evs 27

The 27th INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION

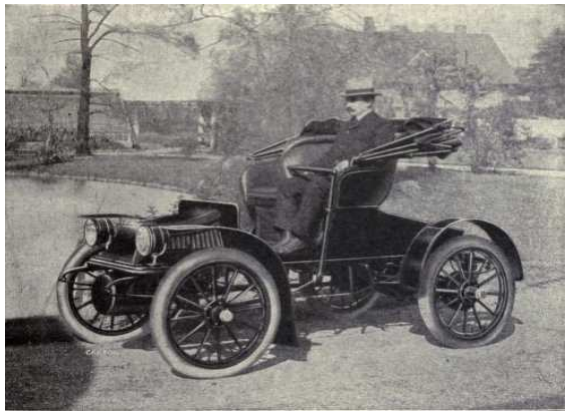
BARCELONA

BRIDGING ELECTRO-MOBILITY INITIATIVES

João Jesus Caetano (INTELI)

Organized by: Fira Barcelona, avele
Hosted by: AVERE, MCA, Ajuntament de Barcelona
In collaboration with: EVAAP, EDTA
Supported by: European Commission

CIP ICT-PSP Call 5 2011: Smart Connected Electro-Mobility



← 100 years →

Addresses **deployment** (not R&D)

Aims at testing urban and inter-urban **ICT services and support systems** to wider uptake of electro-mobility in Europe

Expects to **contribute** towards integrated pan-European electro-mobility network

