



LEONARDO CYBER & SECURITY SOLUTIONS

# MATRICES-MOBI

MOBILITY  
MANAGEMENT  
SYSTEM

Population growth and a consequent greater circulation of vehicles have meant that in many urban areas traffic reached thresholds close to the maximum capacity of the roads during most of the periods of the day.

The effects of congestion have thus increased and with them also the need to mitigate the consequences. Congestion in fact reduces the efficiency of transport infrastructures by introducing a negative impact on travelling times, air pollution (with higher greenhouse gas and NOx emissions) and fuel consumption. Addressing the problem of congestion by expanding road infrastructure is very often not possible and Intelligent Transport Systems (ITS) becomes the key to improve the effectiveness of operation and optimize the assets management.

Another relevant aspect is the growing importance that new technologies such as the Internet of Things, Artificial Intelligence and Broadband communications are assuming to convert conventional roads into intelligent ecosystems, enabling a real-time, automated, safe, efficient and sustainable traffic management.

## The product proposed by Leonardo for the intelligent monitoring and control of mobility and the territory is **MATRICES/MOBI (MOVing Better In town)**.

Our Mobility control solutions refer to the most innovative ITS addresses and take advantage of new technologies to create a complete platform to support the needs of mobility managers and all users who contribute to a smart mobility.

## A COMMON AND INTEGRATED SUPERVISION AND CONTROL SYSTEM FOR ALL URBAN STAKEHOLDERS

Matrics-MOBI integrates and satisfies all the most typical needs of the various urban stakeholders:

- **Mobility of the Territory:** traffic operators supervise the current and future traffic situation, manage traffic alarms and events, coordinate the actions on the field.
- **Civil Protection** is informed about traffic situation and forecast and coordinates intervention in case of critical situations together with the traffic operators.
- **Law Enforcement:** typically Local Police who supervises and manages traffic and intervene in case of congestions or critical events.
- **External bodies** and institutions to be informed. All other stakeholders involved in the supervision and regulation of the urban system, each with their own competences and capabilities, interacting and cooperating with a single platform.

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## A SUPERVISION AND CONTROL SYSTEM EASY TO USE AND EFFECTIVE

Matrics-MOBI is easy to use and very effective, and its main features are:

- Acquisition of heterogeneous information from other systems through adapters using standard or proprietary interchange formats
- Clear representations on a georeferenced map, easy to consult and with numerous selectable information layers
- Automatic and manual events notification and alarm management
- Configurability of actions via dedicated workflow to manage critical situations
- High quality and reliable forecasting tools for traffic and travel times in short and medium period
- Estimated demand and the O/D matrices continuously updated by area and type
- Native integration with video surveillance system and cameras at intersections
- High configurability of the system.

## THE PERFECT CONTROL THROUGH UNITY

MOBI is completely integrated with the products of the MATRICES ecosystem and other Leonardo solutions for a smart and safe city:

- **MATRICES AVM:** Automatic Vehicle Monitoring for planning, supervision and management of fleets of buses and metro trains
- **MATRICES SIGMA+:** Urban Traffic Control, the regulation system of the traffic light network offers a valid contribution to improve the smoothness of traffic in the city.
- **SC2** the Leonardo platform designed to provide Command & Control, security management, situation awareness and resilience, creating a handling center for safety and security.
- **Communication systems:** Leonardo's solutions in the field of professional and enterprise communications (DMR, TETRA, 4G/5G, GSM-R, FRMCS, Wi-Fi, etc.) provides further and significant added value to our systems.

The integration of our ITS, security, communications and cyber solutions creates an ecosystem that is unique on the market, allowing to manage and control urban areas improving effectiveness of operation, optimization of resources and quality of life for citizens.

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