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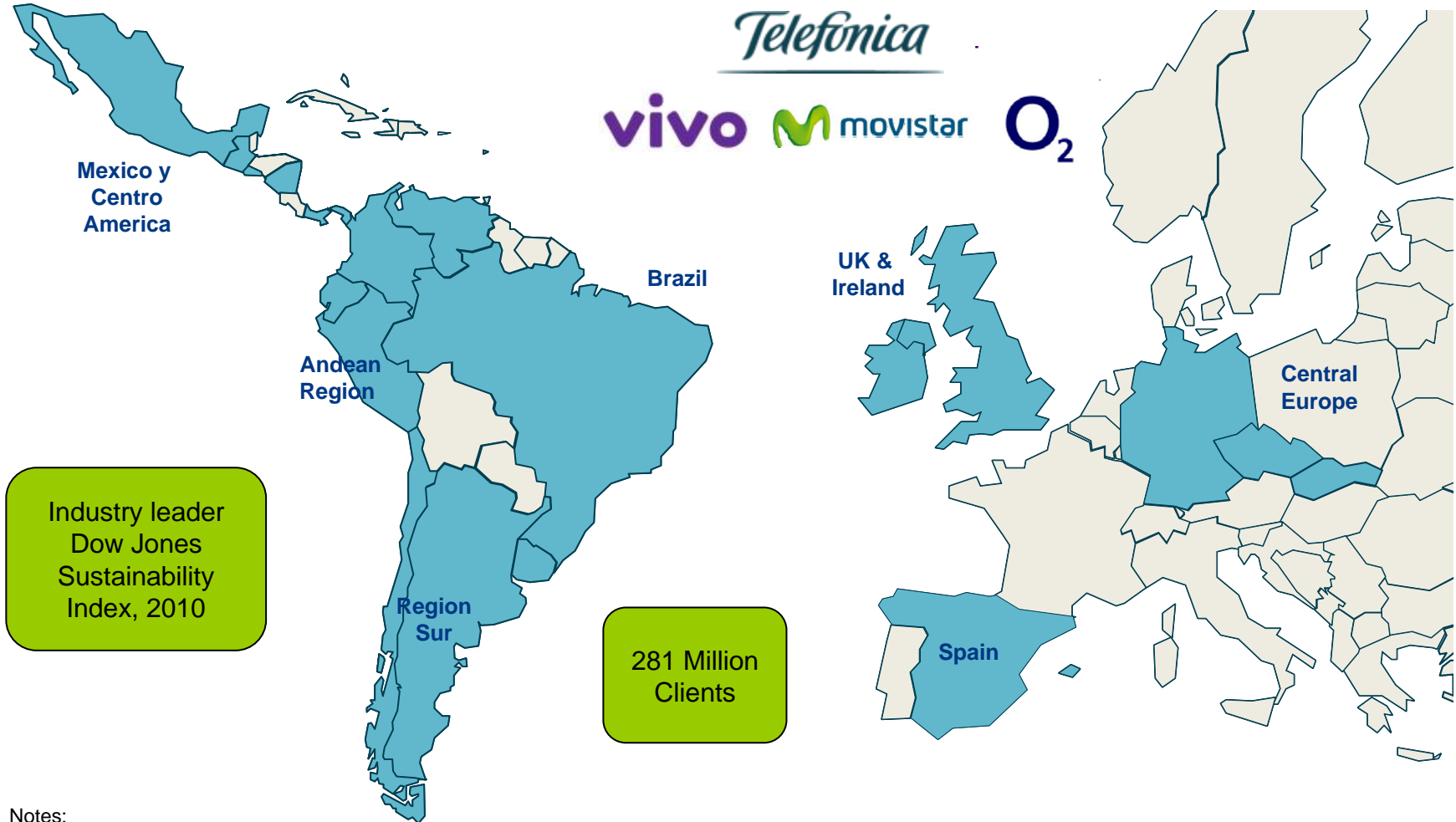
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# 01

