

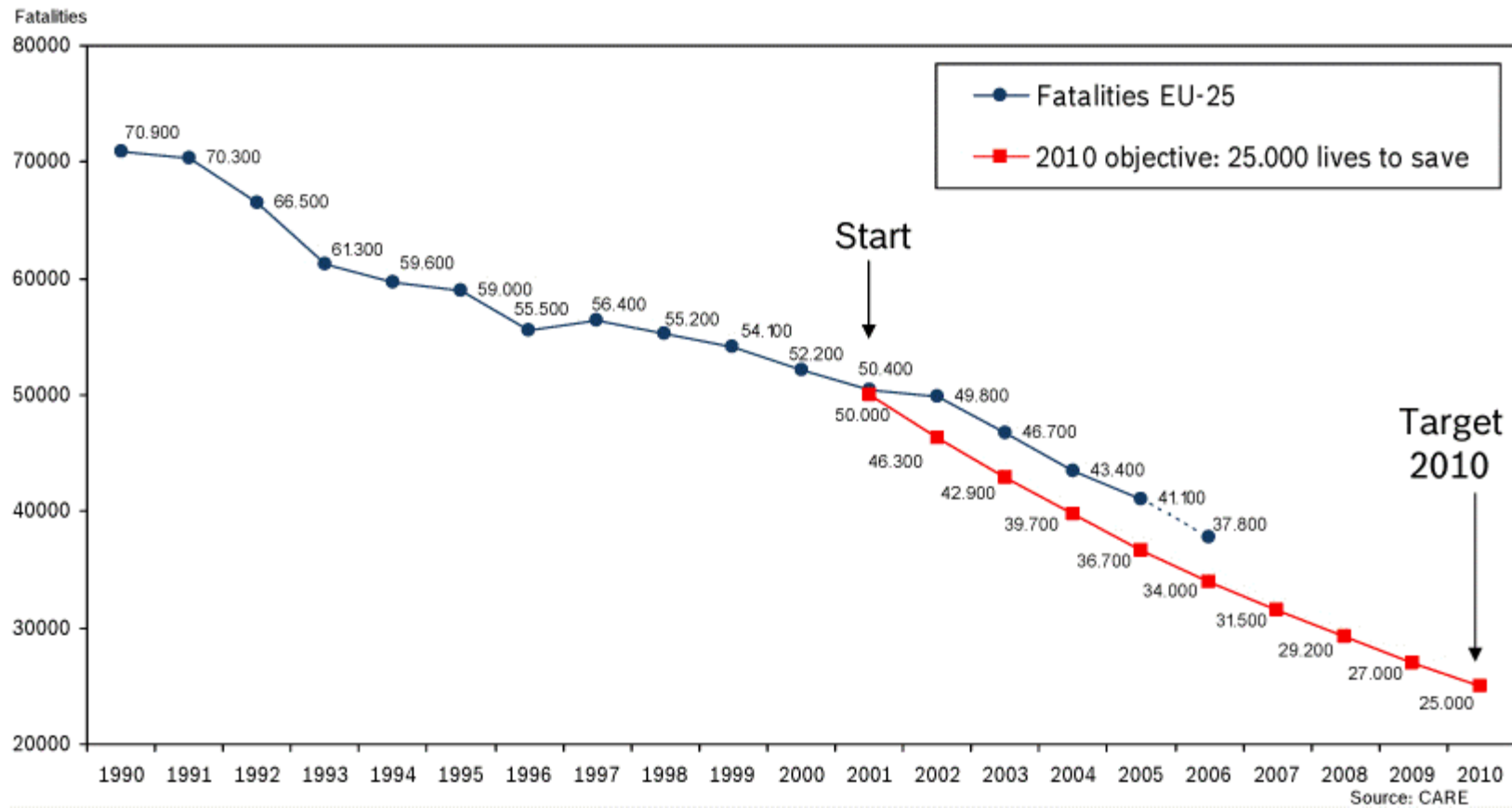


Safer Vehicles

David Ward
Director General
FIA Foundation

Road Safety Expo 2007
QEII Centre, London, Thursday 22nd November 2007

Evolution EU Road Fatalities 1990-2010



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Haddon's Injury Prevention Matrix

	Driver	Car	Road	Environment
Pre-crash	Education/ training Impairment Attitudes/ behaviour	Type Approval Road test Crash avoidance systems (ABS/ESC) etc	Road layout Road signs Maintenance	Licensing Rules of the road Enforcement Speed limits etc
Crash	Use of restraints Seat belts Head restraint etc	Seat belts Air bags Crumple zones etc	Barrier systems Escape lanes	Emergency response
Post-crash	First aid skill Access to medical care	Ease of access Fire risk	Ease of access Rescue facilities	Medical services



1997-2007 From Crash Protection to Integrated Safety

Passive safety/Occupant protection

Front & Side Impact standards (1998)
Launch of the EuroNCAP (1997)
Pedestrian Protection rating
Pole test etc.



