

## Professor Andre Seeck

Euro NCAP President | 2010 – 2014

Research assistant at the Passive Vehicle Safety, Biomechanics unit of the German Federal Highway Research Institute [BAST] since 1993. In 2001 Professor Seeck took over the management of the newly-founded Vehicle Safety Assessment, Driver Assistance Systems section at BAST, and since October 2008 he has been head of the Vehicle Engineering department. He was awarded with the Traffic Safety Awards of the 'Bruderhilfe-Familienfürsorge' in 2004 and the US Government Special Award of Appreciation 2017.

### PASSIVE SAFETY

Extraordinary new technology has transformed the way we drive our cars – and will continue to shape it for years to come as the world embraces autonomous vehicles.

Introducing these advances to the public, however, while encouraging the motor industry to adopt a united approach, was a formidable challenge facing Euro NCAP – one for which Andre Seeck's particular talents made him brilliantly suited.

"My interest in road safety dates back to when I was at university where I studied mechanical engineering with a focus on automotive engineering," recalls Seeck. "Right from my early twenties I focused on safety – particularly passive safety."

He explains: "I grew up in an area in Germany with a lot of fatal road accidents. In between Hamburg and Bremen, people – especially young people – travelled a lot; they had to if they wanted to get to a disco in a city. I saw many fatal accidents, so right from the very beginning I wanted to get into the area of passive vehicle safety.

"This was the starting point on a personal, emotional level, where I became heavily involved with safety. You could say I am a real crash test guy!"

It was while holding key positions at BAST – the technical research institute of the German Federal Ministry of Transport – that Seeck came to appreciate the lack of an effective industry and European-wide





policy on vehicle crash safety. It was a revelation that was to drive his time on the board of directors at Euro NCAP - and as its President.

"In Germany we had four different consumer tests from magazines and consumer organisations and all told the consumer different stories for the same car," says Seeck. "That's why, in the 1990s, when I started at BAST, I started to look at the issue from a scientific point of view."

When he first joined NCAP, says Seeck, this work underpinned his personal vision; ensuring that NCAP's crash test programme delivered a 'real world forecast of how a new car would behave in a real world accident'.

He reflects: "After 10 years of a car's lifecycle you have this data but by then it's too late, the car is no longer on sale. This was the big challenge that NCAP faced; to get the information to the consumer when it mattered."

## REFORMING THE RATING SYSTEM

One of Seeck's earliest achievements at Euro NCAP was to help form the overall rating, in 2009 - based on research he had conducted as a young research engineer at BAST. "There were two initial, key challenges," says Seeck: "To give the right forecasts - and to get it to consumers in a form they could use."

The third major challenge was to create a rating system capable of evolving to absorb the huge flow of new safety technology. "Our system had to be flexible enough to integrate new driver aids and technology such as AEB, lane departure warnings and so on."

Remembers Seeck: "At first it seemed like comparing apples with pears! On one hand we had crash-testing and the protection a vehicle would give its occupants and pedestrians. On the other, we wanted to avoid accidents happening in the first place. It was important to devise a rating system that integrated every need."

The increasingly important role of driver aids was quickly seized on by Seeck when he joined Euro NCAP, and his work at BAST prepared him well. "At BAST I had to adapt my thinking processes from passive to active safety and driver assistance systems. I was head of the whole division so I had to love all my children! And to avoid an accident is much better than having to mitigate the consequences for the occupant, and people outside."

## PRESIDENTIAL CHALLENGES

Looking back on the development of Euro NCAP, Seeck has high praise for previous presidents for ensuring its birth - and survival - in the face of industry opposition.

When he became president one of his key aims was to communicate clear safety requirements to the motor industry - while retaining their support. "It was vital for the consumer that industry could follow our advice and create Five Star cars," says Seeck.

It was also critical that Euro NCAP's guidance could be followed by the mass car market - not just the luxury end of the business "The industry had to be willing to follow us. We were not the enemy, we had to sit with them around the table to find out what is feasible in 2016 and 2020, so that we could define milestones."

Seeck says the role of Euro NCAP is similar to that of a good sports coach. "If he is too soft it is not good for the sportsman because the training is not hard enough. But if the coach is too hard it's also bad for the sportsman; our job was to find the right balance between two extremes. We try to challenge the industry - but in ways they can achieve."

His proudest achievement is shaping and driving forward the roadmap setting out Euro NCAP's goals for years to come, in a way that challenges - but cooperates with - the automotive industry.

Now, he says, Euro NCAP's overriding challenge is to speed and guide the introduction of autonomous cars - leapfrogging the vast amount of time that legislation alone would take to achieve this.

"At Euro NCAP we can react quickly. If we see something that is not OK we can correct it and carry the industry with us. This is behind the success of Euro NCAP."

The second major challenge is to guide the industry towards a successful Human Machine Interface (HMI), so that the rollout of autonomous technology becomes as seamless as possible, says Seeck.

"Consumers think they're happy with what they have today but it's like mobile phones. Nobody thought some years ago they'd need to handle a photo or a video on their phone - now nobody wants to be without a smartphone!

"It will be the same with cars. In 10-15 years people will say 'I can't imagine driving through a traffic jam with all that boredom. How did my parents endure that! Now I can just push a button...' But we have to make sure systems are intuitive at the HMI level."

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The third challenge is ensuring that Europe has as much uniformity as possible, so that when an autonomous car reaches a state border, it is able to follow the same set of rules. "Where that doesn't happen," says Seeck, "the HMI must let the driver know - the driver can't be expected to know all the variations." But he admits: "Harmonising behaviour law in traffic is like harmonising our tax law in Europe. A huge task."

"We are already a little too late. We already have Level 2 cars on the market, and some people use them in the wrong way. Now my dream is to bring the safety potential of autonomous driving to the roads as soon and as quickly as possible.

"This is how Euro NCAP works; we accelerate the penetration of new safety systems into the mass market. It's what we did with airbags and AEB and it's what we must do for autonomous and automated driving today".

