ASCENDI C-ROADS PROJECTS

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Co-financed by the European Union
Connecting Europe Facility

Ascendi Services | Agenda

- Ascendi Core Business
- Maintenance Management
- Intelligent Transport Systems (ITS)
- Toll Collection
- Motivation and Challenge
- Projects Participation
- Contribution & Benefits

Ascendi Services | Road O&M

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Direct operation of infrastructure

1.367 km

Road Concessions under management

7 Roads

(5 All Electronic Tolling and 2 Traditional Tolling Operations)

Ascendi Services | Core

Core Business Areas

Ascendi Services | Road O&M

Services

INTEGRATED O&M SERVICES

- Assistance to users
- Routine maintenance
- Heavy maintenance
- Winter maintenance
- Infrastructure monitoring
- Construction support

MAINTENANCE MANAGEMENT

- Support systems for infrastructure maintenance management

ITS

- Real time control and monitoring of traffic

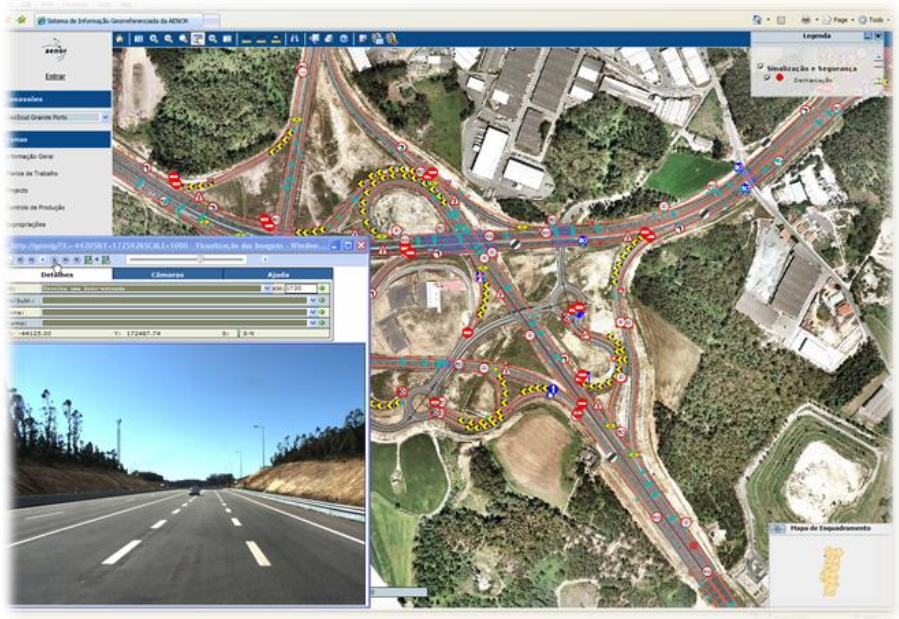
ASCENDI PROVIDES FULLY INTEGRATED ROAD SERVICES

Ascendi Services | Road O&M

Maintenance Management

Ascendi's GIS

- Maintenance management with a fully customized Georeferenced Information System (GIS).
- Records all historical data of the infrastructure from construction and throughout operation.
- Recorded data includes Detail Design, As-Built Drawings, Video Logging, Accident Records, Monitoring Data and Refurbishing Works (available online).



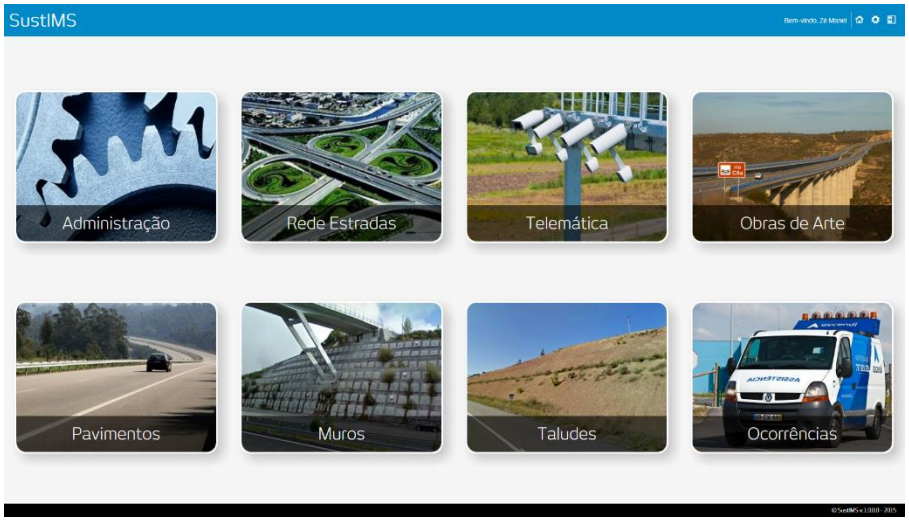
800 km registered in Ascendi´s GIS

Ascendi Services | Road O&M

Maintenance Management

SustIMS

- Sustainable Integrated Management System (SustIMS).
- Platform developed by Ascendi (launched 2017).
- Supported on GIS platform.
- Integrated management of maintenance programs across the board (pavements, bridges, slopes, ITS equipment, etc.).
- Incorporates engines (algorithms) enabling forecast and optimization of preventive or curative maintenance measures.
- Platform developed as a commercial product.