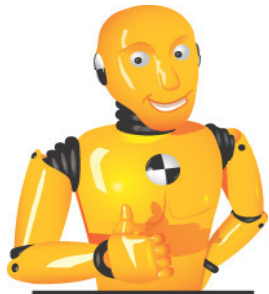
Integrated Safety Concept

Beyond active and passive safety using Intelligent Vehicle Systems with proven effectiveness to promote:

Crash avoidance, Crash protection, and Crash response

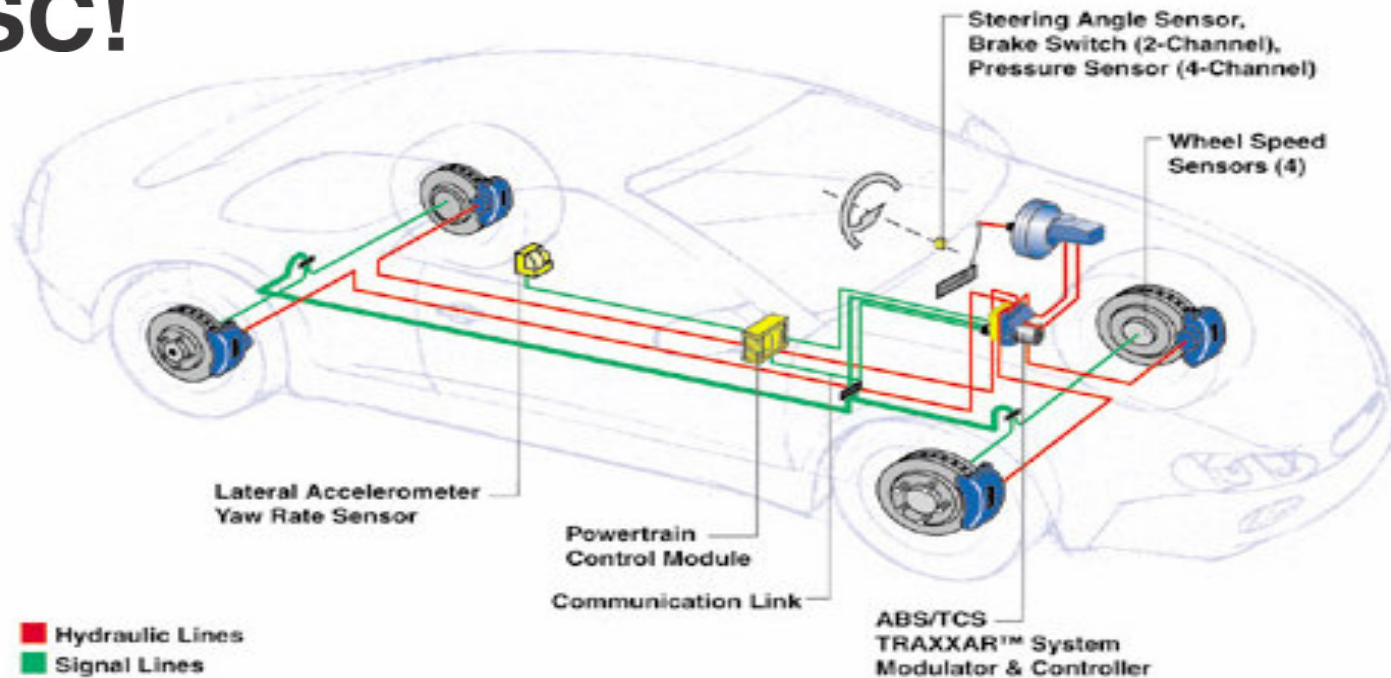


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**CHOOSE
ESC!**

Crash Avoidance – Electronic Stability Control The Best Safety System Since the Seat Belt



