



## DRIVING VISION: Designing digitised cars that let us be more human

### Ricky Hudi

*Title:* Chief engineer for electrics/electronics development

*Company:* Audi AG

*Size:* \$26.9bn market capitalisation; 71,440 employees

**Ricky Hudi** may have been destined to connect cars, computers and passengers in a seamless digital world.

Today the head of electrics and electronics development at Audi AG, Mr Hudi was born in Silicon Valley and then raised by his German parents next door to Audi's global headquarters in Ingolstadt, Germany. From early youth his path was clear, says Mr Hudi, who is 46: "I wanted to go into the car industry and electronics."

He did so at a pivotal time. As computers came to play a dominant role in cars, consumer electronics and social technologies began quickly changing the driver experience. Today, digital architecture propels 90% of innovation in the industry, he says.

"Cars today have an unbelievably high level of intelligence," Mr Hudi says. "Every car, from the smallest to the largest, is already [internally] networked." Luxury cars like the Audi feature dozens of electronic control units and thousands of semiconductors, and these electronics are increasingly connecting to the external digital and social grid in ways that empower customers.

Mr Hudi and his colleagues have made digital innovation an Audi hallmark. The company added mobile Wi-Fi hotspots and piloted autonomous driving at the Pike's Peak



Race in 2010. In 2011, Audi became the first premium carmaker to exhibit at the annual Consumer Electronics Show in Las Vegas, a mecca for social-technology innovations. Its 2014 models featured a sleek "virtual cockpit"—a single dashboard that displays instrumentation, infotainment and GPS navigation controls directly in front of the driver. Onboard software enhances the driving experience for drivers and passengers, allowing

it to be information-filled and more social on every stretch of road.

Mr Hudi's reputation as an automotive visionary dates to an on-the-record prediction in 2000 that compact discs would vanish and be replaced by music delivered wirelessly, just like movies and online navigation. His current predictions? High-speed Internet access will enable cars of the future to understand their three-dimensional surroundings using cameras, supersonic sensors and laser scanners. Cars will be able to take social cues, thus enabling drivers to take the wheel when driving is pleasant and let advanced electronics take over in traffic jams or long hunts for parking (without relieving drivers of ultimate responsibility).

Mr Hudi sees a future where new technologies make cars ever more socially attuned. By the time he turns 60 in 2028, instead of keeping cars in garages, consumers will order whatever cars they want whenever they're needed—and the cars will drive themselves to requested addresses. Car selections will fit the human and social purpose of the moment: compacts for solo short hops, sport-utility vehicles for taking the family on vacation and convertibles for scenic romantic summer drives.

Technology alone does not sell cars (or anything else). "I strongly believe that in the future the emotional aspect of a car will remain as high as today," he says. And social technologies will be instrumental in enabling carmakers to give drivers the exciting experiences they crave.

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