

ASECAP Road Safety Conference

Road Safety – A shared responsibility

A story of success or failure?



BRUSSELS, EUROPEAN ECONOMIC AND
SOCIAL COMMITTEE

21ST MARCH 2017

09.00-13.00



ASECAP Road Safety Conference

Road Safety – A shared responsibility

A story of success or failure?



INFRASTRUCTURE AND TECHNOLOGIES, PDCA ACCIDENT INVESTIGATIONS AND USERS' AWARENESS:
THE MAIN KEYS FOR "LIVE SAVING CHAIN"

ASECAP MEMBER
AUTOSTRADE PER L'ITALIA
SPA



SPEAKER:
GIANMARCO
ANGELETTI



Overview of ASPI network



- 2,854.6 km
- 4M customers per day
- > 45Bn km travelled per year
- > 5,000 employees



9 Regional Headquarters

- 320 km of network operated by each regional HQ
- 9 traffic management centers h24
- 35 O&M regional departments (“*Centri Esercizio*”)



2 Central Headquarters

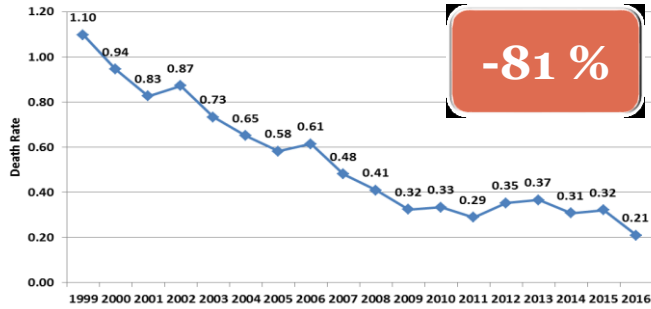
- Rome
- Florence



Road Safety Results

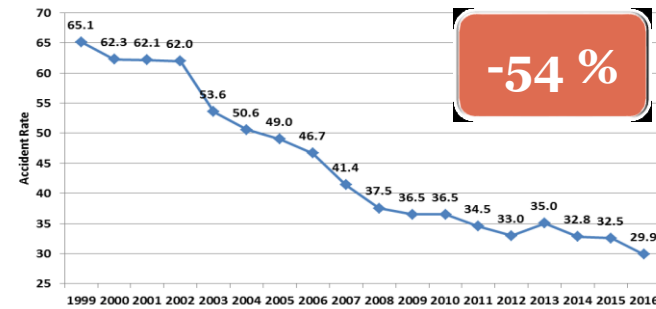
Death Rate

[number of deaths per 100 million km travelled]

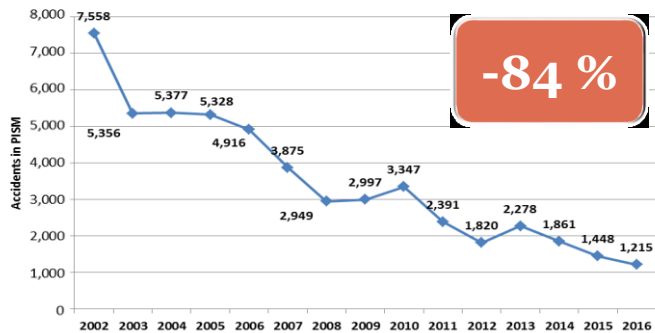


Accident Rate

[number of accidents per 100 million km travelled]

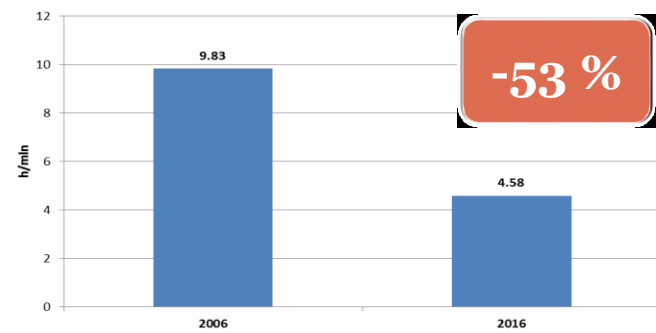


Accidents in PISM



PISM are 1km long sections where the number of accidents is above the network average

Total Delay



Total Delay represents the fluidity in terms of "lost time" (hours) by users in transit in comparison to a reference transit time.