## Energy Efficiency and Electric Vehicle (EV) Strategy of Telefónica



Notes:

- Central America includes Guatemala, Panama, El Salvador and Nicaragua
- Total accesses figure includes Narrowband Internet accesses of Terra Brazil and Terra Colombia, and Broadband Internet accesses of Terra Brazil, Telefónica de Argentina, Terra Guatemala and Terra Mexico

The Fully Networked Car  
Geneva, 2-3 March 2011

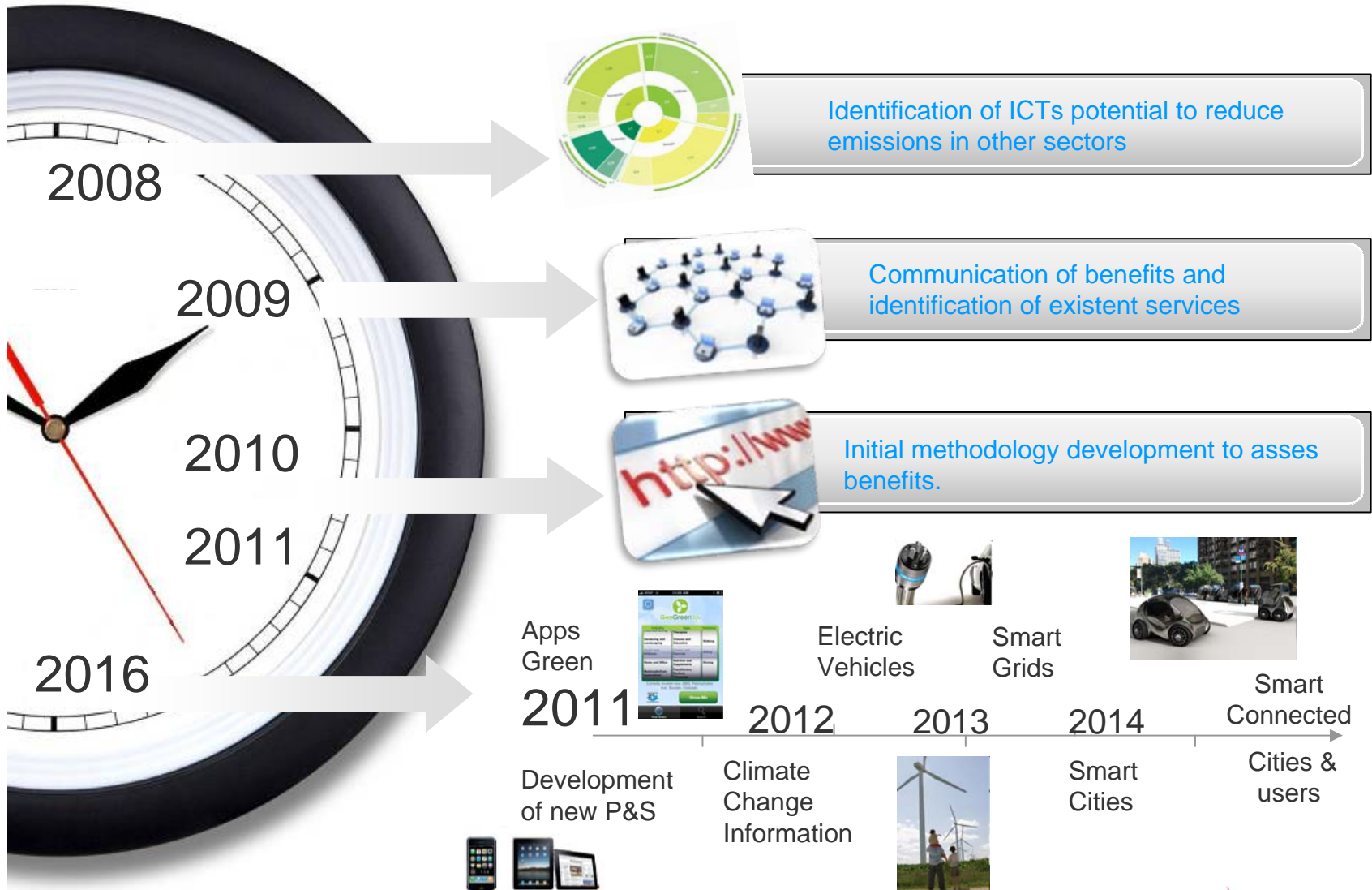


**Telefónica, as an ICT company leader in the field of climate change abatement, spreads the energy efficiency culture**

*Telefonica*

**To find new income opportunities**  
by the development of new products and services for energy efficiency.

**To reduce energy consumption**  
through internal efficiency practices



The Fully Networked Car  
Geneva, 2-3 March 2011



- To bring new EV ICT service innovation closer to the core business.
