

# COORDINATING ITS SERVICES ON A NATIONAL TRAFFIC CONTROL CENTER

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The implementation of National and Regional Traffic Control Centers is an ambition of the National and European Authorities, in order to guarantee the support of services for traffic management, traffic information, cooperative systems, among others, covering all the Trans-European Network with the same level of services. These projects aims to delivery to drivers an improvement of the service offered by the road operators, contributing to the ITS Plan and objectives defined by the European Commission. Estradas de Portugal S.A. (EP) as the Portuguese National Authority for operation and management of the national road network, implemented its Traffic Control Center (TCC) to support all services and operate multiple types of roads (Nationals, Highways, others), with disparate typologies and equipment, and integrate with multiples entities (Countries, Road Concessionaries, Security forces, Emergency services, among others). The implementation of the TCC was made to support all ITS Services, based on European studies and standards (DATEX II, ALERT-C, etc), which allowed EP to specify, design an implement a new integrated system platform that today allow common ITS services for Traffic Management and Information, operation and maintenance of the infrastructure covering multiple and disparate road networks, and be prepared to follow in the future the new ITS directive.

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**Palavras-chave:** Traffic Control Center (TCC), ITS Services, ITS Plan, ITS Directive, Traffic Management, Traffic Information, Trans-European Network (TEN), Easyway, DATEX II, ALERT-C

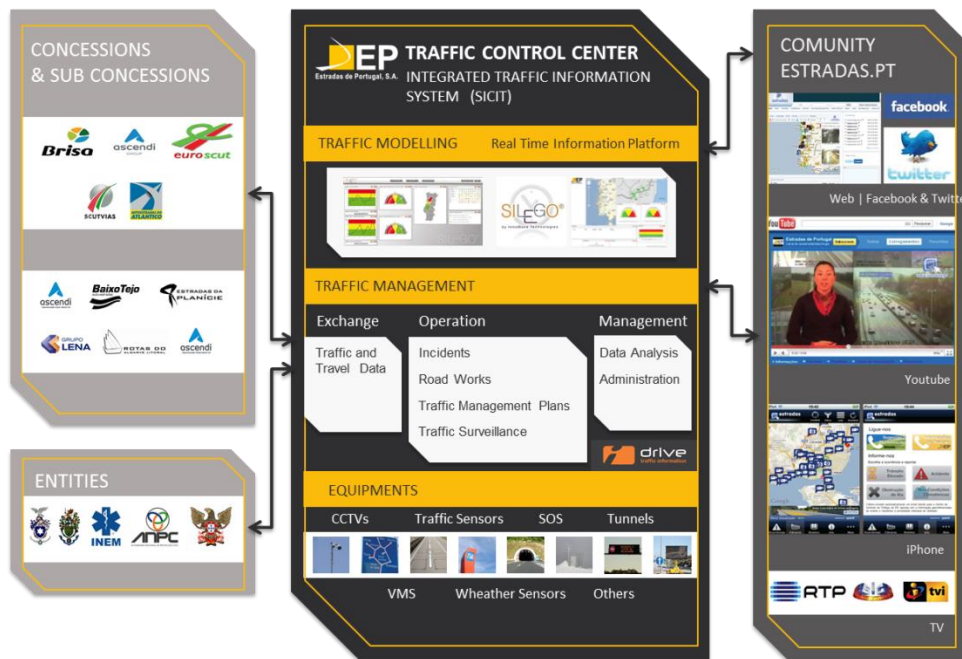
## 1 INTRODUÇÃO

Estradas de Portugal S.A. (EP), is the National Authority that have the role of traffic management and traffic information of the Portuguese Road Network. To support his role, EP has a TCC supported by an integrated traffic information system (SICIT), that implements the more important activities and services in order to guarantee the safety and comfort of drivers, and a more efficient traffic management of the Portuguese Road network in real time.

The improvement of services offered the drivers is one of the most important goal in European and National scale. The implementation of TCC on the Trans-European Network (TEN), allow accomplish one of the more important objectives of the ITS Plan, reducing the congestion and CO2, and improve the security.