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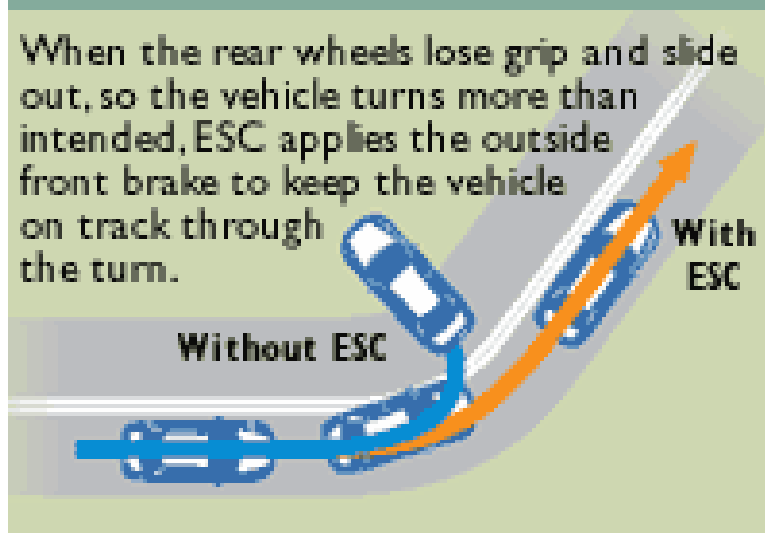
**CHOOSE
ESC!**

ESC – How the System Works...

On-board sensors measure the speed, steering wheel angle, direction of travel and lateral acceleration of the vehicle. If the calculated path of travel is different to that dictated by the sensors it will make a correction by applying individual brakes to correct understeer or oversteer

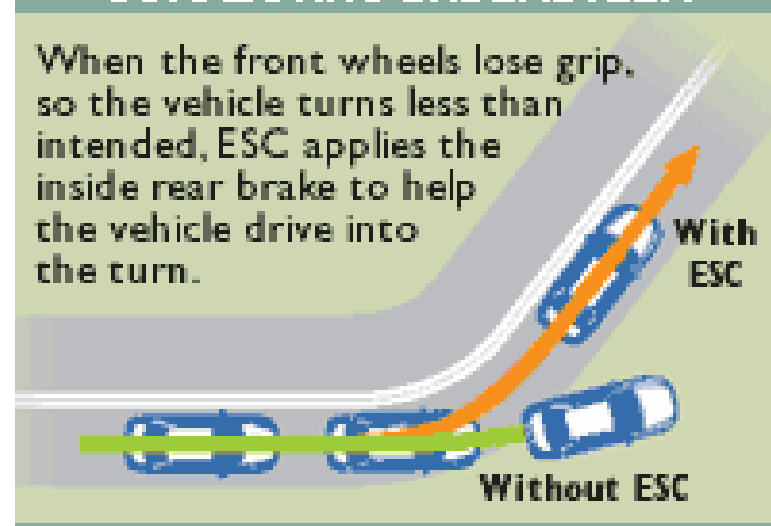
CORRECTING OVERSTEER

When the rear wheels lose grip and slide out, so the vehicle turns more than intended, ESC applies the outside front brake to keep the vehicle on track through the turn.




CORRECTING UNDERSTEER

When the front wheels lose grip, so the vehicle turns less than intended, ESC applies the inside rear brake to help the vehicle drive into the turn.



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ESC Effectiveness Passenger Vehicle Crash Statistics




IIHS, 10/04 & 06/06

- All fatal crashes - 43%
- Fatal single vehicle accidents - 56%
- Single vehicle accidents - 41%

NHTSA, 2006

- All single vehicle crashes passenger cars - 34%
- SUVs - 59%
- Single vehicle rollovers passenger cars - 71%
- SUVs - 84%



Daimler Chrysler, 05/04


- Driving accidents - 42%

Volkswagen, 02/04

- Fatalities - 35%
- Skidding Accidents - 80%

Swedish National Road Administration, 2002/2005

- All Accidents¹ - 22%
- Severe & fatal single vehicle accidents - 44%



Toyota, 05/03

- Single vehicle accidents - 35%
- Severe single vehicle accidents - 50%

NASVA, 02/05

- Single vehicle accidents - 44%
- Severe accidents² - 62%

¹ Except rear end collisions on dry roads ² Single vehicle and head-on collisions;
 Remark: all studies are based on different approaches and databases



Cost Benefit Analysis of ESC



Study carried out by Prof Dr Herbet Baum, Institute for Transport Economics, University of Cologne reveals that:

If all cars in the EU 25 were ESC equipped approximately 4,000 lives could be saved and 100,000 injuries avoided

The study assumes a unit cost of €130 (much higher than the US equivalent).

The benefits of full stock ESC penetration in avoiding crashes (both injury & non injury) amount to €16 billion per year against costs of €2.8 billion.



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ESC Could Cut UK Road Deaths by a Quarter

Loughborough University Vehicle Safety Research Centre (VSRC) estimate that ESC equipped cars are 25% less likely to be involved in a fatal accident than those without it.

If every UK vehicle on the road were fitted with ESC, this would equate to approximately 380 fewer fatal accidents each year.

