

**autostrade** per l'Italia

## Winter operation management

Shaken, frozen with a pinch of salt

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Autostrade // Tech

ASECAP June 1 2010

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## Autostrade holding company

Autostrade manages the biggest motorway network in Europe

- 3.413 Km of network
- 61% of Italian toll highway network
- 18% of European network
- 2.023.000 per day vehicles (ASPI)
- 45 billion Km in year 2009 (ASPI)

Gruppo Autostrade

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## Winter operations: Men and equipments

Vehicle:	
Snowploughs	1500
Spreaders	640
Road assistance vehicles	200
Men:	
Operator	≈2500
TCC dedicated operators	20
Equipments:	
	2.140

**5 mountain crosses, 15% of the network classified as mountain road**

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## Winter operations process - Overview

- ➔ A risky process
  - Media and stakeholder are very sensible
- ➔ Different activities and skills involved
  - Many pieces must fit together to solve the puzzle
- ➔ High costs
  - Strict control of operations

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## WO process - Weather forecast

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## WO process - Weather real time

- ➔ Radar nowcasting
- ➔ Real time sensor owned by ASPI

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On line training Weather forecast Automatic summoning Monitoring Billing and analysis

## WO Process - Billing

- Durations from phone call system
- Movements from tracking system
- Resources cost from prices list
- ❖ **Automatic invoice production**
  - Strict control over payment

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## WO process - Analysis

- Monitor tools can be run in "Historical mode"
- The "multi source" facility allow merging of information
- Specialized tools for Data Mining
  - Business Object
  - Pentaho
  - Custom

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## WO Process - On line training

- Winter operations is an articulate and complex process
  - Training is needed to have quality and efficiency
- Computer can help teaching
  - Repository of manuals, video, operative instructions
  - Automatic test
  - Final examination

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## WO Process - On line training

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## Thank you for your attention

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## Network under management

Autostrade Group	Km
Autostrade per l'Italia	2.854,6
Torino-Savona	130,9
Traforo Monte Bianco	5,8
R.A.V.	27
S.A.T.	36,6
Tangenziale di Napoli	20,3
Autostrade Meridionali	51,6
Strada dei Parchi (dal 1/1/03)	281,4
<b>Totale:</b>	<b>3.408 Km</b>
Other Activities	Km
Global Service	120
Firenze-Pisa-Livorno (dal 1/4/03)	
Euroypass: Toll collection in Austria (since 1/1/04)	2.000

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## Presentation Layer 2

Microsoft Internet Explorer

Dettagli Veicolo - Microsoft Internet Explorer

ID: 020338424461830  
 telefono: 3354141590  
 codice abbonamento: 0

**tipo veicolo:** FLOTTA AZIENDALE  
**stato:** TRACCIATO  
**tempo medio viaggio:** 3 min

data	latitudine	longitudine
2004-09-20 20:16:30.0	43.99624	01127853
2004-09-20 20:14:29.0	43.40823	01126745
2004-09-20 20:12:20.0	43.43732	01124840
2004-09-20 20:10:21.0	43.43032	01123562
2004-09-20 20:08:24.0	43.43073	01120355
2004-09-20 20:06:25.0	43.44005	01117844
2004-09-20 20:04:24.0	43.43091	01115632
2004-09-20 20:02:21.0	43.43466	01115632
2004-09-20 20:00:21.0	43.43466	01115632

**Vehicle details and phone integration**

Distal Zoom: 1x  
 km 300 PT SUD  
 autostrada per Italia s.p.a. 3165 10:38:40

**Images from Camera**

**Coda**  
 tra Anica e Bivio A1/A11 Firenze-Pisa Nord per traffico intenso

Autostrada: A01 MILANO-NAPOLI  
 Dir: Bologna  
 Km1: 351.0  
 Km2: 284.0  
 Ultimo Aggi.: 23-09

**Traffic data**

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## Hive effect – Bad news are coming

Microsoft Internet Explorer

ARCHIVIATI: data: 21-02-2005

zone del 24-00-2005 ore 7:00

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