EP currently supervises and operates a total of 11700 km on his TCC:

- More than 500 equipment's (Cameras, VMS, SOS, Traffic and weather sensors, tunnels, others);
- Supervises and provides ITS services (Ex. Incident and Works Management) for 8 sub concessions, each one having a regional TCC;
- Supervises and exchange data with 15 concessions;
- EP is the national road operator and is the entity that exchange data on the TEN network, exchanging data with Spain.

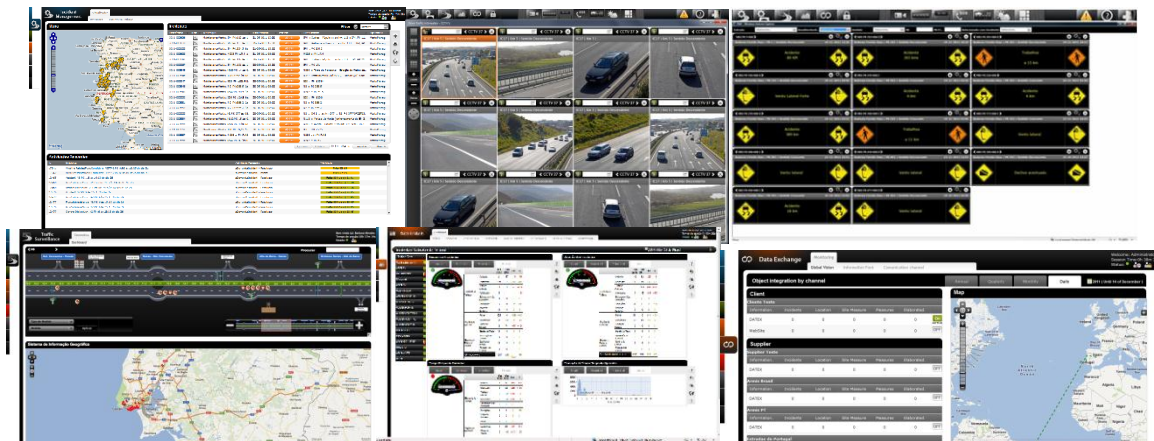


**Figura 1 - Traffic Control Center Overall Vision**

### 1.1 Integrated traffic information system (SICIT)

To support its activity EP has implemented the TCC supported by a ITS solution (SICIT). SICIT is a global system used on the National TCC, which support and coordinate ITS Services for traffic Management and Information.

- Collect and manage traffic and travel information from equipment's on the road (traffic and weather sensors, cameras, VMS, SOS, others);
- Implement ITS services for Traffic Management (Incident detection and Management, Traffic Management Plans, Information services, Road Works, among others);
- Provide traffic and travel information for the drivers on its portal estradas.pt, implementing ITS services for Traffic Information;
- Exchange Data and services with other entities, using DATEX II protocol;
- Support all activities and services on the TCC, allowing EP to play its role of national road operator, in coordination with other entities at national and international level;
- Ensure the operation and management of multiple roads networks with disparate typologies and characteristics;



**Figura 2 - Traffic Control Center central application management system**

## 2 CONCLUSIONS

With the implementation of this project, is possible to EP:

- Improve the efficiency and quality of service for drivers;
- Adopting a new ITS system, allow EP reduce costs of operating multiples concessions and networks, and infrastructure maintenance;
- EP is better prepared to the future, integrating these services on new roads and concessions;
- This project is an innovative service, integrating the Portuguese road network typology, characteristics, needs and requirements, and the European recommendations based on studies and standards defined on multiples European programs;

Allow the implementation of the obligations defined by the new ITS directive, in order to harmonize the ITS service on a European scale.

## 3 AGRADECIMENTOS

For the deployment of this platform a joint work of Innovation and Development has been made between EP and the technological partner Armis. This knowledge has contributed for the enrichment of the functionalities and usability of the platform.

A special thanks for the EP traffic operators that have an essential work, nor only in the daily work of traffic management, but also for the special feedback in the improvements made for improvement of the application.

## 4 REFERENCES

Non applicable.