Ascendi Services | Road O&M

Intelligent Transport Systems (ITS)

- CCTV System
- Meteorological Stations
- Traffic Control Centers (5)
- Variable Message Panels
- Automatic Incident Detection
- Emergency Communication Systems
- Counting and Classification Equipments
- Ascendi customized software for traffic management | DRIVE

Ascendi Services | Toll Collection

Traditional Toll System

Manual and Electronic Toll collection systems

[SLFF – 'Single Lane Free Flow' for Electronic collection on a dedicated lane]

23 Closed system Toll Plazas

3 Open system Toll Plazas

207 Lanes

135 Manual Lanes

72 Electronic Lanes (SLFF)

All Electronic Toll System / MLFF

Video and Electronic Toll collection systems

[MLFF – 'Multi-Lane Free Flow' for all traffic in all lanes]

130 Tolling Points

421 MLFF Lanes

Ascendi | Motivation and Challenge

Motivation

- Compliance wih the Directive 2010/40/EU, 7 july 2010 - Framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport Text with EEA relevance.
- Compliance with the Commission Delegated Regulation (EU) 2015/962 and the Commision Delegated Regulation (EU) 886/2013.
- Development and Implementation of the Single Access Point (SPA).
- Delegated Regulation (EU) 886/2013, 15th may 2013 - Data and procedures for the provision, where possible, of road safety-related minimum universal traffic information free of charge to users Text with EEA relevance.

Challenge

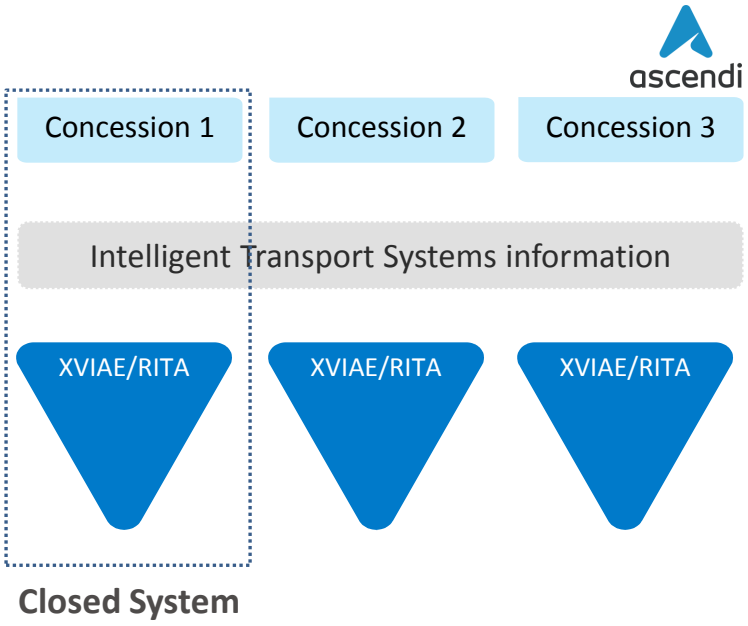
- Divert from closed and independent systems proving data and information to one specific Road to a Single Access Point where all Roads ITS systems take a roll to handle and share information as unique database.
- Adapt existing infrastructures to boost the development of new systems (Current installed communication systems, patrol vehicles, road gantries and ITS systems).

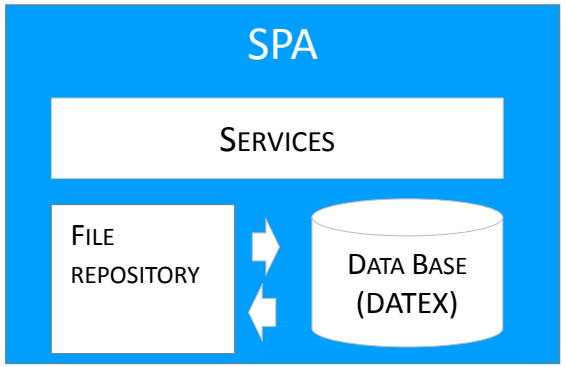
Ascendi | Projects Participation

SPA – Single Point of Access

- This project will contribute to a specific objective of C-ROADS trough the design and Pilot of a National Single Point of Access (SPA) prototype designed in compliance with the Commission Delegated Regulation (EU) 2015/962 and covering information of around 3.390 km.

- Ascendi is implementing a new Integrated platform (DRIVE) to replace the current ITS management system (XVIAE/RITA) in order to allow the distribution to all ITS data information to the SPA database using standard protocols (eg. DATEX-II).





- Dynamic Data (Network occurrences, lane status).
- Traffic Data (lanes usage (%), velocity, Traffic jams, journey times.
- Telematics Data (PMV messages, weather reports, CCTV images).

Ascendi | Projects Participation

C-ITS Services

- Cooperation with GMV on the development and testing of an in-vehicle app that will provide C-ITS services to the users on the A25 (BLA Concession – Shown below).

- This project will use a hybrid communication system (ITS G5 + cellular), that will be able to provide the following Day-1 and Day-1.5 C-ITS services:

  - ✓ Road works warning
  - ✓ Weather conditions
  - ✓ Slow or stationary vehicle(s)
  - ✓ Other hazardous location notifications
  - ✓ Traffic jam ahead warning

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Concession Beiras Litoral e Alta (A25)

Use of existing infrastructures (Gantries) for RSU's installation

Pilot test to connect current installed communications system (FO) with RSU's

Installation of OBU's in O&M vehicles to conduct tests

Ascendi | Contribution & Benefits

SPA and C-ITS Services

- Produce mutual benefits for the several stakeholders, in the sense of being possible, using European funding, adapt our road infrastructures with intelligent systems and offer various services in the field of road mobility, fully aligned with the vision that the European Commission and DG Move have on this theme, highlighting the ITS Directive and Delegate Regulations published or in the process of being published.

- Contribute with 120km of highway (BLA) to the specific objective of implementation pilot test services over a total of 460km of core network.

- Contribute with 1100km of highway (all Ascendi Concessions and Subconcessions) to the specifc objective to share information of the network by collecting, processing and distribute ITS critical data from all Ascendi Operation (sub)concessions.

C-ROADS

THANK YOU!

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