



2011 ROAD SAFETY EVENT ASECAP TOLL ROADS: A SAFE JOURNEY IN EUROPE

***"Knowledge of roads and its features.
A technical background for road safety"***

Roberto Arditi - AISCAT-SINA



Athens, 1 March 2011



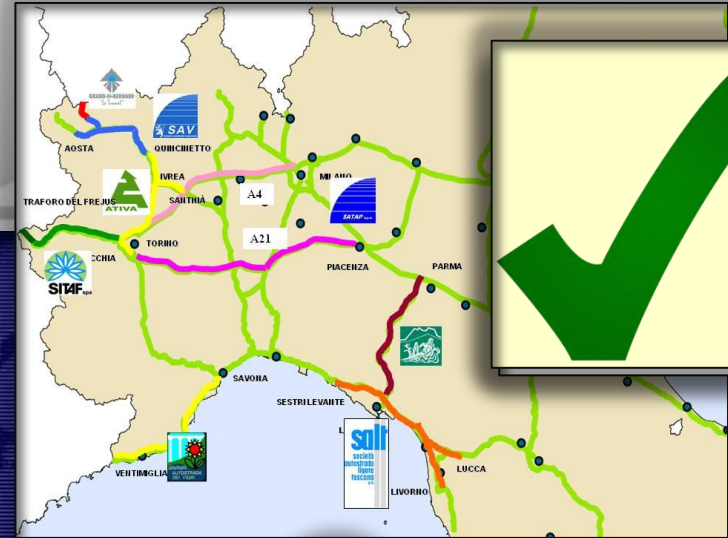


GRAND-SI-BERNARD
"Le Tunnel"



ASTM-SIAS group and the European demarche

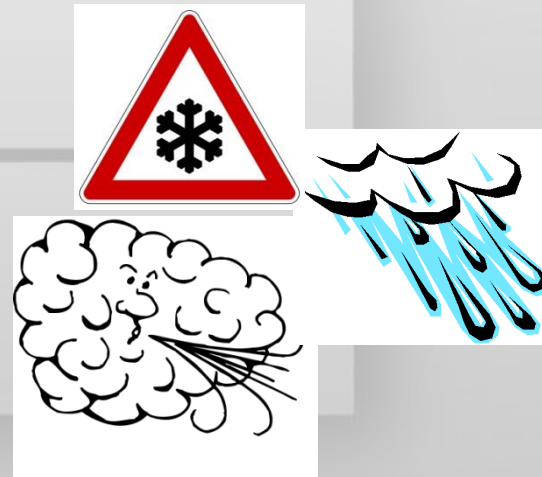
White Paper
proposed in 2001:
**halving the
number of road
fatalities by 2010**



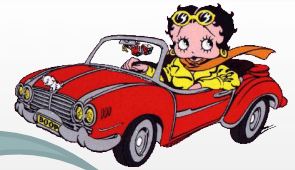
July 20th 2010:
**Kallas: “we want
to cut road deaths
in half by 2020”**



Road operators and causes of accidents



Road operators and causes of accidents



Operation

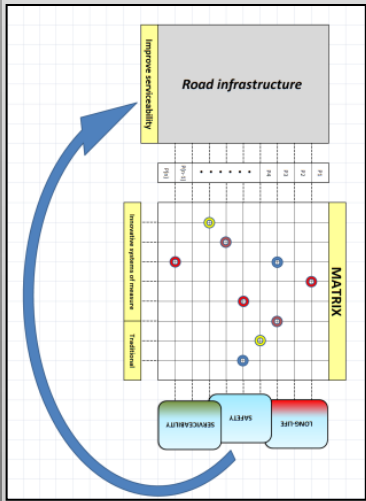
Design and construction
(mainly new roads)

Technological improvement

Serviceability and
maintenance



EasyWay



Serviceability and maintenance

EVENT

SOLUTION

TIME

Operation

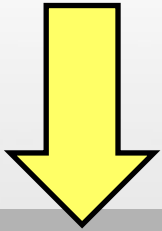
How?

