

**EasyWay**



Annual Forum 2010



**Shortcut to the future.**  
Lisbon • November 16<sup>th</sup>-18<sup>th</sup>



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The experience of Ascendi in  
MLFF Systems

Pedro Pinto



## AGENDA

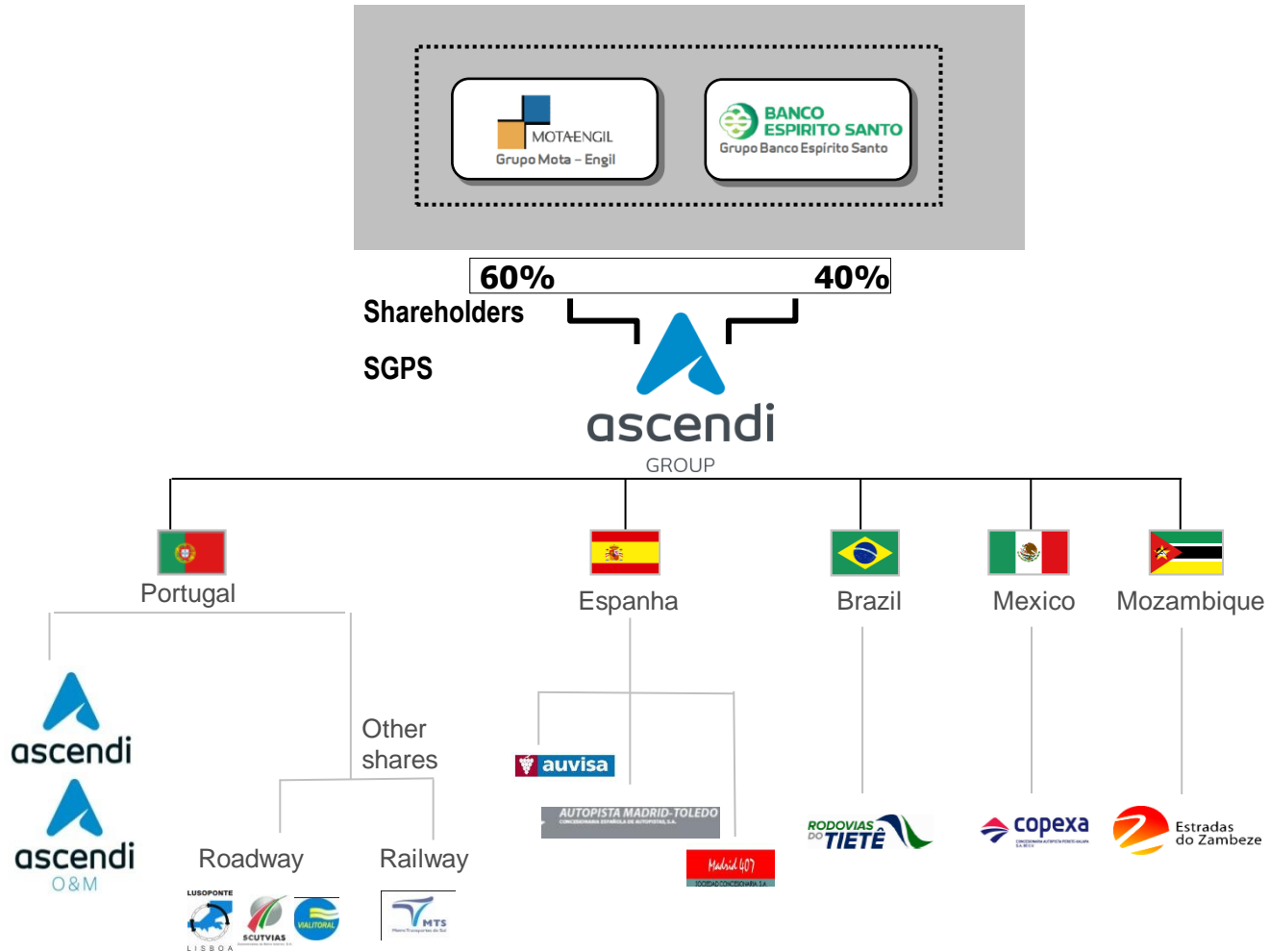
- ▶
  - Ascendi
  - Framing
  - Milestones
  - MLFF architecture solution
  - Figures