Road Safety Improvement



- ❖ **PDCA ACCIDENT INVESTIGATIONS**
- ❖ **INFRASTRUCTURE & TECHNOLOGIES**
- ❖ **INFORMATION & AWARENESS**

PDCA Accident Investigations



[2002-2016]

“**high-accident-rate-sections**”
(1km long sections)



over **2,000** specific
improvement actions



Number of accidents
-84%

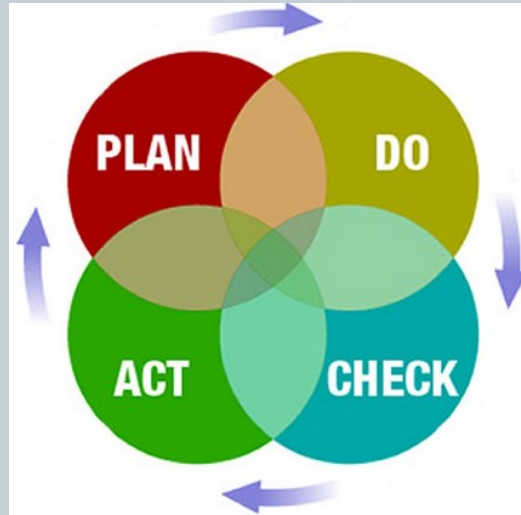
PDCA Process

PLAN

Monthly analysis of accidents
and definition of specific
improvement actions

ACT

- *Positive results:* Follow up
and standardization
- *Negative results:* new PLAN



DO

Execution of scheduled actions

CHECK

Check of actions' effectiveness

PDCA Accident Investigations



Best Practices [1/4] : Highway D19, km 19

Before

2014: **22** accidents

2015: **23** accidents



MAIN FEATURES

- High Traffic Volumes
- Frequent Crossing of Striped Markings
- Frequent Rear-ends & Side-impacts

Actions



High-Impact and
Special Warning Signs

Optic Speed Stripes

Static Road Marker +
Rumble Strips

After

2016: **10** accidents

N° of accidents

- 57%



PDCA Accident Investigations

Best Practices [2/4]: Highway A4, km 138

Before

2013: **46** accidents
2014: **42** accidents



MAIN FEATURES

- High Heavy Traffic Volumes
- Frequent Lane Crossings by Heavy Vehicles to use Telepass Tolling lanes
- Frequent Rear-end & Side impacts

Actions



High-Impact and
Special Warning Signs



Improving Pre-Channelling
Vertical Signs



Right Lane:
Heavy Vehicles + Telepass

Left & Centre Lane:
Light Vehicles + Telepass

After
2015: **19** accidents
2016: **16** accidents

N° of accidents
- 60%

PDCA Accident Investigations

Best Practices [3/4]: Highway A7, km 133

Before

2012: **27** accidents
2013: **28** accidents
2014: **26** accidents



MAIN FEATURES

- High Traffic Volumes (Heavy+Light vehicles)
- Entries from the harbour and from Genoa city
 - Frequent Rear-end & Side impacts

Actions



Special Road Signs
with speed detector

Static Road Marker +
Fencing Extension

After

2015: **16** accidents

N° of accidents

- 41%



PDCA Accident Investigation



Best Practices [4/4]: Highway A7, km 129

Before

2015: **36** accidents



MAIN FEATURES

- 2 different flows (Highway A7 and Highway A12)
- Curving section
- Frequent Side impacts

Actions



Rumble Strips to separate the 2 different flows

Application of high-grip pavement

After

2016: **13** accidents

N° of accidents

- 64%

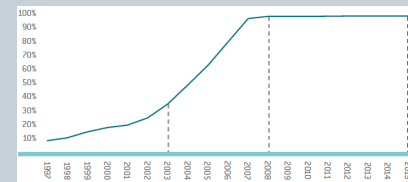


Infrastructure & Technologies



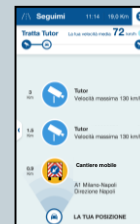
POROUS ASPHALT

- Reduction of aquaplaning and spray-effect
- 16% in 1999 → 100% in 2008 (excluding tunnels and mountain highways)