Knowledge of the road & related features

Planning and organization

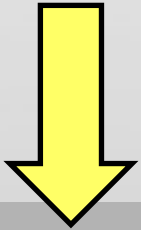
Intervention means

***“Le bon Dieu est dans le détail”
(the mercy God is in the detail)***

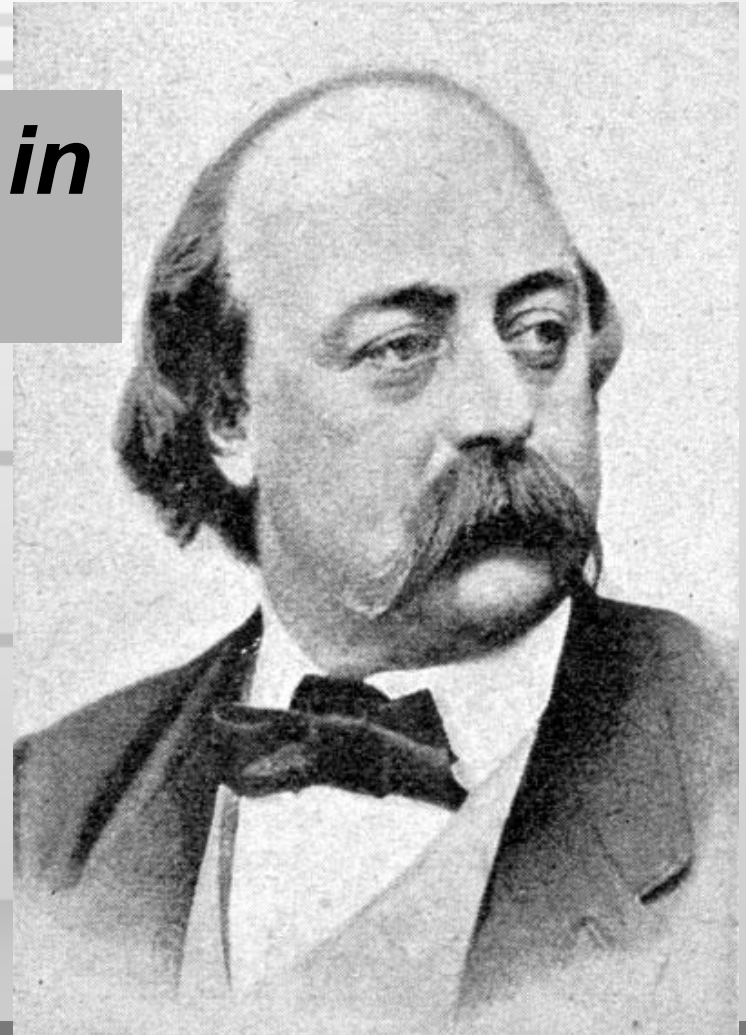


Gustave Flaubert

***“The devil lays hidden in
minute details”***



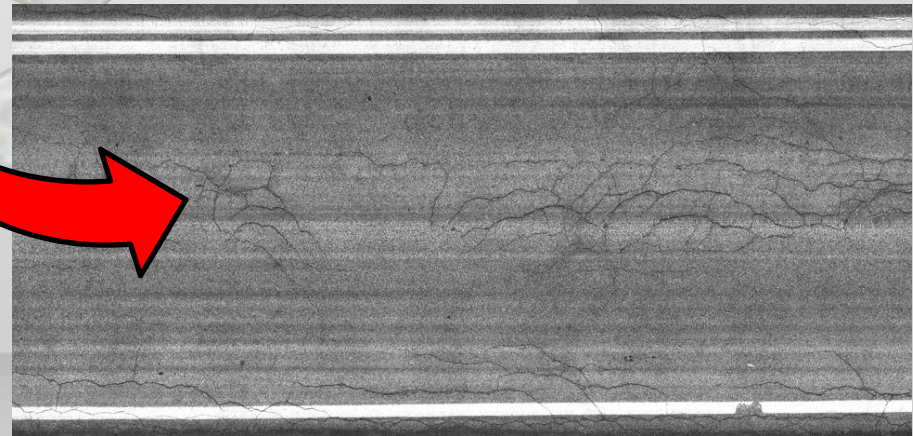
***“To fire road safety
risks we need to
know minute details
of our roads”***



HOW TO ACHIEVE THIS KNOWLEDGE?



high-speed inertial profilers





ARAN: Geometrics data, roughness IRI and distress



HWD: Bearing capacity and residual life...



