



# Electric Mobility

Creating an  
innovative network.

February 2012



# The “need” that drives innovation

## July 2008:

Fuel Crisis

Price reaches 200 US\$/B

End of fuel on the horizon

Decarbonize generation

Modernize the grid

Give customers choice

Provide universal service

Keep rates low

## Opportunity

Mobility Framework Business Model



# A NATIONAL EV CHARGING NETWORK - REQUIRES...



A **STRATEGY**  
FOR ELECTRIC MOBILITY

A **MARKET MODEL**  
TO ACCOMMODATE PUBLIC & PRIVATE MARKET  
PLAYERS

A **BRAND IDENTITY**  
TO INCREASE USER AWARENESS & ADOPTION RATE

A **TECHNICAL ARCHITECTURE**  
TO INTEGRATE ALL SYSTEMS & EQUIPMENTS

# STRATEGY FOR ELECTRIC MOBILITY - MAIN GOALS



**FOCUS ON THE END-USER** (CITIZEN & ORGANIZATIONS)

**COMPETITIVE PRICING** WHEN COMPARED TO ICE VEHICLE

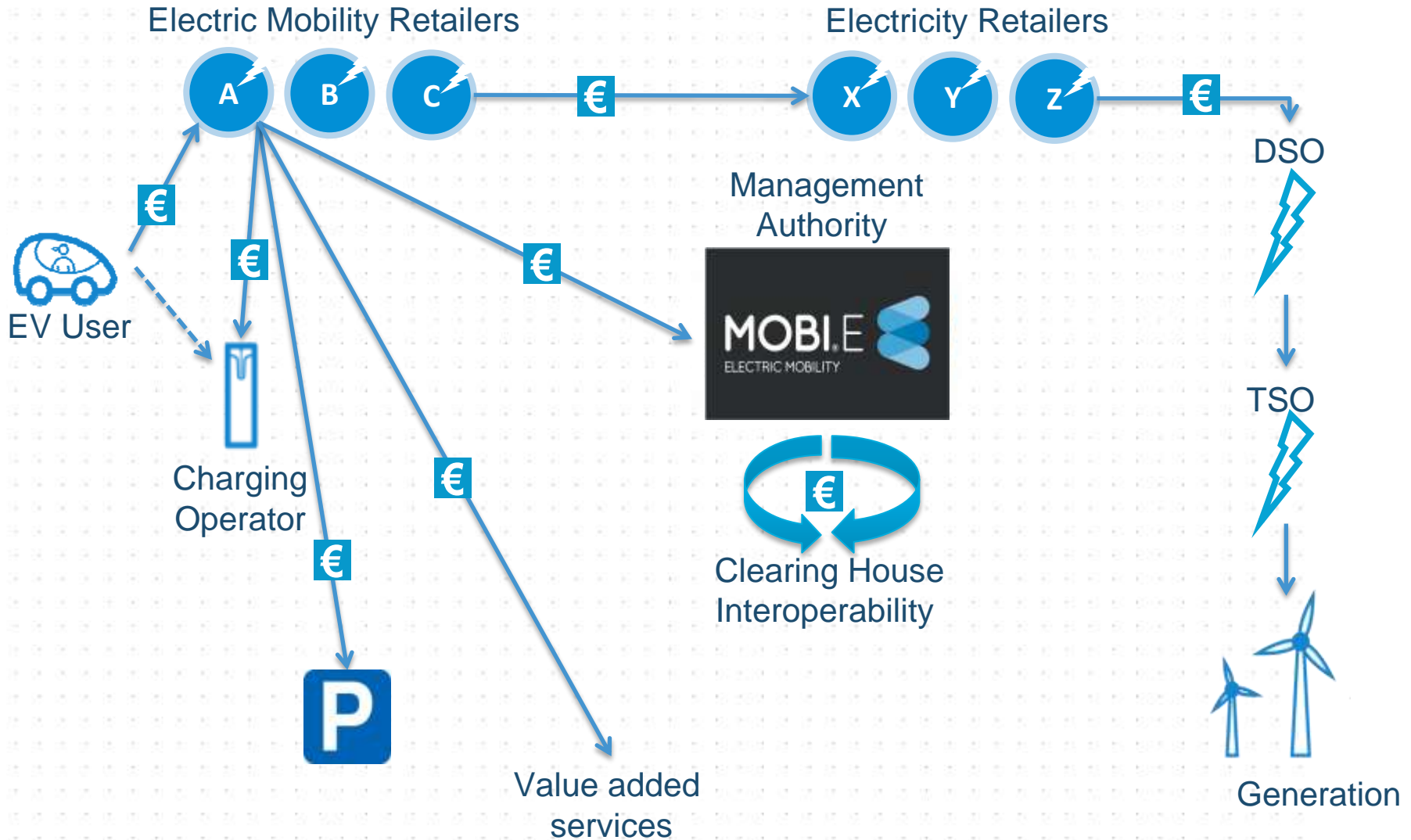
**UNIVERSAL ACCESS**, OPEN TO EVERY EQUIPMENT MANUFACTURER, UTILITY & PRIVATE OPERATOR