ESC was especially effective in helping to prevent crashes that involved a vehicle skidding or overturning, with the potential to reduce serious accidents like this by up to 59%.

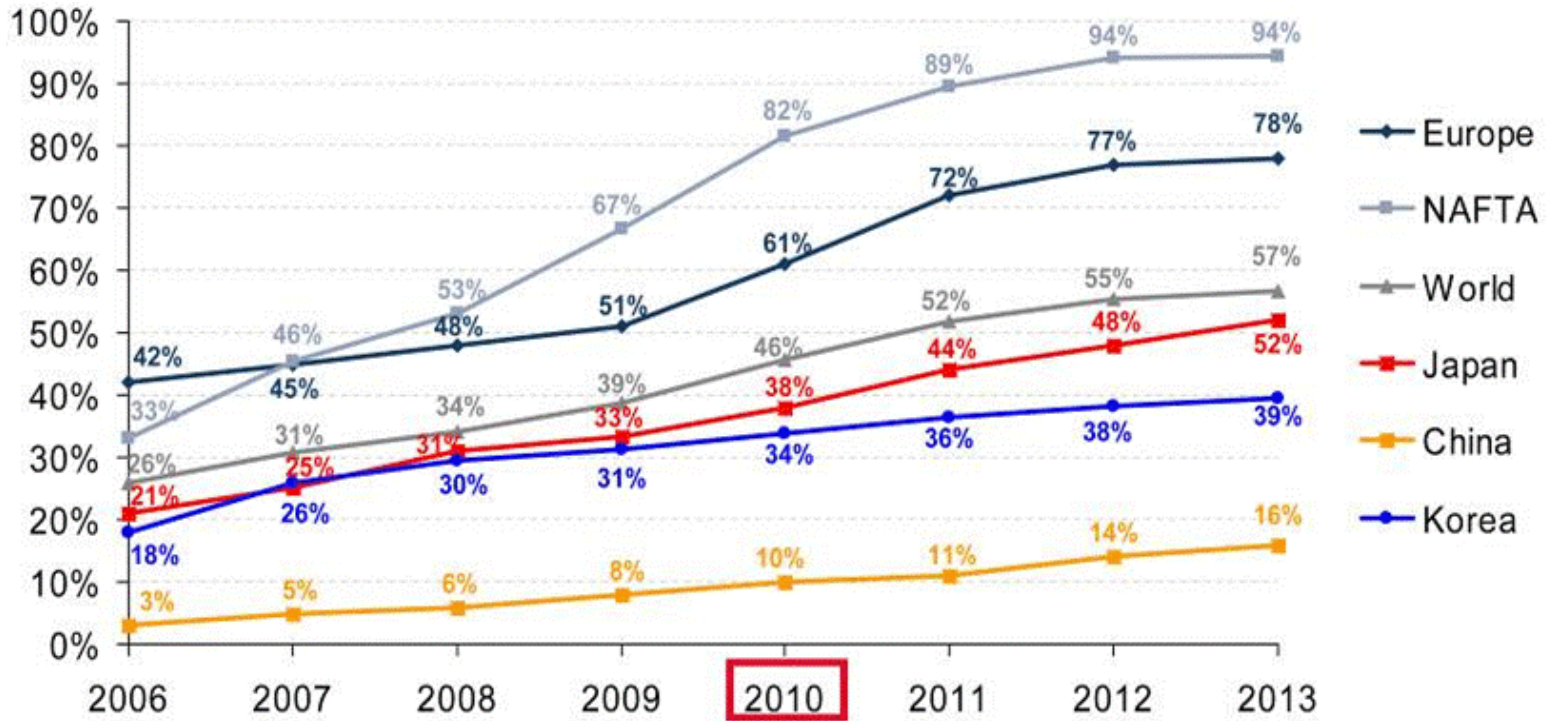
Accident Severity	Reduction in non-VRU Accidents if ESC is fitted*	
	(%)	(n)
Fatal	25	383
Serious	11	1102
Slight	6	6315
All	7	7800

* assuming all vehicles are fitted with ESC, as compared with no vehicles being fitted, based on 2005 accident data.



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Who will be the first to reach 100% Installation Rate?