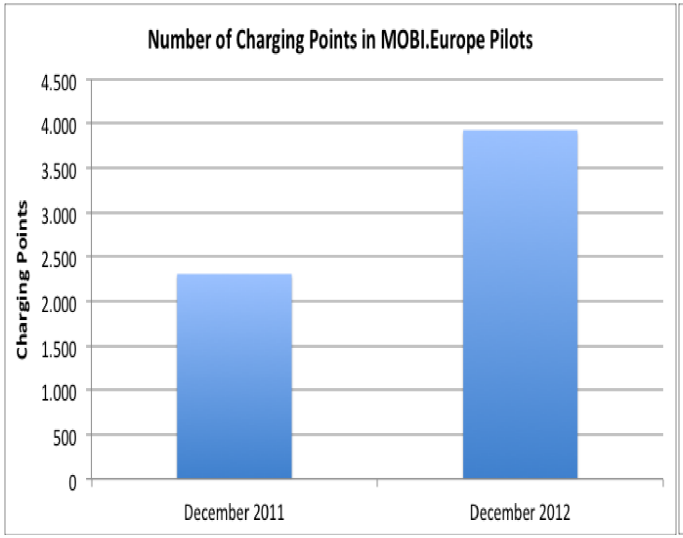
FRAG MENT ATION

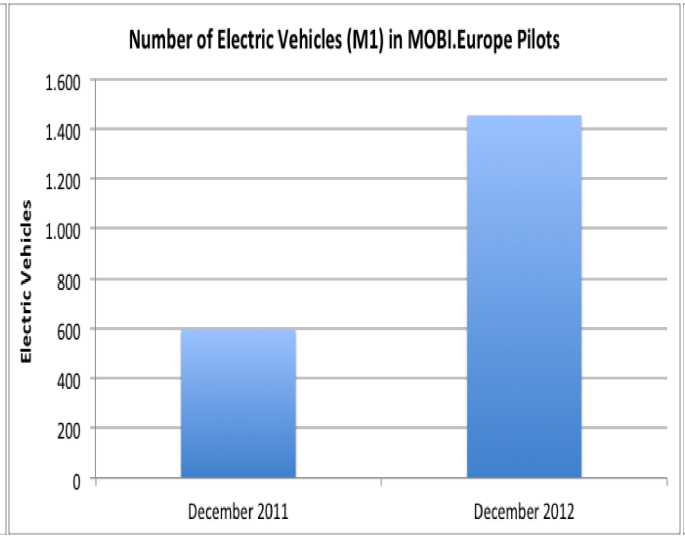
MOBI.E Nationwide program

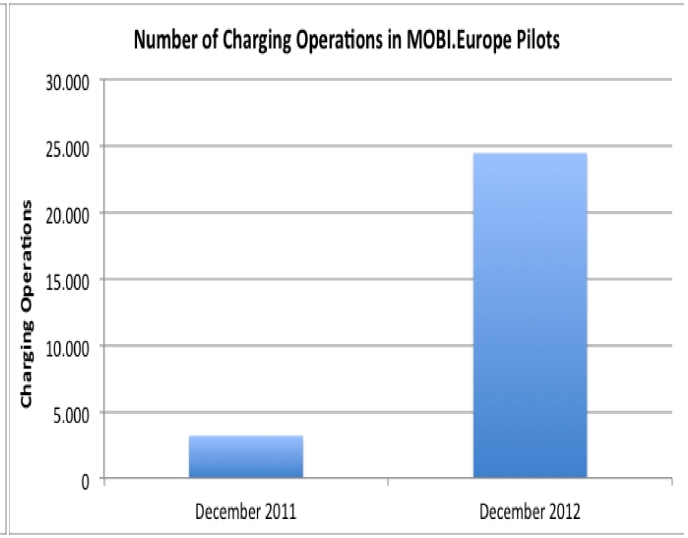
e-car IRELAND Nationwide program

Amsterdam elektrisch City-wide program

Region-wide program



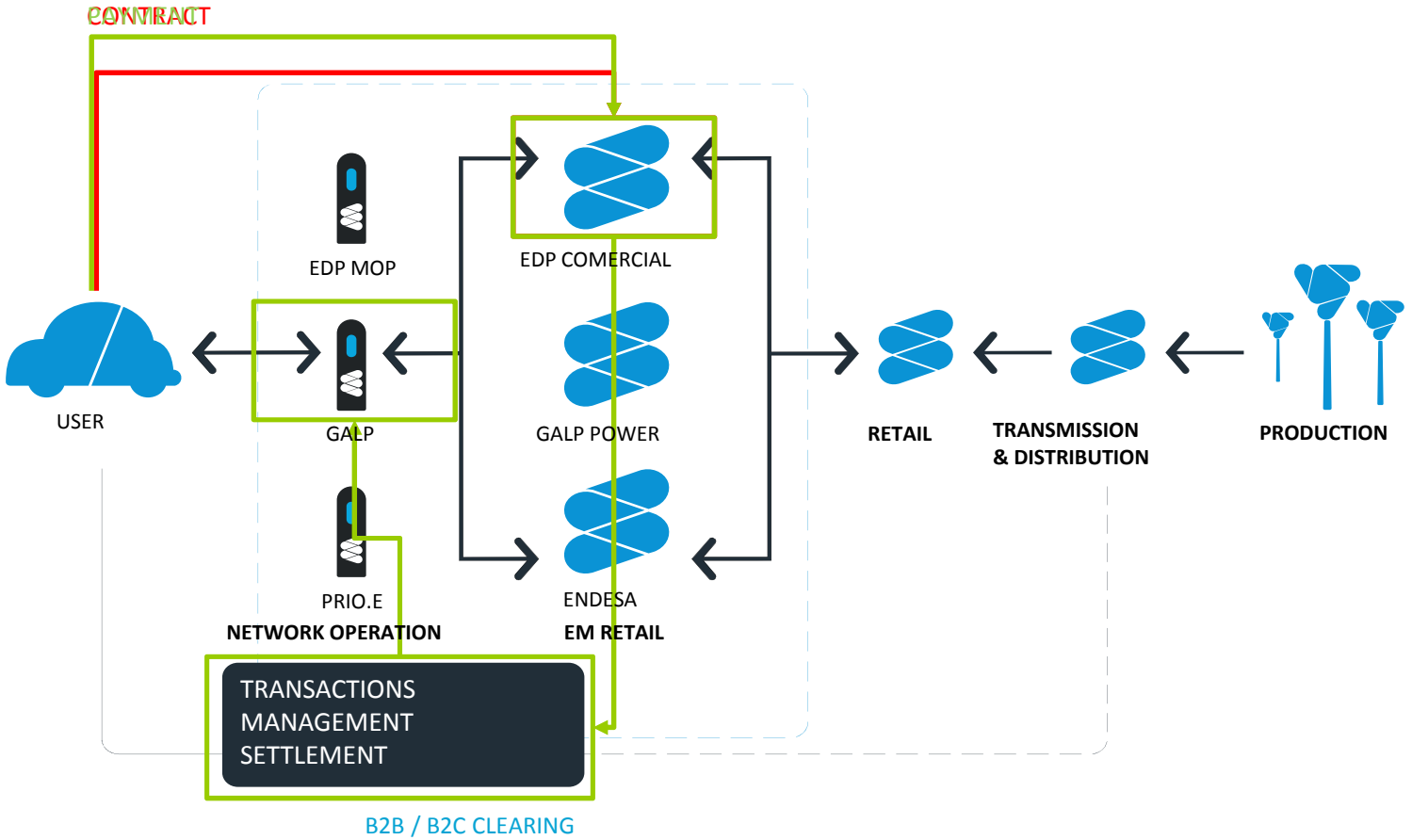




INTEGRATION

(INTEROPERABILITY: technical, but not only)

Portugal: Architecture and Principles



High-level Pilots Specifications

Findings

- Pilots with central systems (Ireland, Portugal) having a sole entity responsible for its operation
- A pilot with decentralized systems (Netherlands), involving several entities in their operation
- Some pilots have business models strongly regulated and others less regulated ('more liberal')
- In open markets, like the Netherlands, some entities already have implemented normalizations, allowing them to interchange data
- Mobi.Europe's universe has a lot of diversity with different architectures, solutions, normative, business models, etc.
- All entities generally dislike interoperability solutions which may cause a limitation on their capacity to evolve their systems freely

High-level ICT Framework Specifications

THE HIGH-LEVEL ARCHITECTURE HAS TO BE ABLE TO INTEGRATE SYSTEMS WITH A BIG HETEROGENEITY OF BUSINESS AND SOLUTIONS DEVELOPED