**INTEGRATION** OF INFORMATION, ENERGY & FINANCIAL FLOWS

ATTRACTION OF **PRIVATE INVESTORS**

**NATIONAL SCALE**, ANTICIPATING MASSIFICATION OF ELECTRIC VEHICLES

# MARKET MODEL - MARKET PLAYERS & MANAGEMENT AUTHORITY



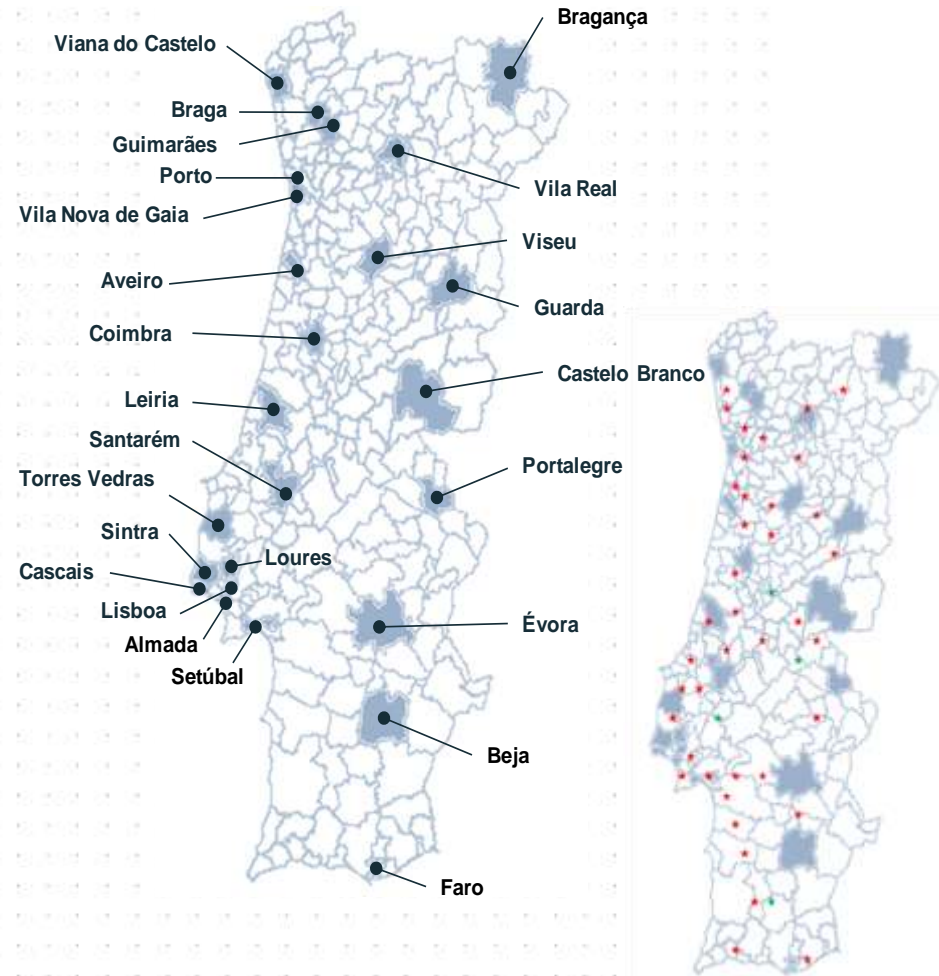
# MOBI.E – NATIONAL SCALE INFRASTRUCTURE