## ▶ Ascendi



## ► Ascendi





## ► Ascendi

7 Concessions

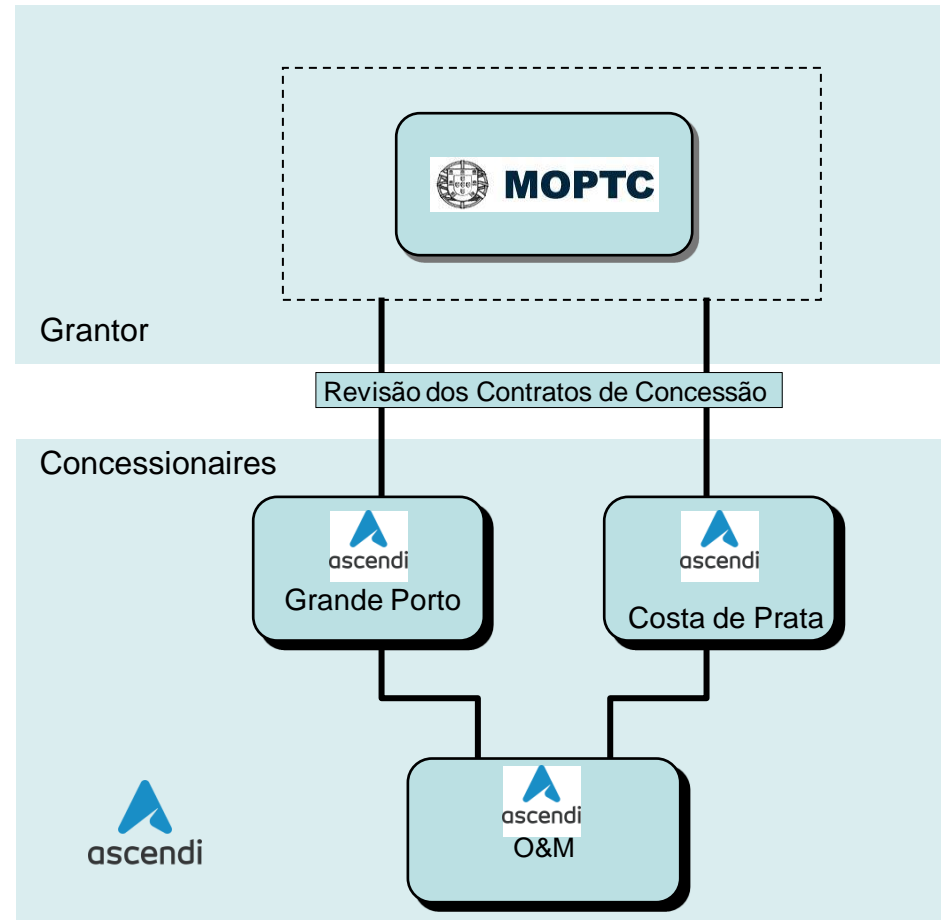
Around 1.370 kms



## ► Framing

Ascendi is close an agreement with the Portuguese Government to change two Concessions working in shadow toll schema to a real toll schema (Grande Porto and Costa da Prata).

Due to the technical characteristics of these concessions a *Multi-Lane Free-Flow* (MLFF) system was considered to be the best solution.