ASSUMPTIONS AND INTEROPERABILITY SOLUTION

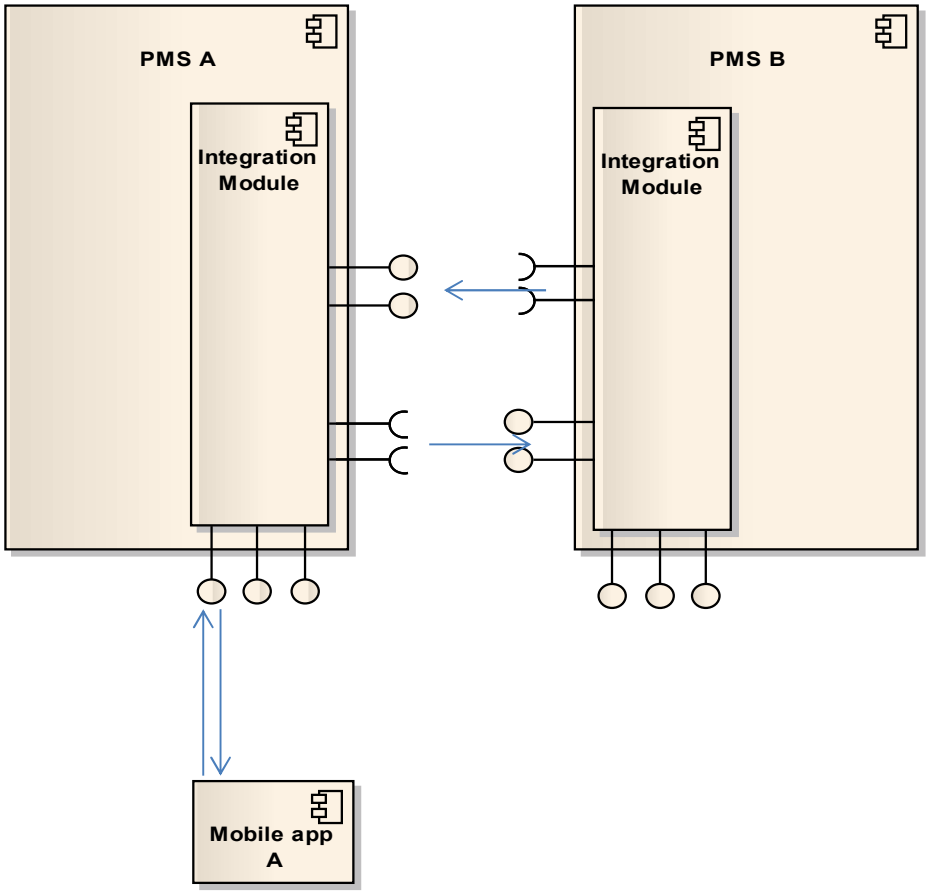
MOBI.EUROPE ROAMING SOLUTION IS BASED ON THE FOLLOWING ASSUMPTIONS

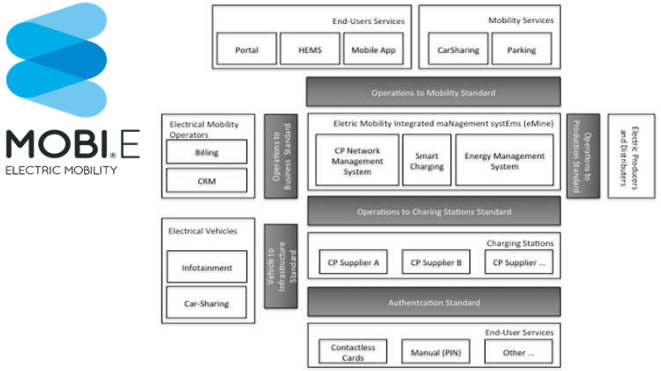
1. SOLUTION TO BE THE LEAST INTRUSIVE AS POSSIBLE
   LEAST POSSIBLE IMPACT ON EXISTING PILOTS
2. BUSINESS-MODEL INDEPENDENT
   SHOULD COPE WITH EXISTING AND FUTURE BUSINESS MODELS
3. DECENTRALIZATION AND RESPONSIBILITY DELEGATION
   THE BOUNDARIES OF PILOT'S SYSTEM AND INTEROPERABILITY AREA SHOULD BE CLEARLY DEFINED.

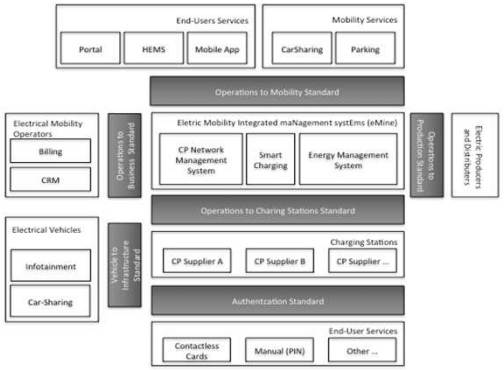
High-level ICT Framework Specifications

ASSUMPTIONS AND **INTEROPERABILITY SOLUTION**

- PMS CONCEPT: PILOT MANAGEMENT SYSTEM – ABSTRACTION THAT REPRESENTS ALL SYSTEMS BELONGING TO A PILOT
- SOLUTION BASED ON:
  - AN INTEGRATION MODULE, CONTAINED WITHIN EACH PMS
  - A MOBILE APP
- THE INTEGRATION MODULE MUST EXPOSE A SET OF SPECIFIED INTERFACES TO COMMUNICATE WITH:
  - THE OTHER PMS'S
  - THE MOBILE APP