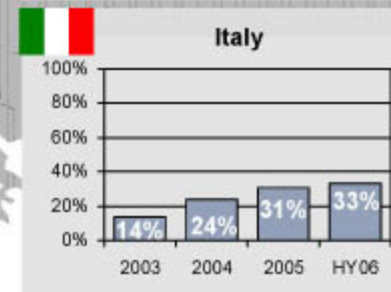
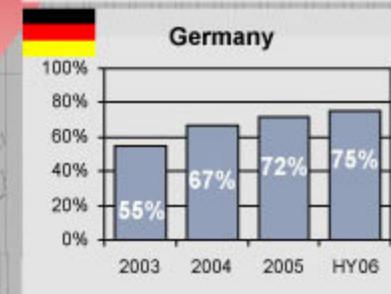
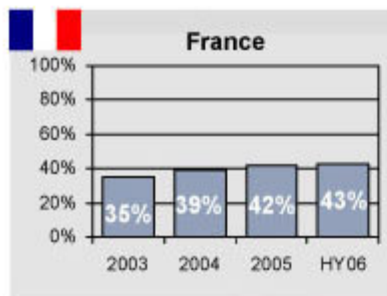
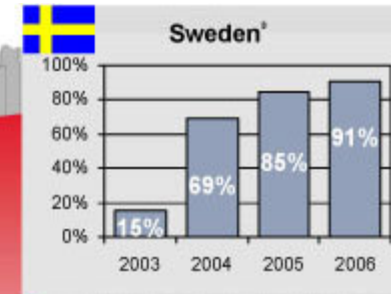
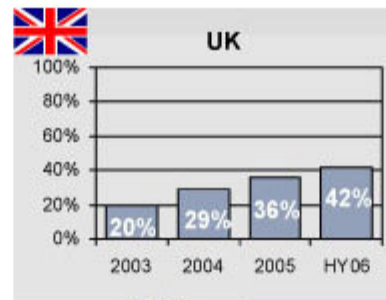
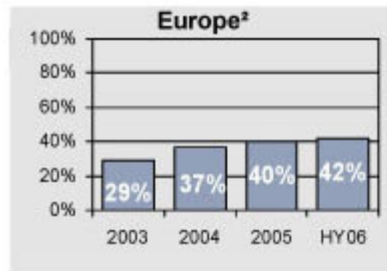


Data: Production base BP07FF
Production base BP07FF-Rev



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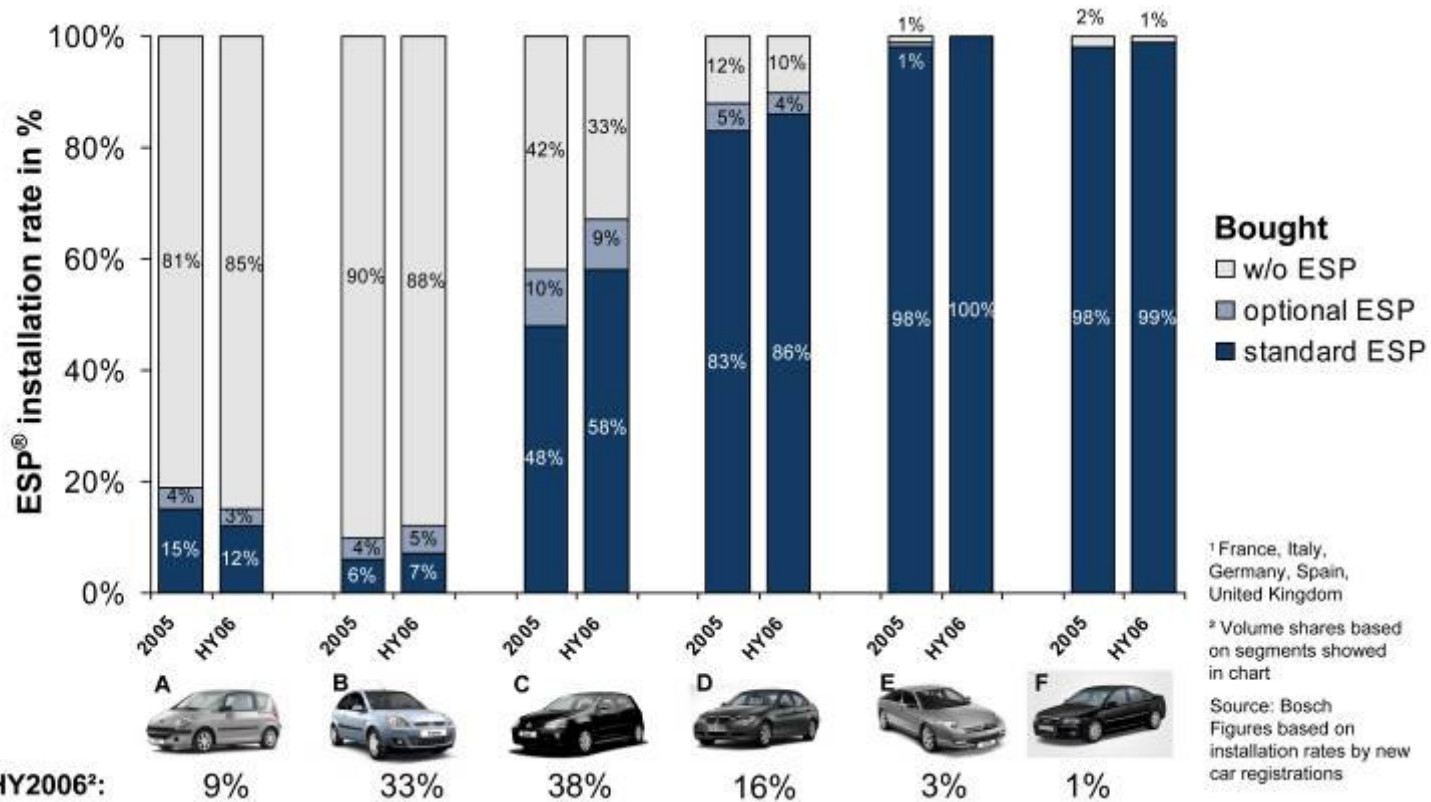
ESC Installation Rate Europe by new car registration¹



