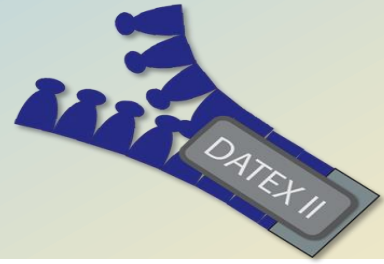


NATIONAL DEPLOYMENTS PORTUGAL

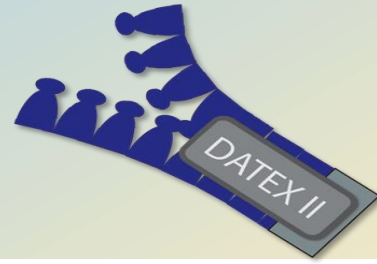
Ricardo Coelho

Agenda



- Portuguese Road Network
- Use Case Scenarios at Portugal
- Traffic Information and Management
- Monitoring and Supervision (Contract) (Traffic and Infrastructure)
- DATEX II Portuguese Implementation

Portuguese Road Network



Transeuropean Road Network (TERN)



**94% NOW
COMPLETED
IN PORTUGAL**

Portuguese Road Network



National Road Network (PRN2000)

Network length (National Road Plan) under Concession / Subconcession

In operation/ In construction

Length (km)

State Concessions

2.700

EP, SA Concession

10.850 (200 km Motorways Built)

EP, SA subconcessions

1.000 (400 km Motorways)

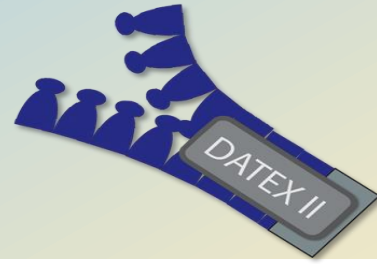
14.550 km



2014

**Motorways
3112 km**

Use Case Scenarios at Portugal



□ Traffic Information and Management

- The objective is to provide a public service with traffic management and traffic information role on the Portuguese Road Network.
- “Estradas de Portugal” (EP) is the National Authority for this role.



□ Monitoring and Supervision (Contracts)

- Main task is to supervise and oversee the management and operation of the road network, monitoring compliance with laws and regulations and concession agreements (Contracts).
- IMT is the National Authority to supervise the Concessions and EP supervise his sub concessions



Traffic Information and Management



Estradas de Portugal (EP)

- EP currently supervises and operates a total of 1 1700 km on his Traffic Control Center (TCC):
 - Operate and supervise more than 2000 equipment's (Cameras, VMS, SOS, Traffic and weather sensors, tunnels, others);
 - Supervises and provides ITS services for concessions and sub concessions, each one having a regional TCC;
 - EP is the national road operator and is the entity that exchange data on the TEN network, exchanging data with Spain.



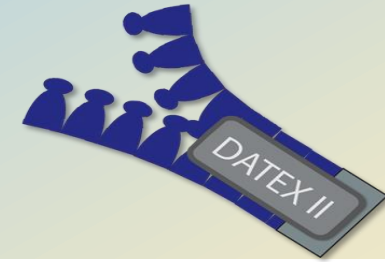


Traffic Information and Management

Vision



Traffic Information and Management

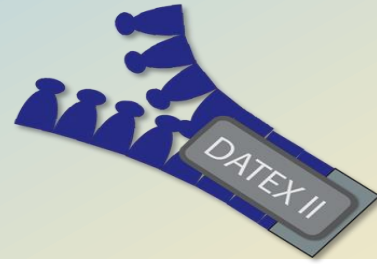


To achieve his goals

1. Collect Real Time Data Traffic and Travel Data (Situations and Measures)
 1. Equipment's operation;
 2. DATEX II Exchange from sub concessions
2. Provide Traffic Information for End users;
3. Exchange data with others entities (Others Public authorities and countries)



Monitoring and Supervision (Contracts)



- One of the main tasks is to supervise and oversee the management and operation of the road network, monitoring compliance with laws and regulations and agreements, to ensure the efficiency, equity, quality and safety of infrastructure as well as users' rights.



Monitoring and Supervision (Contracts)



To achieve this mission, IMT (Concessions) and EP (Sub concessions) had to:

1. Gather and analyze huge amounts of information
2. Supervise and manage concessions and sub concessions
3. Act promptly!