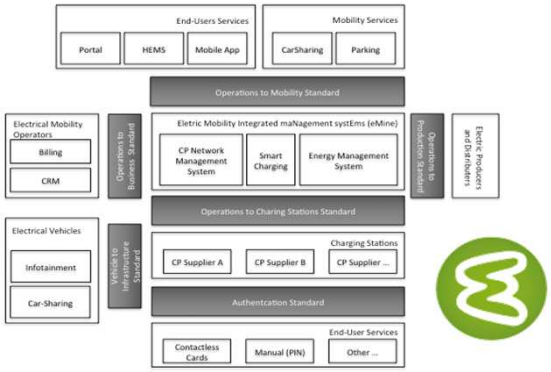




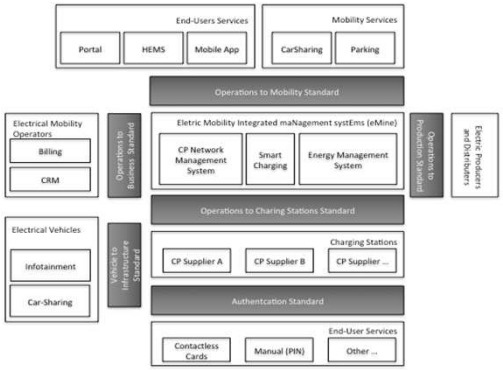
e-car IRELAND

mobi europe

Common Interoperability Standards

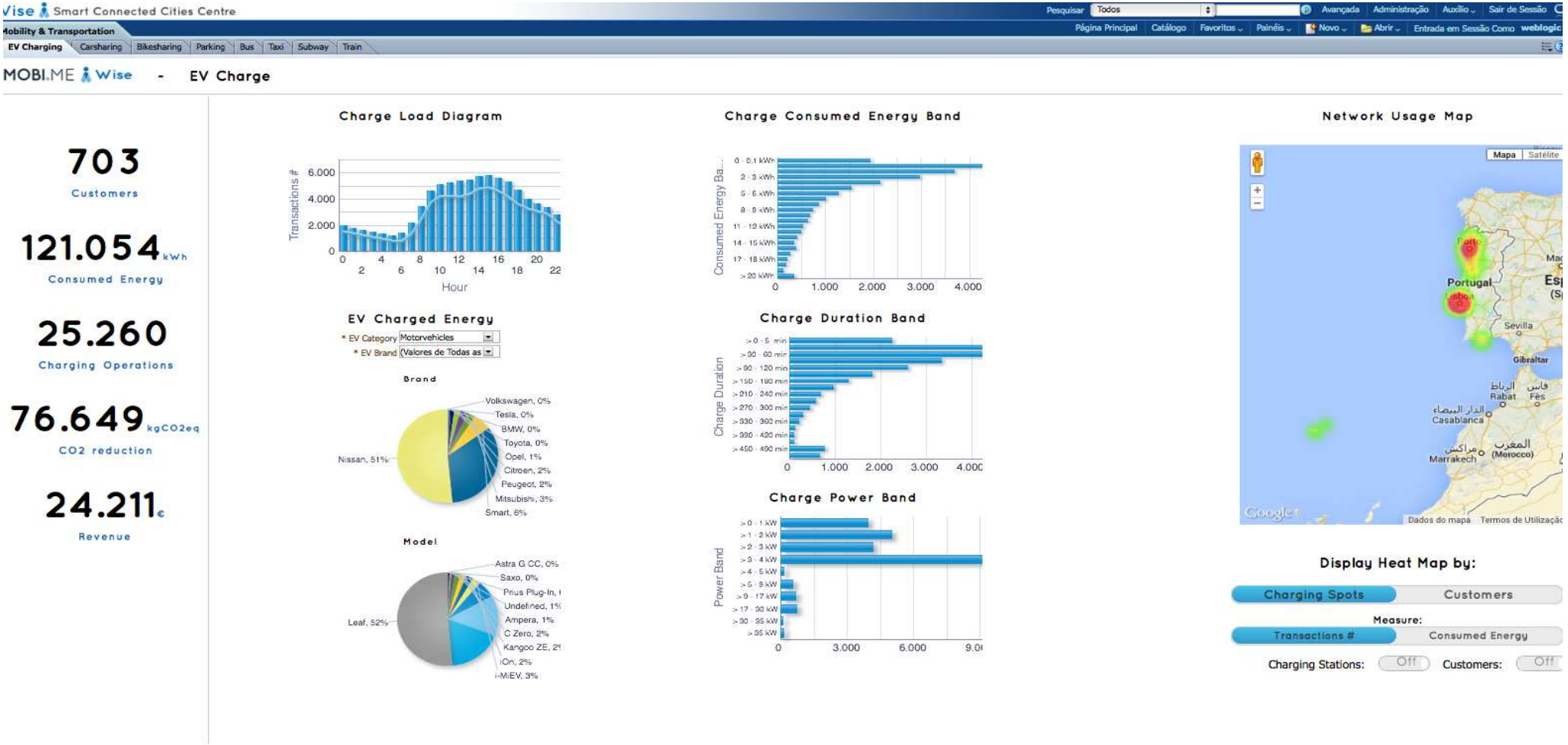


Amsterdam elektrisch



MONITORING

Network activity (Portugal)

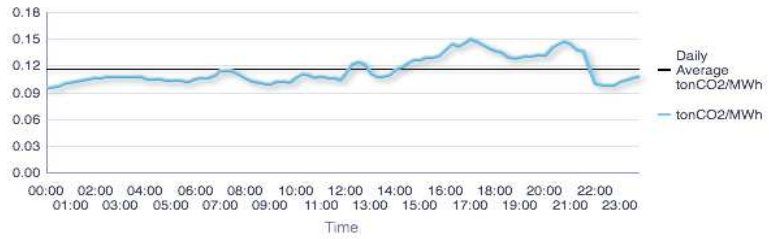


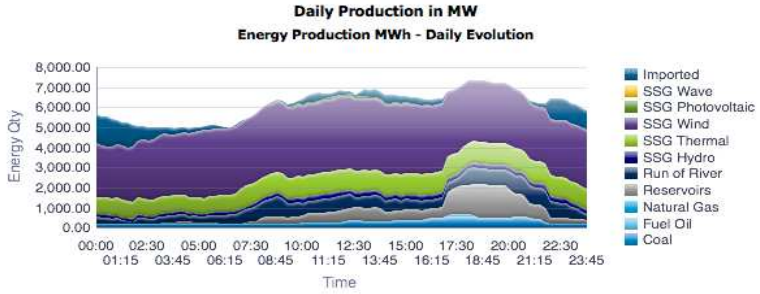