## ▶ Framing

### MLFF System characteristics, under the agreement established

- **Fully automated system requiring no human intervention for collection;**
- **Open System with main road Charging Points (CP) in selected sub-stretches:**
  - **Costa de Prata – 22 CP**
  - **Grande Porto – 26 CP**
- **Each CP will collect a toll rate corresponding to its predefined influence area;**
- **Vehicle identification through Tag reading or photograph with License Plate Recognition using OCR technology;**
- **The CP transactions comprised in a journey will be clustered in a single business transaction that is in everyway similar to that of a closed system transaction, in which the toll amount charged is determined by the entrance and exit interchange.**



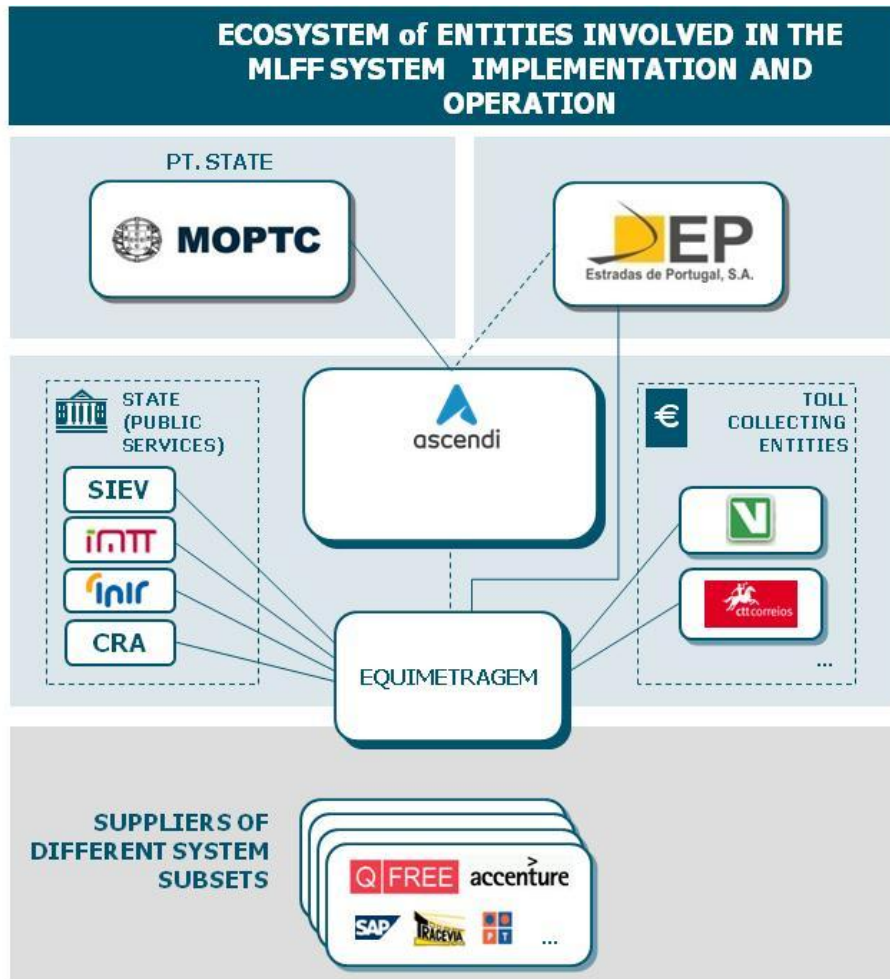
## ▶ Framing

System functioning characteristics derive from the implementation of a Vehicles Electronic Identification System (VEIS), accordingly with PT legislation (May 18<sup>th</sup> 2009)

- **Payment systems available:**
  - **Primary collection to be available by CTCE (Certificated Toll Collecting Entities, eg: Via Verde)**
    - Payment system under contract (direct debit)
    - Pre-payment anonymous system
    - Pre-payment system with user's identification
  - **Secondary collection to be available in CTT (Portuguese Post Office Company)**
    - Post payment anonymous system
    - Pre-payment system with user's identification
- **Enforcement collection model previewed for non payments;**
- **Previewed a schema to apply to foreign cars.**



## ► Framing



PT STATE	Grantor of the Concession Contracts
EP	Publicly owned private company entitled to the toll income. Grantor of the Tolling Service Contracts
EQUIMETRAGEM	Private Company owned by Ascendi assuring the implementation, operation and maintenance of the MLFF System
STATE (Public Services)	Entities that exchange the necessary information for the operation of MLFF system
TOLL COLLECTING ENTITIES	Certified entities by SIEV to assure toll collecting services in the system: <u>Primary Collection</u> – Via Verde, or others <u>Secondary Collection</u> - CTT