OpenRoads

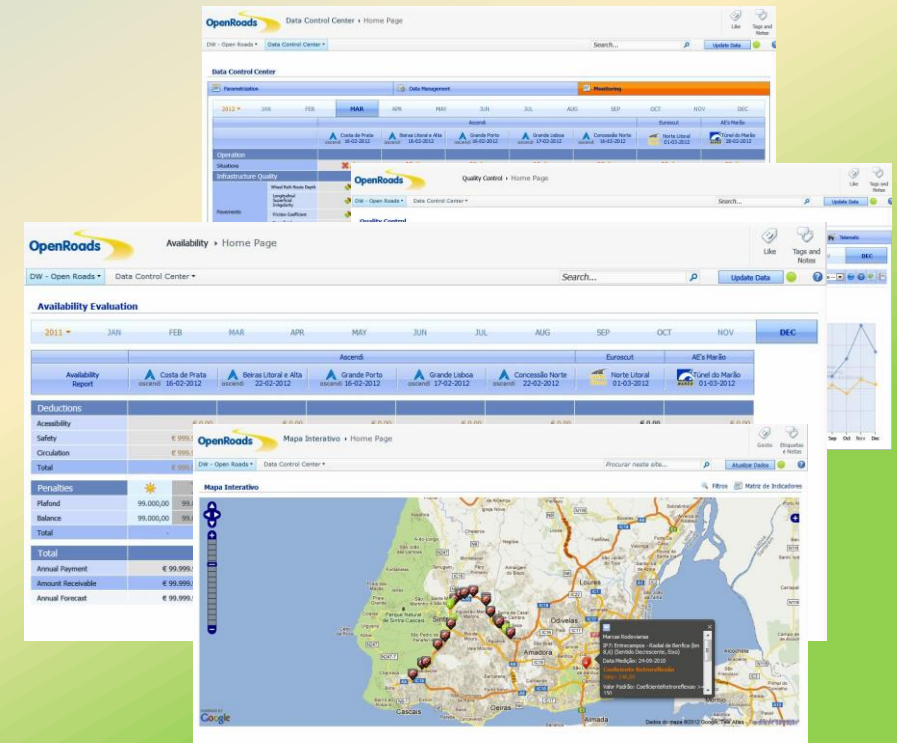


Monitoring and Supervision (Contracts)

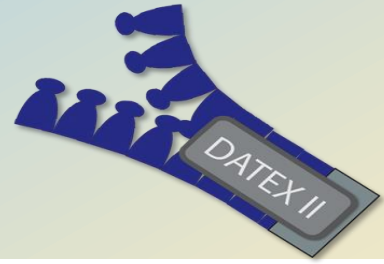


- Control and monitor the information received using DATEXII
- Analyze and explore the information by extracting Indicators and Reports
- Analyze the impact of availability on the financial contract
- Explore the information

OpenRoads



Monitoring and Supervision (Contracts)

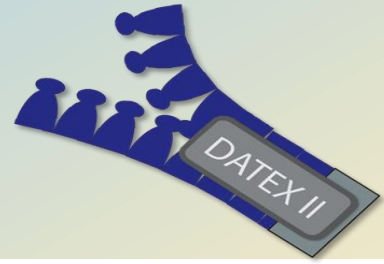


How OpenRoads was set:

OpenRoads

1. By defining a methodology and a Glossary of the concepts and processes
2. By adopting the DATEX II protocol for collecting information
 1. Defined a profile over Situation and Measure Publication
 2. Created new extension for infrastructure Publication
3. The road operators were linked using DATEX II
4. The activity of supervising the concessions is made using the OpenRoads system

Monitoring and Supervision (Contracts)

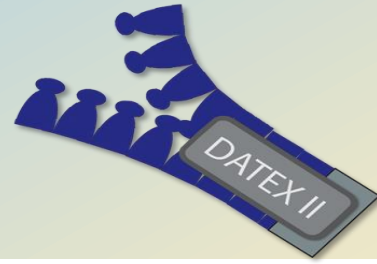


OpenRoads allows to know:

- ▣ what is happening on the road network;
- ▣ with a granularity of 100 mts, on each motorway, each lane, each day, every hour;
- ▣ based on information collected by each concessionary and reported on a “Datex II wrapping”.



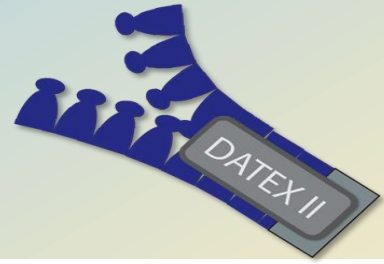
DATEX II Portuguese Implementation



- ▣ Traffic Information and Management
(Real time Exchange)
 - Situations Publication Profile;
 - Measures Publication Profile;

- ▣ Monitoring and Supervision (Periodic
Exchange based on Contract)
 - Situations Publication Profile;
 - Measures Publication Profile;
 - Infrastructure QoS Publication Extensions;

National deployments Portugal



Thanks !

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