25 MUNICIPALITIES (IN 300)  
INVOLVED IN THE PILOT  
INFRASTRUCTURE NETWORK +  
MAIN HIGHWAYS

WIDESPREAD PILOT CHARGING  
NETWORK:  
1300 SLOW CHARGE + 50 FAST  
CHARGE

INCLUDED LOCATIONS:  
STREETS  
PUBLIC PARKING LOTS  
SERVICE STATIONS  
AIRPORTS  
HOTELS  
SHOPPING CENTERS



# Peripheral & Network - Global layout



Browse Network

Search by Name or IP Address

- Network Root
  - Athlone City Council
    - GAC75 - West
    - GAC76 - North
    - GAC77 - South
  - Dublin City Council
    - GDC14 - Merlin Park
      - EVC63
      - EVC64
      - EVC65
      - EVC66
        - SKT1
        - SKT2
  - Waterford City Council



Target Devices

Remove All Devices

STATION EVC65 James's Street, Dublin 8 ipv4 / ipv6 277.89.0.67:43999 / [5001:b18:cafe:babe::7344]:43999 LT / LSC 06-03-2011 9:45am / 06-03-2011 4:12am

Belongs to: Network Root > Network Group - Dublin City Council > Device Group GDC14

Event Console

Operations

Remote Session

Usage Report

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Order by: Priority Entry Date

Device	Group	IP Address	Type	Entry Date	Occurance	Last Update	Current Status
1 EVC65	DC14	ipv4 126.89.0.67:43999	CRT1-DCA	06-03-2011 9:45am	Issue description	06-03-2011 10:45am	Last status description

Status Changes

06-03-2011 10:45am	MTSI Pending	Last status description	Actions: SMS notification to Maintenance Team
06-03-2011 9:45am	CC Notification	Last status description	Actions: SMS notification to Operation Team

Update Status Command Device

1 EVC65	DC14	ipv4 126.89.0.67:43999	CRT1-DCA	06-03-2011 9:45am	Issue description	06-03-2011 9:45am	Last update status
2 EVC65	DC14	ipv4 126.89.0.67:43999	CRT1-DCA	06-03-2011 9:45am	Issue description	06-03-2011 9:45am	Last update status
3 EVC65	DC14	ipv4 126.89.0.67:43999	CRT1-DCA	06-03-2011 9:45am	Issue description	06-03-2011 9:45am	Last update status
3 EVC65	DC14	ipv4 126.89.0.67:43999	CRT1-DCA	06-03-2011 9:45am	Issue description	06-03-2011 9:45am	Last update status
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Order by: Priority Entry Date

# IMPORTANT MILESTONES



Over the last past two years and a half several important milestones have been accomplished that enable us to plan the upcoming stages.



Oct  
2008

Mar  
2009

Jun  
2009

Dec  
2009

Mar  
2010

Jun  
2010

Jun  
2011

- Think Tank creation for the definition of the technical solution and exploration model

- QREN Candidacy
- Japan visit

- Agreement for the creation of the Management Entity at the Recharging Portugal event