- To help all business areas to acknowledge that EV is a reality.
- To encourage EV ICT services innovation from research to sales and vice versa.
- To foster an end to end EV service development approach.
- To promote the delivery of in house services for EV owner employees.

## Telefónica ICT Services

- Phone booths with EV charging stations.
- Payment methods.
- Content Delivery Networks.
- Automotive Fleet Management and M2M Global Platform.
- Virtual EV application\*.
- City traffic information.



## Projects

- Santander Smart City.
- MARTA Project.
- Electric demand message.
- Mobility pattern recognition.

\* Under development

The Fully Networked Car  
Geneva, 2-3 March 2011

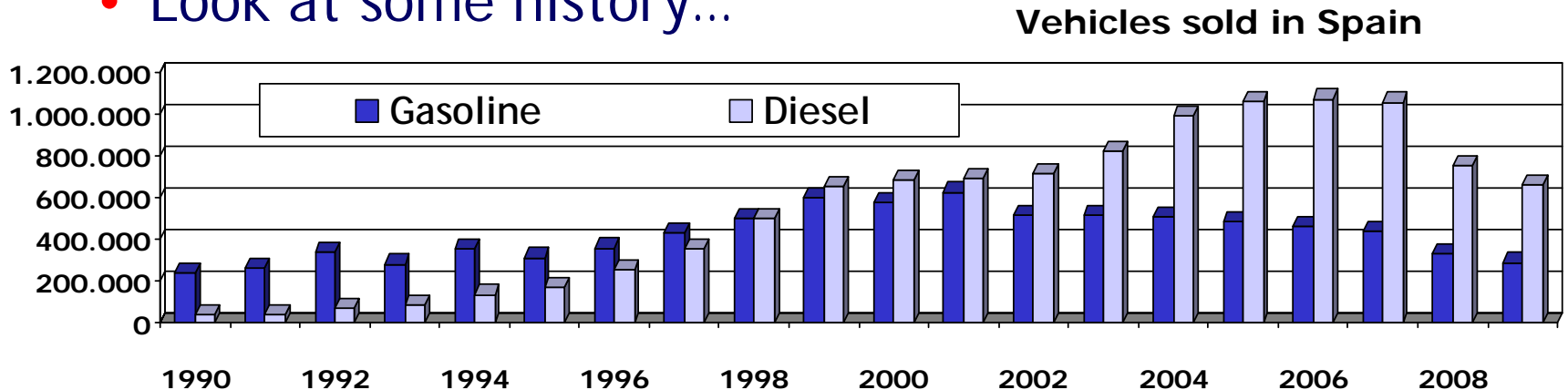




# 02

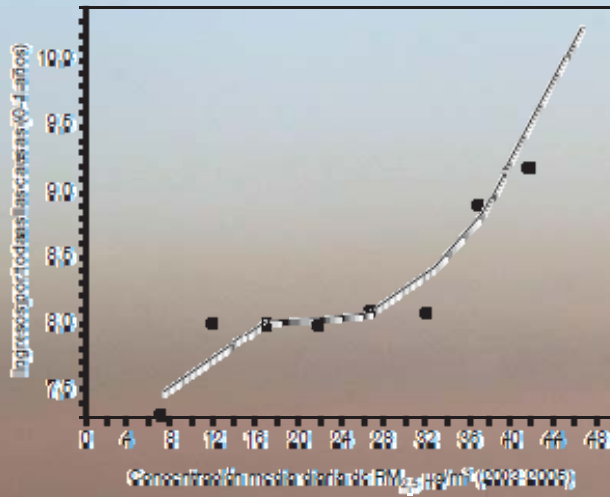
## The Challenge

- It looks like a great business but...
  - How much per car/driver/passenger?
  - How many years from now?
  - Look at some history...



