

European Road Assessment Programme



Rating Europe's roads for safety

In the mid-1990s, leading European motoring organisations working with the UK and Swedish governments and others started *EuroNCAP* - the European New Car Assessment Programme.

The programme involved buying new cars from showrooms, crash testing them, and awarding each vehicle a star rating depending on the protection given.

At the start of the programme, 2-star performance was common. But, although progress has been too slow on pedestrian protection and child seats, no manufacturer is now content unless their vehicle achieves a 4-star rating. In fact, *EuroNCAP* has recently made its first 5-star award. Early research suggests *EuroNCAP* has already helped save European lives by the thousand.

EuroRAP

But there are still over 40,000 deaths annually on Europe's roads. And 4-star cars driving on 1-star roads are part of the problem. For example, thousands of drivers are killed each year simply because solid objects at the side of the road are unprotected by safety fencing.

Now a new programme, the European Road Assessment Programme-*EuroRAP*-has been piloted to show each stretch of Europe's roads can be rated for safety. The pilot results were published for consultation in 4 countries in February 2002.

EuroRAP is again being led by Europe's leading motoring organisations with technical support from European governments. The AA Foundation for Road Safety Research is managing the programme.

Measuring Safe Roads

Vital to the *EuroRAP* programme are two new standard test protocols. The first seeks to introduce a standard road inspection for safety features. The second measures and maps the rate at which people are being killed and seriously injured. These road assessment protocols are being developed at the UK's Transport Research Laboratory (TRL) which also developed the protocol for *EuroNCAP*.

Across Europe, governments are now switching focus to concentrate on cutting deaths and serious injuries rather than accidents alone. This switch means road and vehicle engineers must rethink. For example, road engineers can often choose between introducing a roundabout or traffic signal junction. With 4-star cars, crashes at well designed roundabouts should not mean routine

death and serious injury. At traffic signals on high speed roads, serious injury is too often designed in.

Behind *EuroNCAP* and *EuroRAP* is realism. Human beings will make mistakes on the roads, typically 1 mistake in 500 driving decisions. Nor do we want to slow our lives to a crawl — in Switzerland, 80% recently voted against a blanket reduction in urban speed limits from 50 kph to 30 kph.

Roads and vehicles must be developed to work together as a system using the best affordable technology to protect against injury. *EuroRAP* must give road engineers the challenge and support that *EuroNCAP* gives Europe's vehicle engineers.

“Road deaths are not acceptable. Roads and cars must be designed as a system to prevent serious injury.”

Everyday human error leading to avoidable death should be no more acceptable on roads than in the factory. The human body needs shielding from uncushioned impacts above 40 kph which are unsurvivable.

Today, a new 4-star car can usually cushion its occupants so that if the worse

happens at 70 kph then the accident will not mean serious injury. But when that protection is combined with proper road protection, roads can be safely rated at 110 kph or more. At the extreme, Formula 1 car and track protection systems, which include advanced electronic intervention (“e-safety”), mean drivers frequently walk away from 220 kph crashes.

Europe's safest roads—motorways—are its fastest roads. Relatively few (around 5%) of road deaths are on motorways despite the traffic they carry. Motorway safety can be further improved but most obey the basic rules to avoid death—traffic in opposing directions is separated; junctions are split level; roadside objects such as signs, parapets and trees are protected by safety fences; and vulnerable pedestrians and cyclists have separate routes.

Most deaths are outside built-up areas. Most are on single carriageways. Most serious injuries are inside built-up areas.

Most existing roads do not meet the standards demanded of new roads. Known low cost safety measures are not systematically applied. As with cars before *EuroNCAP*, data is not held in a way that allows engineers to check their performance against others.

***EuroRAP* gives the consumer, authorities and engineers powerful new information. As with *EuroNCAP*, standards can rise towards the best once what is best and what is worst is measured, understood and communicated across Europe. Communication to drivers and engineers of *EuroRAP*, and new work in 6 countries, is at the heart of the 2002/3 programme.**



Even 4-star EuroNCAP cars cannot protect against 1-star roads. Unfenced objects at the side of 90 kph roads are a killer. In Germany 1600 die each year striking trees, in France 800 die. Over 500 die striking hazards close to the road in Britain