- MOBI.E model freeze

- FAI Candidacy
- Management Entity Constitution
- Beta 1 Demo presentation

- Beta 2 Demo presentation

- Pilot Network Roll-out

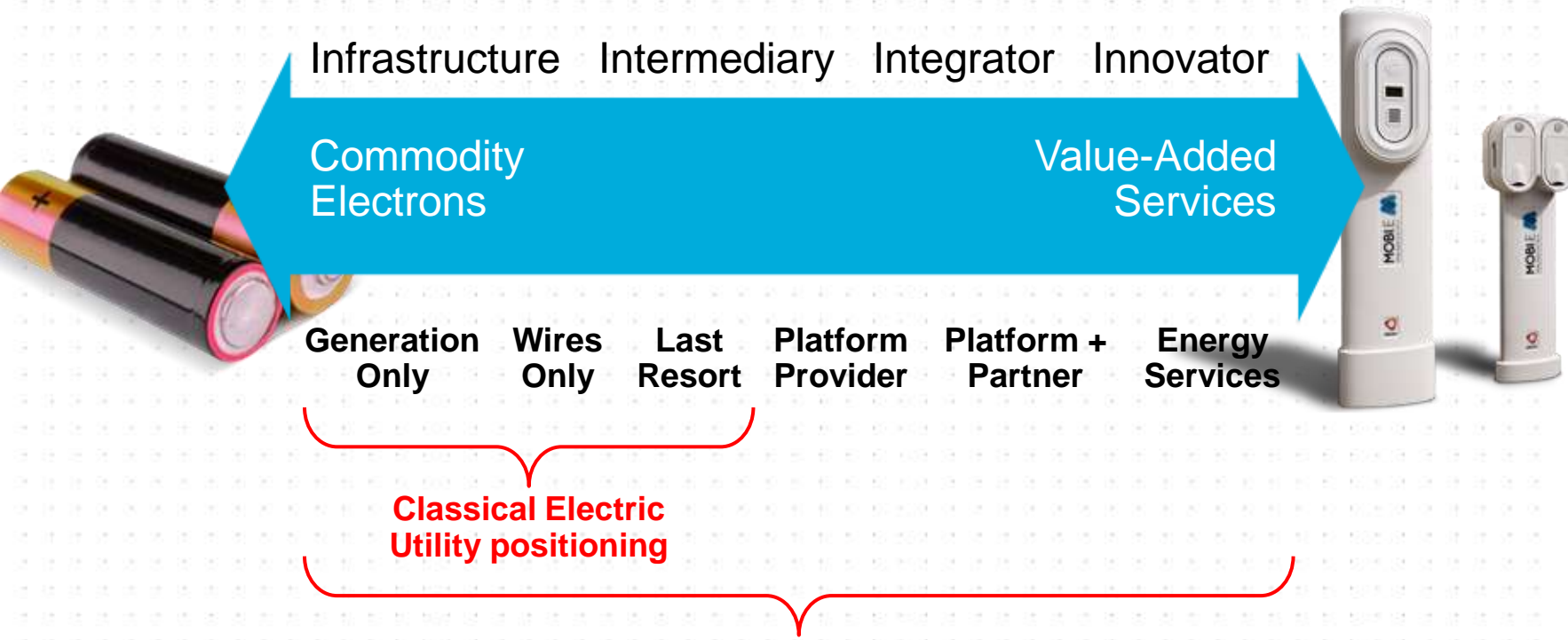
- Pilot Network completion



# Mobi.e innovative positioning

Mobi.e contributes to the **repositioning of electric utilities** in a “value-added services” model, through an **innovative platform**:

- Supporting value added services; and
- bringing together **a whole new value chain.**





# Mobi.E innovative positioning

The Mobi.E platform creates a network effect, allowing for multiple players to quickly enter the market by:

Lowering entry costs

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Creating an accessible platform for innovative services

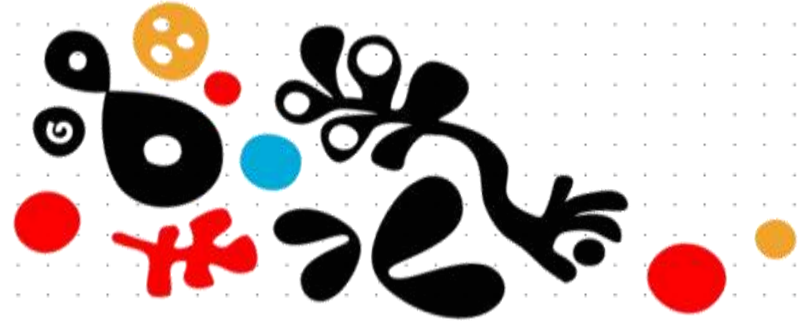
Electric vehicles can charge at any public station with a contract from any mobility retailer

Anyone can become a network operator!

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Anyone can become a mobility retailer!

# Next Steps



- Partnership with providers, car makers, charging station builders
- Sell the solution outside



# Key Take Aways



- Innovation is Originated by necessity
- The innovation in Mobie is in the business model
- Think for the world
  - Designed for different market models
  - Enterprise class services platform
  - Designed for interoperability and systems integration
- Investment project – return in future sales abroad



Thank you!