Source:
 Robert Bosch GmbH
¹ Passenger car registrations 2003-2005, Jan-Jun 2006
² Eastern & Western Europe
³ Swedish Road Administration

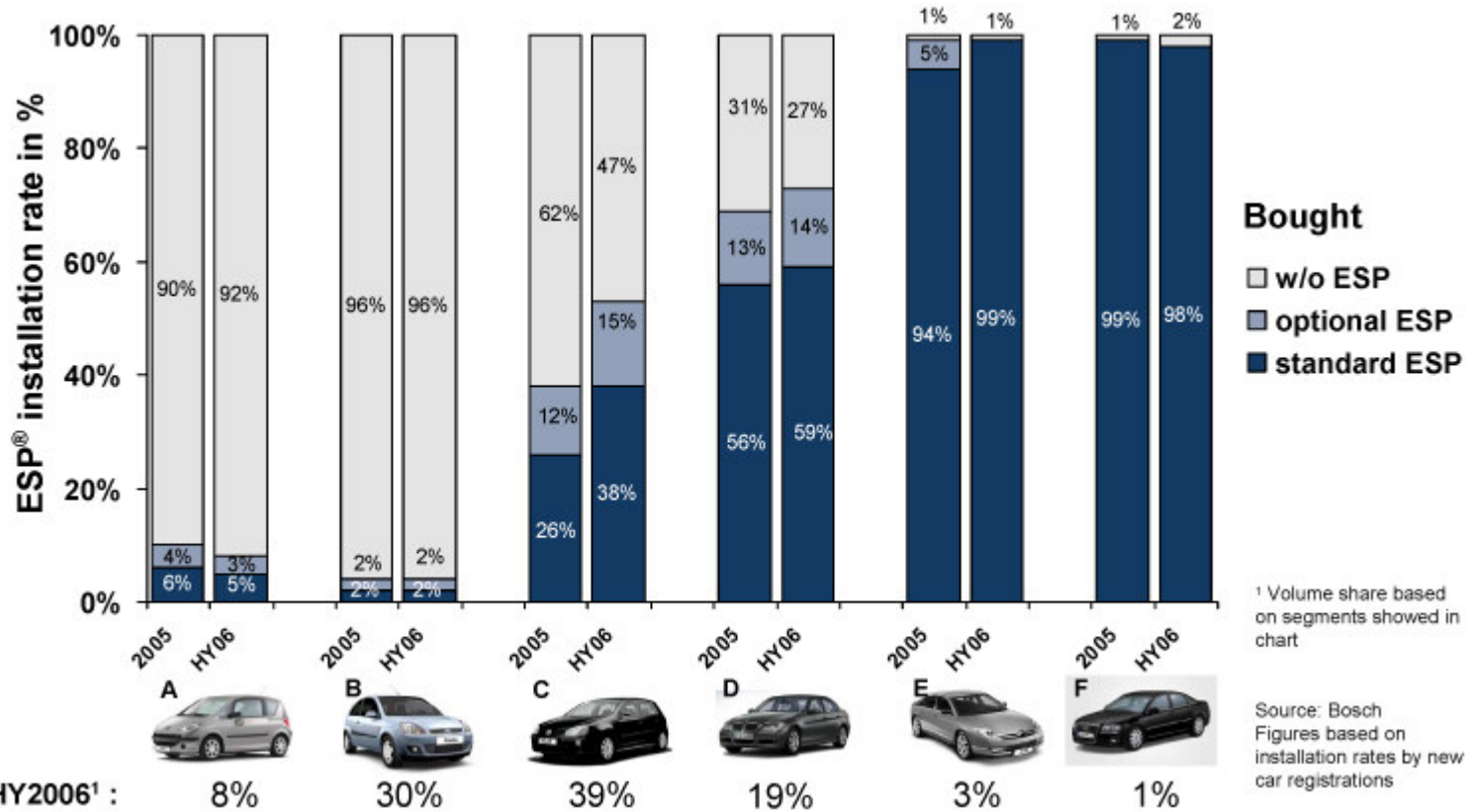
Slow Penetration of Smaller Vehicle Classes