Electricity sector CO2 emission (Portugal)

Electric Sector - Daily Analysis

Back

* Country: Portugal | * Year: 2013 | * Month: 2013/11 | * Date: 04-NOV-2013 | Apply





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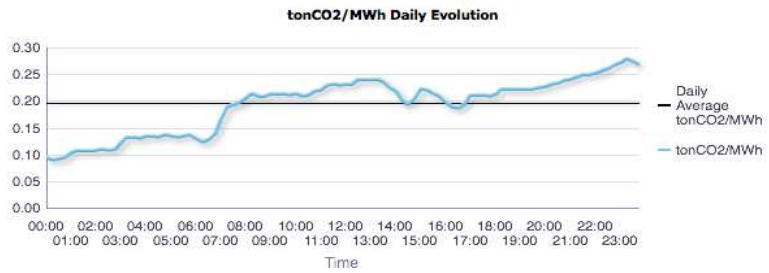
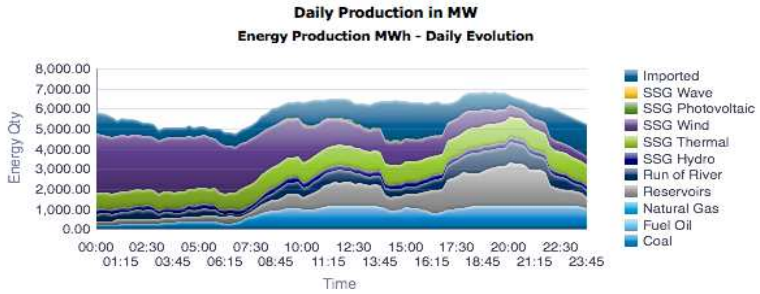