- Is crucial to have a full vision on the EV business, based on usage monitoring information, to guide and glue ICT services innovation projects.

- o The results obtained (on the study) demonstrate the need to implement measures to reduce PM 2.5 concentrations in the atmosphere in large cities



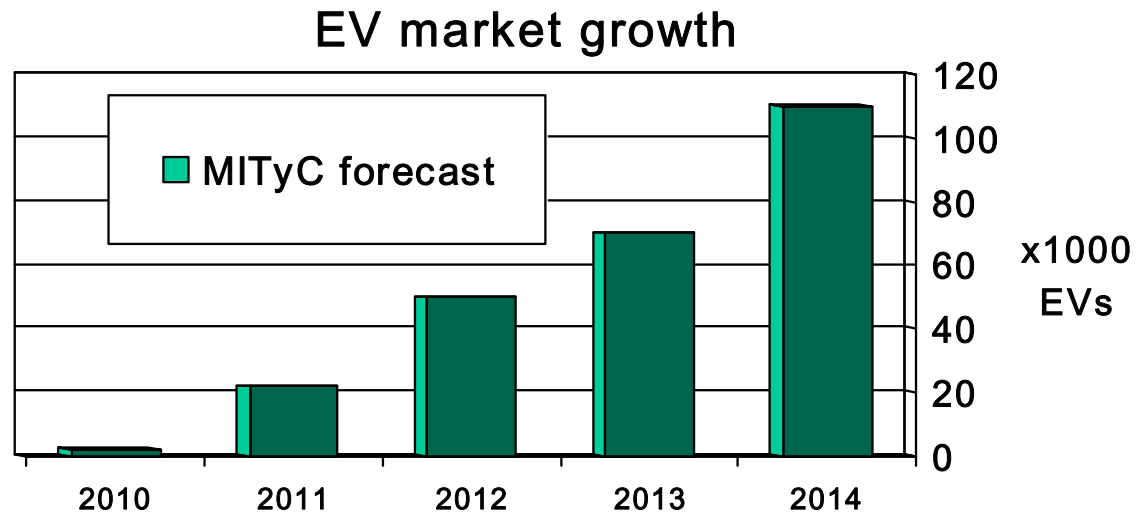
(1) Impact of particulate matter within diameter of less than 2.5 microns [PM 2.5] on daily hospital admissions in 0 to 10 years old in Madrid (2003-2005)

Cristina Linares y Julio Díaz, Instituto de Salud Carlos III, Madrid.

# 03

## ICT solutions impact on EV penetration

- Spain's Department of Industry and Transport Forecasts 254.000 EVs by 2014.



- The Automotive and ICT industries are making great efforts oriented to connect the car to the Infrastructure and vice versa.
- But... Infrastructures and cars do not decide what to pay for or how much, people do.
- We have to help EVs to become connected to their future owner and the occupants.
- So far choosing a car it has been quite emotional, if not fully.

2011–2012 EV ICT Service focus



2011–2016



- Rationally, Electric vehicles play an positive roll on environmental quality in our cities; pollution/odour and noise/vibrations.
- But... There is too much uncertainty in car buyers and users about VE
- We have to demystify the use of VE.

- We need EV-Ready companies, governments, institutions to foster EV users.
- Embed EV culture across organizations (campus, fleet migration, employees).
- Extend in place innovation programs to handle end to end EV process services.
- Promote public-private ICT partnerships to accelerate EV penetration, as we do with connected car projects.



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