Installation rates major EU markets¹ 2005/HY2006



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ESC Installation UK 2005/HY 2006 by car segment – optional and standard equipment



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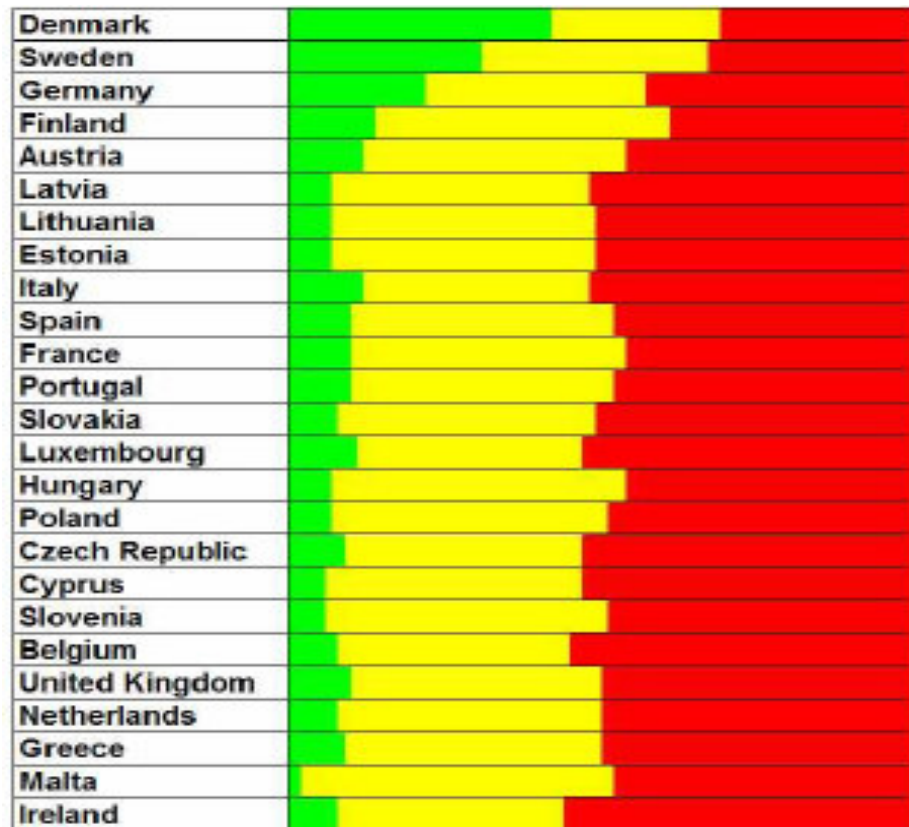
ESComplications!

Slow take up of ESC in smaller vehicle classes

Price Factors

Lack of Information

Lack of availability



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How to Accelerate Use of ESC

Demand Pull Measures

- Increase awareness of ESC impact among car buyers
- Give fiscal incentives to encourage car buyers to choose ESC
- Encourage fleet purchasers to choose ESC

Demand Push Measures

- Provide universal availability
- Require mandatory fitment



ESC Global Policy Developments

US National Highway Traffic Safety Administration (NHTSA) has legislated to make ESC mandatory on all new cars by 2012.

European Commission's policy is to achieve 100% availability by 2012 not necessarily by legislation..

A proposal for a Global Technical Regulation (GTR) on ESC has been submitted to the United Nations World Forum for Vehicle Standards Harmonization (meets in Geneva). A draft GTR is expected to be Ready by end of 2008.



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Choose ESC! Campaign

Launched by public/private 'eSafety Aware' platform with members from industry, member states including the UK, motoring organisations and NGOs.

