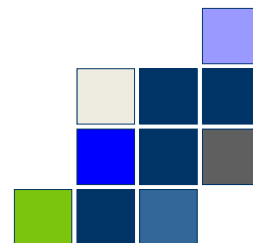


What does Future Internet bring to Smart Cities?

## *Smart Urban Mobility*



Antonio Marqués  
 amarques.etra-id@grupoetra.com  
 Director of New Technologies  
 ETRA  
 www.etra.es



## *ETRA: a high tech ITS Industrial Group*

- Part of ACS, the 2nd largest Construction and Services Corporation in the World.
- 2.000 employees, +230M€ turnover, market leader in technology, mobility and services.
- ETRA's activities include:
  - Intelligent Transportation Systems
  - Fleet management, integrated public transport solutions
  - Integrated Traffic Management –urban, interurban, tunnels, etc.
  - Electronic toll collection, e-ticketing
  - Parking management and access control
- From basic research to turnkey systems delivery
- Key player in EU RTD Framework Programme.

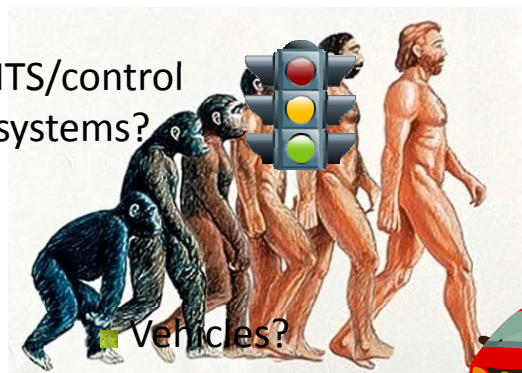




*Some of the things we do...*

## *What is Mobility about?*

■ ITS/control systems?



■ Vehicles?

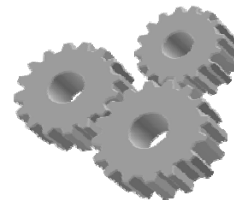


**Homo Mobilis**



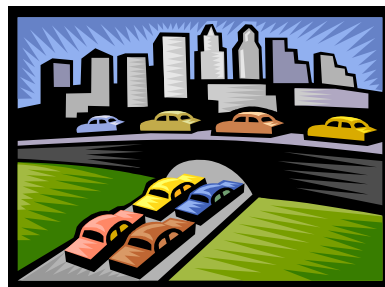
## *Key Parameters*

- Economy/Efficiency
  - Access/ownership use/maintenance cost
  - Time
  - Impact on the overall economy
- Convenience
  - Comfort
  - Information
  - Perceived Quality
  - Social prestige
- Safety and security



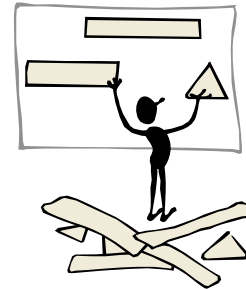
## *Mobility problems of the last decade(s)*

- Congestion costs 1% of the GDP of EU
- Tens of thousands of fatalities
- Health problems
- Safety
- ...

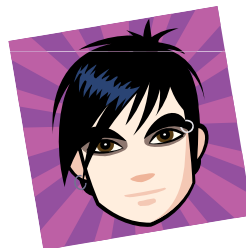


## *Isolated measures have not been enough*

- Access restriction / congestion charging
- Quality Public Transport
- Park and ride
- Seamless Multimodality
- Traffic calming systems
- Cleaner fuels / vehicles
- Soft measures: car sharing, mobility plans, awareness campaigns...



## *Nothing new under the Sun?*



## Generation Y

They value empowerment

Technologic, connected 24/7

Service oriented, not product oriented

Worried about the future

Limited levels of loyalty



Independent, autonomous

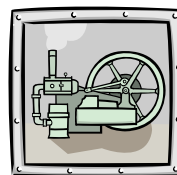
Demanding, impatient

The best educated and with more environmental concerns



## The end of an Era

- The Third Industrial Revolution?



- A number of unstoppable drivers forcing a deep, structural **CHANGE?**



### *Some of the changes which will lead to SUM...*

- Achievement of the concept of **personal mobility**
- The driver/citizen must be empowered and evolve into an actual **consumer** of mobility...
- ... which takes **well founded** travel decisions based in current, relevant, global, integrated information

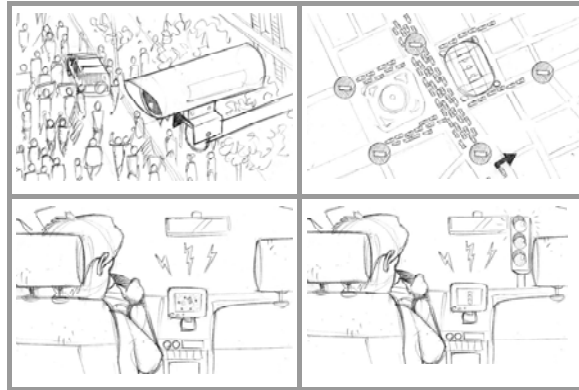


### *What the Future Internet can do for SUM*

- Provide a platform which is
  - Ubiquitous
  - Reliable
  - Fast
  - Secure
  - ...
- A utility to be used by road network operators and mobility service providers



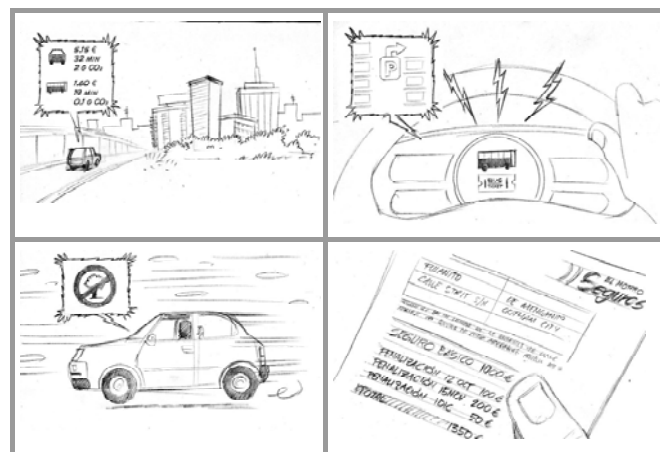
## Use case examples (1)



(Taken from Spanish National Project MARTA)



## Use case examples (2)



(Taken from Spanish National Project MARTA)



***Your feedback  
is welcomed!***

Antonio Marqués

[amarques.etra-id@grupoetra.com](mailto:amarques.etra-id@grupoetra.com)

ETRA

[www.etra.es](http://www.etra.es)

