

Development of smart auto safety systems

According to World Health Organization estimates nearly 1.2 million people die annually in road crashes worldwide and up to 50 million are injured. New generation safety systems could create a safety zone around a vehicle to avoid collisions and reduce injuries and fatalities

First-generation active safety systems

1 1971, Traction-control systems: TCS prevents loss of control when excessive throttle is applied. Introduced by **General Motors**

■ 1978, Antilock brakes: ABS maintains steering control under heavy braking. **Mercedes-Benz**

■ 1987, Enhanced stability control: Prevents skids. Cuts risk of fatal single-vehicle accident by 50%. **Robert Bosch**

■ 1992, Emergency Brake Assist: Reduces emergency stopping distance by up to 20%. **Daimler**

Next generation smart safety systems

2 2003, Pre-crash system: Tightens seatbelts and activates brakes. **Denso**

3 2005, Blind Spot detector: Warns if vehicle is within 10 metres in adjacent lane. **Visiocrp**

4 2007, Lane-departure warning: Sounds alarm when car strays from lane or if hazard detected. **Mobileye**

5 2008, Automated braking: Reduces low-speed collisions which account for around 75% of all crashes. Volvo's **City Safety** works up to 30km/h

6 2009, Automatic pedestrian recognition: Detects people or animals in car's path. **Mobileye**

7 2009, Backover detection: Applies brakes if person or obstacle is behind vehicle while reversing. **Ford, Mobileye**

