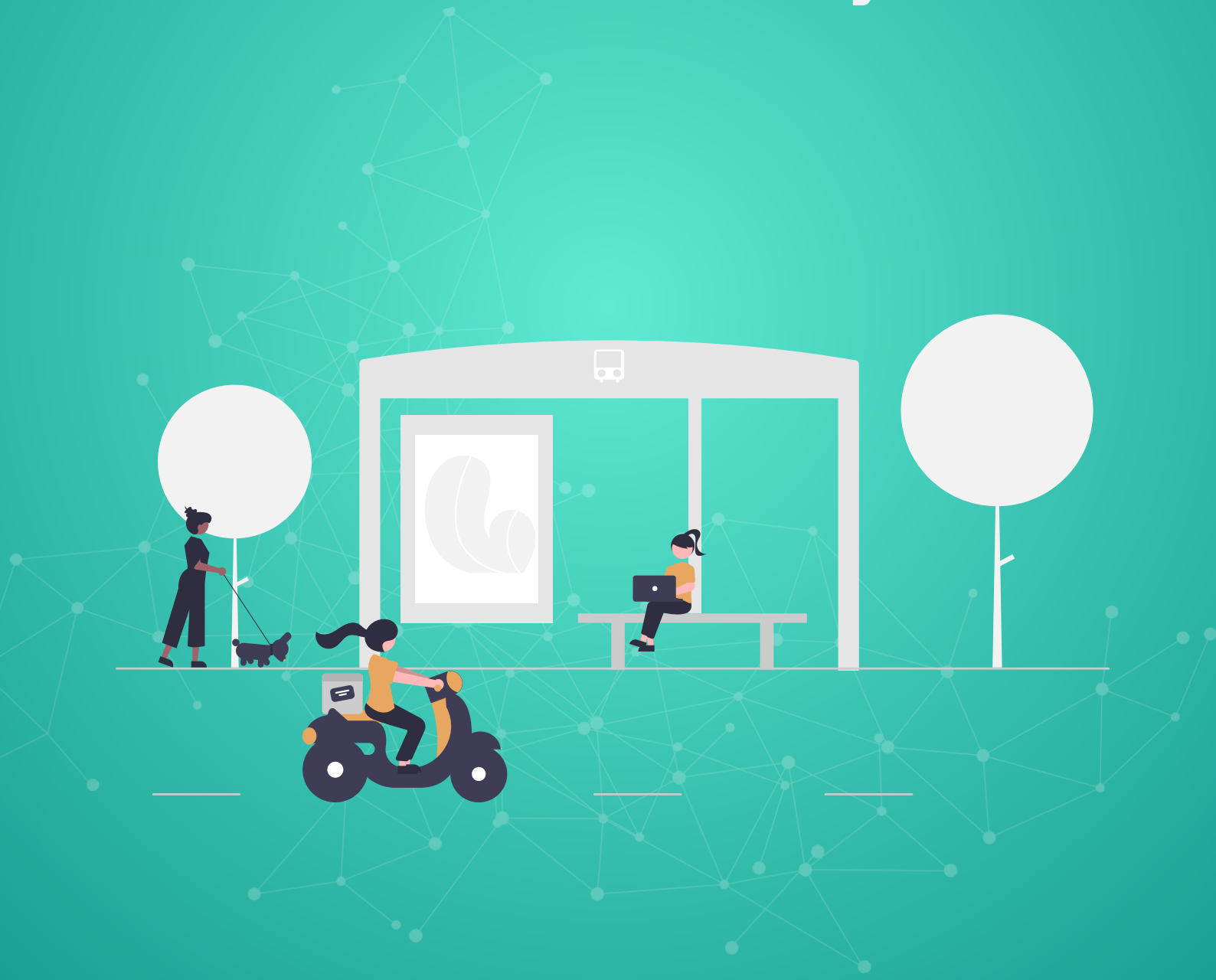
Traffic Monitoring System



Apryl

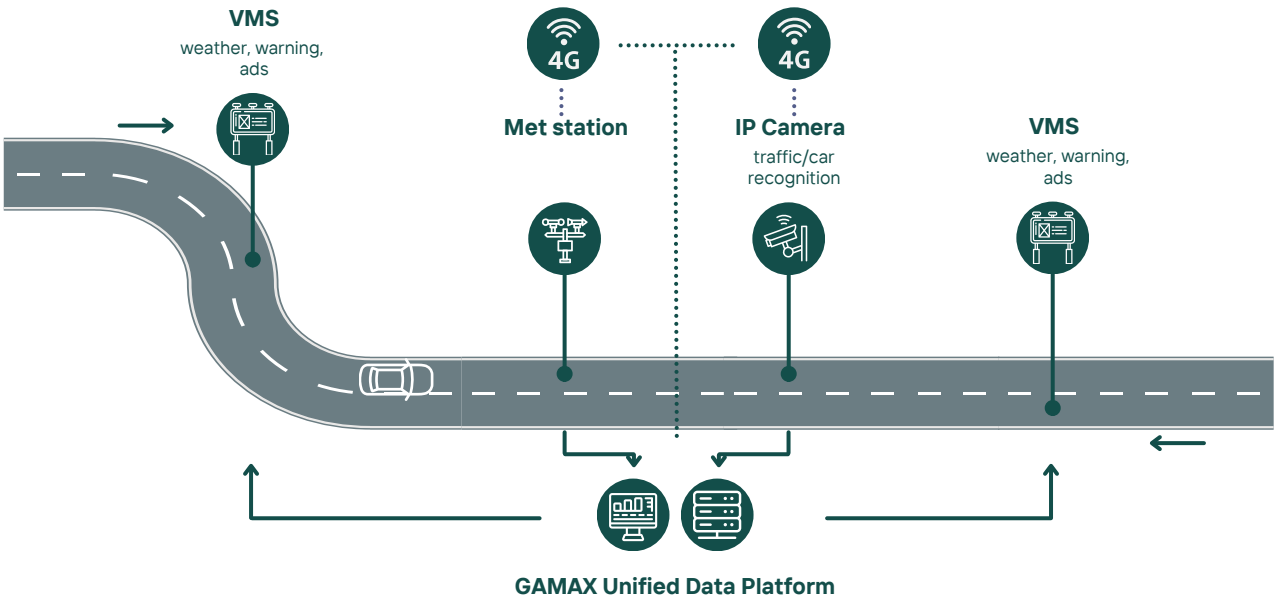
2024

Traffic Monitoring System (TMS)

Traffic monitoring video analytics involves using video footage from cameras placed along roads to analyze various aspects of traffic and road conditions.

The system collects data from multiple sources; sensors, GPS devices in vehicles, and inductive loops. GAMAX AI algorithms process the collected data in real-time to detect and analyze traffic flow, congestion, vehicle speeds, lane occupancy, and other relevant parameters.

GAMAX as a system integrator, ensures the coordinated operation of traffic cameras, CCTVs, weather sensors and Variable Message Signs (VMS). The traffic and weather monitoring systems communicate with the VMS network to activate specific messages or warnings related to current weather and traffic conditions, road hazards, or appropriate speed limits.