Patrons are Viviane Reding, Member of the European Commission and Max Mosley, President of the FIA, and chaired by the FIA Foundation

Campaign events, demos etc across the European Union

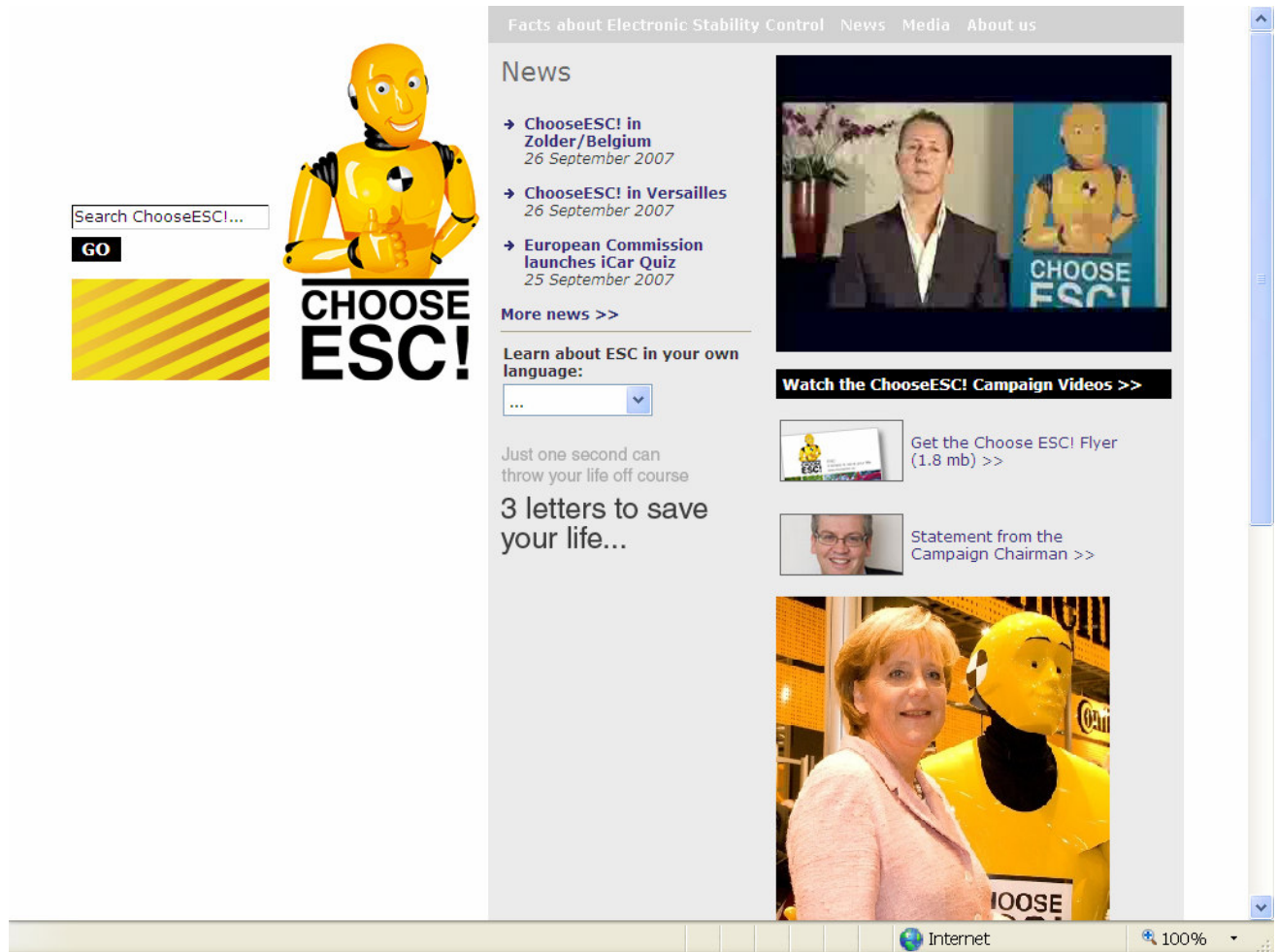


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More information:

www.eSafetyAware.eu
www.ChooseESC.eu

Thank you....



The screenshot shows the ChooseESC! website interface. At the top, there is a navigation menu with links for "Facts about Electronic Stability Control", "News", "Media", and "About us". The main content area is titled "News" and features three articles:

- **ChooseESC! in Zolder/Belgium** (26 September 2007)
- **ChooseESC! in Versailles** (26 September 2007)
- **European Commission launches iCar Quiz** (25 September 2007)

Below the news section, there is a "More news >>" link and a language selection dropdown menu. A prominent message reads: "Just one second can throw your life off course. 3 letters to save your life...". To the right, there are two promotional boxes: "Watch the ChooseESC! Campaign Videos >>" and "Get the Choose ESC! Flyer (1.8 mb) >>". A "Statement from the Campaign Chairman >>" link is also present. The bottom of the page shows a browser status bar with "Internet" and "100%" zoom level.



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