ROAD WORKS

- Improvement in road-works warnings
- Road-Works GPS tracking on My Way App
- Rumble strips on the right edge strip
- Simultaneous activities in the working area



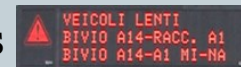
TUNNELS

- Safety standards upgrade through new systems (illumination, ventilation...) in more than 400 tunnels



VMS & CCTV

- 1,089 Variable Message Signs
- 3,308 Traffic Control Cameras



NETWORK'S UPGRADING

- ≈400 Km widening to 3, 4 or 5 lanes



Infrastructure & Technologies

PREVENTION OF “WRONG-WAY” DRIVERS

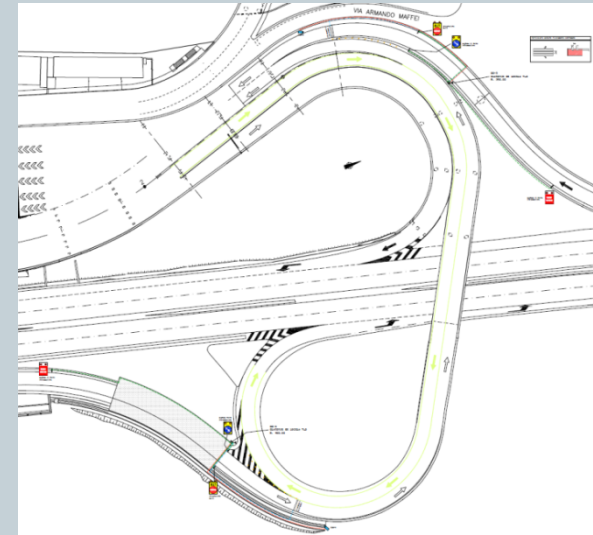
- High-impact road signs on all the entries since 2008
- A trial of new technologies for alerting purposes with:



- **high-impact road signs;**
- **photoluminescent road markings;**
- **optic fiber, sensors and cameras.**



To activate the devices on the deceleration lane (i.e. flashing lights on road signs, sound alarm) and to provide real-time information to the Traffic Management Center.



Infrastructure & Technologies

MAIN TOOLS FOR TRAFFIC MANAGEMENT (developed by ASPI)

“SIV”

- Information management of network events which are automatically processed and shown on VMS to warn users and to be broadcasted by radio service

“BMS”

- Real-time resources management through an automated phone system
- GPS Tracking System on the operational vehicles

“AUTOTRAF”

- Real-time management of data measured by more than 2,000 sensors placed on the network (CCTV, recording beacons, weather stations...)
- Travel time's calculation to give an alert to the users via VMS



Information & Awareness

SAFETY TUTOR: The Average Speed Control System

Pioneering system introduced in Italy to check vehicles average speed

MILESTONES

- **2005** → ASPI was the first to use the Safety Tutor in Italy
- **2016** → 2,500km covered (40% of ASPI network)

RESULTS

- **-51%** Global Death Rate
- **-15%** Average Speed
- **-25%** Peak Speed



Information & Awareness



BROADCASTING CHANNELS



- 1,089 **Variable Message Signs**



- 3,308 **Traffic Control Cameras**



- **APP MYWAY and MYWAY-TRUCK**



- **Radio** (Isoradio – RTL)



- **TV** (Canale5 – La7 – MyWay, the first European TV channel exclusively dedicated to Traffic Information)



- **H24 Call-Center** with 120 phone lines (40,000 calls per day)

Information & Awareness

90% of accidents due to unsafe behaviors
(i.e. Lack of attention, No safety distance)



“Education & Prevention Campaigns”
promoted by ASPI



*“Do you drive? Don't drink alcohol” &
“Life is a breath” [2006-2007]*



“12 Safety Months” [2008]



The right use of children's car seats



*“10 Commandments for Road Safety”
[2008]*



Free Coffee at Night [2005-2012]
→ -50% Global Night Death Rate



*Diabolik for Road Safety
[2014-2016]*



VMS Contest [2012-2016]



*Emergency Lane & Mobile Work
Zone [2016]*



**THANKS FOR YOUR
ATTENTION**