CIP-ICT PSP Clustering

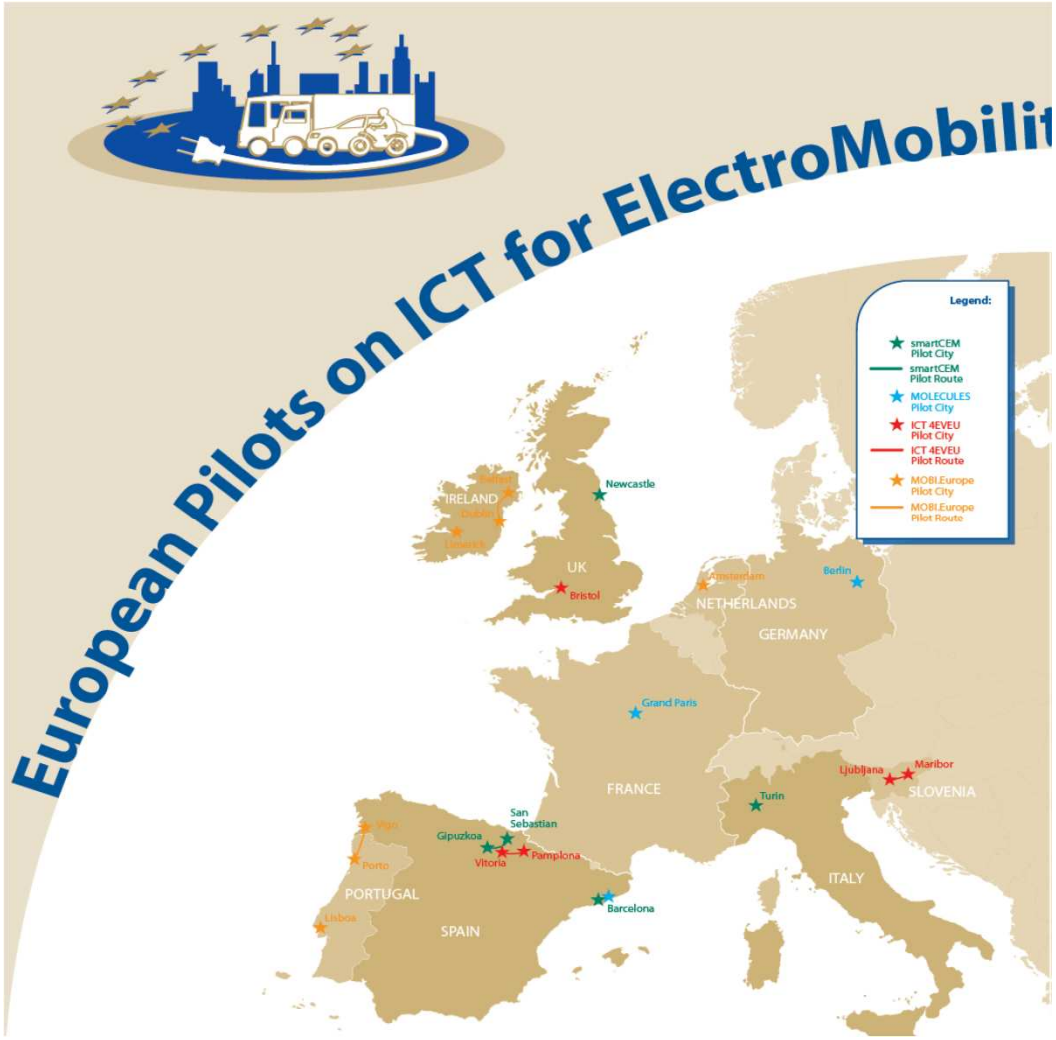
ICT4eveu

molecules

smartCEM

mobi europe

Common launch event at the European Parliament, February 2012



Common European Stakeholder Approach

- MOBI.Europe
  Bilateral deals mobile phone
- Green eMotion
  Market place & clearing House
- UK / Ireland
  8 UK PIPS Shared Whitelists
- Treaty of Vaals
  Open clearing House
- eMI3
  All of above + Auto OEMs +
  Hubject + anyone interested

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(CEiiA stand D.404)