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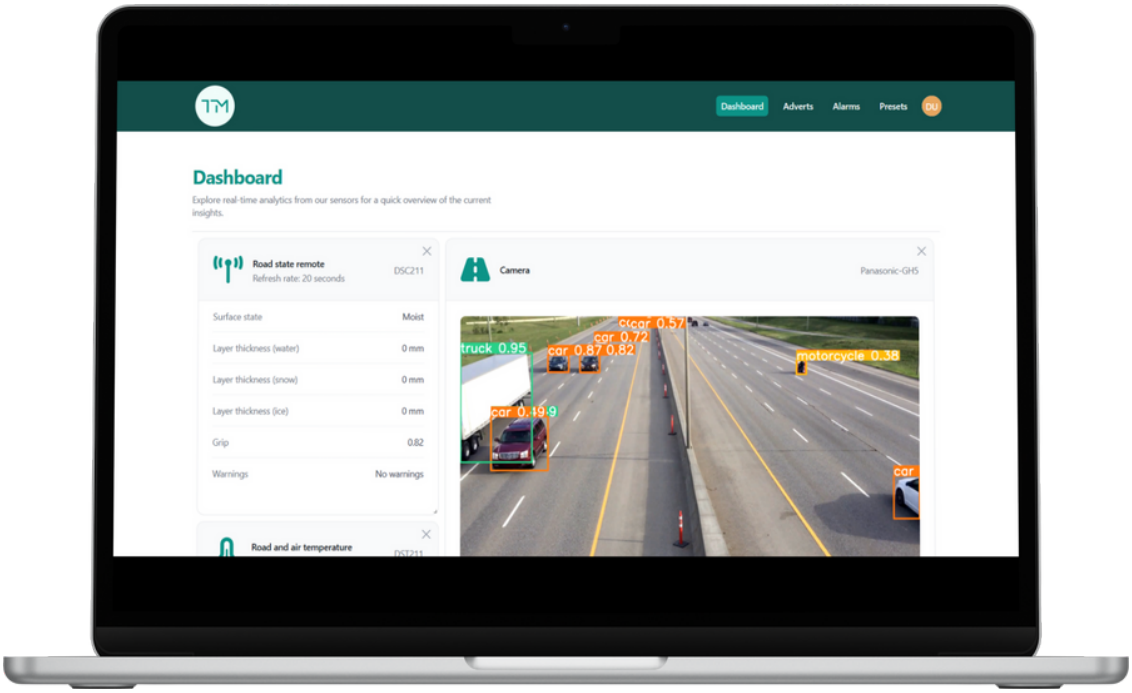
Objectives & Dashboard

Traffic analysis	Analyzing the flow of vehicles along roads, including vehicle counts, speeds, and patterns of movement, to understand traffic congestion and optimize traffic flow.
Incident detection	Automatically detecting incidents such as accidents, breakdowns, or road hazards, allowing for quick response.
Vehicle and pedestrian behavior analysis	Monitoring how vehicles and pedestrians interact at intersections, crosswalks, and other road locations to improve safety and identify areas for infrastructure improvements.
Road condition monitoring	Detecting potholes, debris, or other road surface issues that may require maintenance or repair to ensure road safety.
Parking management	Monitoring parking spaces and analyzing parking behavior to optimize parking availability and reduce illegal parking.

The TMS dashboard can be parameterized based on individual needs.

Data Sources



Any existing IP - CCTV cameras and sensors can be added to TMS system, lowering the infrastructural and maintenance costs.

- **Video cameras**

Traffic cameras installed along roads capture video footage of traffic and road conditions, and provide data on vehicle speeds, counts, directions and classifications.

- **Weather data**

Weather conditions such as rain, snow, or fog can affect road conditions and traffic flow, so integrating weather data into analytics can provide valuable insights.

- **GPS and mobile data**

GPS devices in vehicles and mobile phone location data contribute to understanding traffic patterns and congestion levels.

Outcomes

#1 Improved traffic management
By analyzing video footage and detecting traffic patterns and congestion hotspots, authorities can optimize traffic flow, adjust lane configurations, or implement dynamic routing to improve traffic flow.

#2 Enhanced safety
Real-time incident detection allows for faster response times to accidents or emergencies, reducing the risk of secondary incidents and improving overall road safety.

#3 Proactive road maintenance
Detecting road surface issues early, such as potholes or cracks, allows authorities to prioritize maintenance activities and prevent accidents or vehicle damage.

#4 Data-driven decision-making
By collecting and analyzing data from road monitoring video analytics, transportation agencies and city planners can make informed decisions about infrastructure investments, urban planning, and transportation policies.

#5 Efficient parking management
Video analytics can help monitor parking usage, identify illegal parking or congestion in parking areas, and provide data-driven insights for optimizing parking allocation and pricing.

#6 Environmental impact
By optimizing traffic flow and reducing congestion, AI traffic monitoring can help minimize vehicle emissions and reduce environmental impacts associated with urban transportation.

Get In Touch

We are looking forward to showcasing the value of **TMS**!

Get a free demo

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