GPR: Stratigraphy of Pavements and subgrade



SCRIM: friction and texture



Laserlux: Retroreflectivity road markings

Some example of technologies for in-motion measuring and high-speed road profiling

A NEW SINECO LASER ROAD PROFILER

Global Positioning System (GPS)

Distance Measurement Indicator (DMI)

Inertial Measurement Unit (IMU)

Light Detection and Ranging (LIDARs)



Points cloud



Picture



Survey of a Greek Highway with Lynx

Points cloud



Picture



Survey of a Greek Highway with Lynx

Achievements

We have a better knowledge of the road

We are able to feed services with valuable info

We have a reduced impact on traffic

The way ahead

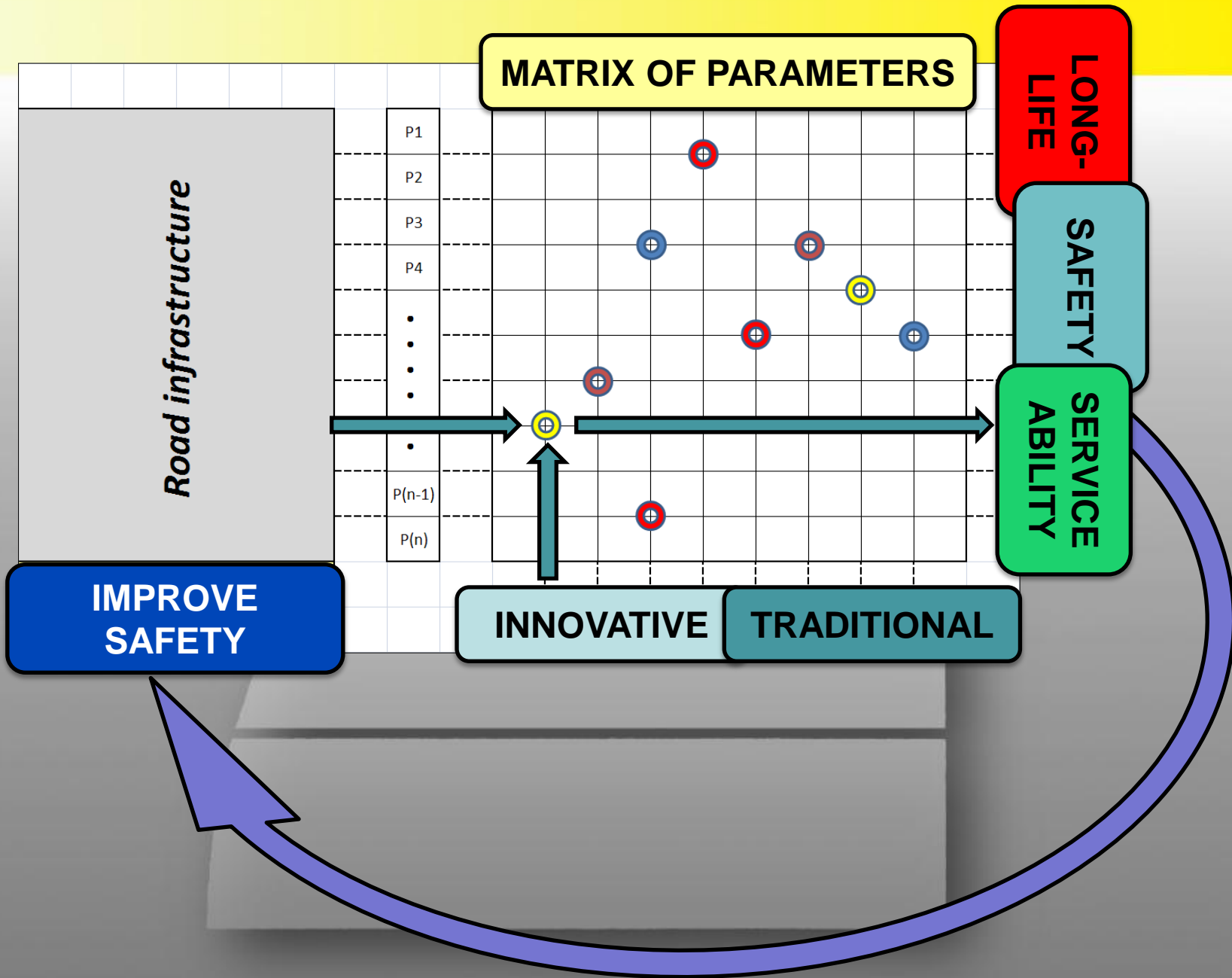
A lot of info – are we able to use it all?

Tech goes ahead. Can we have more?

Target a HQ overall asset management

Today

Tomorrow





Thanks for your attention

roberto.arditi@sina.co.it



*Association Européenne des Concessionnaires
d'Autoroutes et d'Ouvrages à Péage*