RSE & OBO	Q FREE	Software CBO	SAP	Civil Works, Inf., Elec.	TRACEVIA
CBO	accenture	Communications network	PT	Civil Works, DC	manvia



## ▶ Milestones

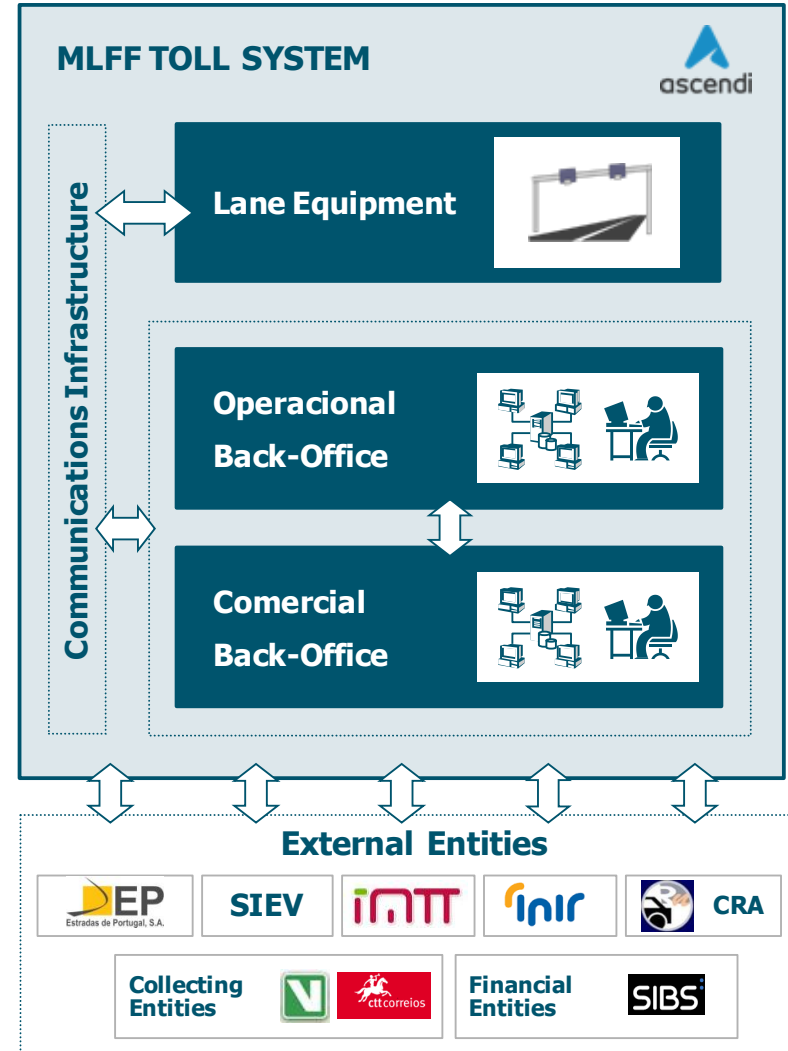
- December 2008 – Government indication to change tolling schema;
- June 2009 – Beginning of the project installation;
- September 2009 – Go-Live for 10 charging points; **(Postpone by Gov. Decision)**
- July 2010 – Go-Live for the full system; **(Postpone by Gov. Decision)**
- 15 October 2010 – Go-Live for the full system;



## ▶ MLFF architecture solution

The MLFF system is structured in three major components:

1. RSE - *Roadside Equipment*
2. OBO - *Operational Back-Office*
3. CBO - *Commercial Back-Office*





## ▶ MLFF architecture solution

MLFF simulation



## ▶ Figures

- Percentage of ETC around 62%
- Percentage of VTC around 38%
- Average number of business transactions (trips) per day around 180.000
- Average number of photos per day for manual validation around 25.000



▶ Thank You !

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