
Glossary of terms

Air bags: safety devices installed in vehicles that inflate to protect the driver or passengers in case of a collision.

Alcohol interlock device: an electronic breath-testing device connected to the ignition of a vehicle. The driver has to breathe into the device. If the driver's breath alcohol level is above a set limit, the vehicle will not start.

Anti-burst door latch: door latch in a motor vehicle that is designed not to open under certain conditions in crashes, so preventing vehicle occupants from being ejected.

Area-wide urban safety management: traffic calming, traffic safety management and speed reduction carried out in a particular urban area.

Automatic enforcement: the enforcement of road traffic rules by means of equipment that records offences without requiring the presence of police officers at the scene, such as speed cameras or radar detectors.

Barrier terminals: the ends of safety barriers, which often need to be protected by crash cushions.

Blood alcohol concentration (BAC): the amount of alcohol present in the bloodstream, usually denoted in grams per decilitre (g/dl). A legal BAC limit refers to the maximum amount of alcohol allowed in the bloodstream that is legally acceptable for a driver on the road. In some countries, the law stipulates an equivalent quantity of alcohol in the air breathed out, in order to facilitate detection of drink-driving.

Breakaway columns: lighting or telegraph poles, designed to break or collapse on impact.

Breathalyser: an instrument that measures the relative quantity of alcohol in the air a person breathes out.

Bridge pier: the support columns of bridges.

Bull-bars: rigid or soft metal bars fixed to the front of a sports utility vehicle, originally designed to prevent damage on contact with animals in rural areas.

Central refuges: areas in the middle of the carriageway, where pedestrians can stop and wait until the road is clear before crossing.

Change in velocity during a collision (ΔV): in crash reconstructions, the change in velocity occurring as a result of an impact – usually at the centre of gravity of the vehicle – is widely used as the measure of the severity of a collision. At substantial speeds, collisions between cars are almost totally inelastic so there is very little rebound. Thus if a car travelling at 100 km/h strikes a stationary car of the same mass, they will both undergo a change in velocity of 50 km/hr. ΔV is an important measure of the input severity or energy dosage, that relates to the outcome or injury severity. It is therefore a widely used variable in assessing the characteristics of crashes and the benefits of various countermeasures, such as the use of seat-belts and air bags, and changes in speed limits.

Chicane: a physical speed management measure consisting of an obstacle on one or other side of the road, that has the effect of narrowing the width of the road.

Child restraints: special seat restraint for children, designed according to age and weight, offering protection in the event of a car crash.

Clear zoning: the systematic removal of all hazardous features near the roadside, to minimize the chances of injury should a vehicle run off the road.

Crash cushions: energy-absorbing applications that can be attached to barrier terminals and other sharp-ended roadside objects to provide crash protection on impact.

Crash-protective roadsides: collapsible or break-away roadside objects or energy-absorbing “cushions” on barriers and rails that reduce the severity of injury on contact.

Crash-protective vehicles: vehicles designed and equipped to afford interior and exterior protection to occupants inside the vehicle as well as to road users who may be hit in the event of a crash.

Forgiving roadside objects: objects and structures designed and sited in such a way that they reduce the possibility of a collision and severity of injury in case of a crash as well as accommodating errors made by road users. Examples are collapsible columns, guard fences and rails, and pedestrian refuges.

Functional classification of roads or road hierarchy: process of classifying roads in a network according to their function and setting speed limits according to the road function.

Grade-separated junctions: junctions or intersections that separate non-motorized road users from motorized road users so as to avoid conflicts, for example, footbridges over motorways.

Guard fences and rails: rigid, semi-rigid or flexible barriers which are situated at the edge of a carriageway to deflect or contain vehicles, or in the central reserve to prevent a vehicle crossing over and crashing into oncoming traffic.

Hands-free mobile telephones: a mobile telephone device, usually fitted to the dashboard of a vehicle, that does not require manual operation.

Headway: the distance between two vehicles travelling one in front of the other.

High-mounted brake lights: brake lights fitted to the rear window of a vehicle so that they are at eye level with the driver of the car behind and can therefore be easily and quickly seen.

High visibility enforcement: patrolling by the police which is easily seen by passing road users, for example, random alcohol and sobriety checkpoints.

Human capital approach: an approach based on human capital theory that focuses on the centrality of human beings in the production and consumption system. The “human capital approach” model includes both direct and indirect costs to individuals and society as a whole due to road traffic injuries. Such costs include emergency treatment, initial medical costs, rehabilitation costs, long-term care and treatment, insurance administration expenses, legal costs, workplace costs, lost productivity, property damage, travel delay, psychosocial impact and loss of functional capacity.¹

Ignition interlock function: a device that prevents the ignition from starting until certain conditions have been met, such as putting on a seat-belt.

Integrity of the passenger compartment: ability of a vehicle’s passenger compartment to stay whole and not collapse on impact with another vehicle or object.

Intelligent speed adaptation: a system by which the vehicle “knows” the permitted or recommended maximum speed for a road.

Intelligent vehicle applications: technologies that include communication systems, route and traffic information systems, systems for autonomous control of the vehicle, and smart air bags.

Low-cost and high-return remedial measures: low-cost, highly cost-effective engineering measures applied at high-risk sites following systematic crash analysis.

Median barrier: safety barrier positioned in the centre of the road that divides the carriageway, deflects traffic and often has energy-absorbing crash-protective qualities.

Modal split: the share or proportion of different modes of travel.

Motorized two-wheelers: a two-wheeled vehicle powered by a motor engine, such as a motor-cycle or moped.

Non-motorized transport: any transport that does not require a motor to generate energy. Included in this term are walking, bicycling, and using animal-drawn or human-drawn carts.

¹ Blincoc L et al. *The economic impact of motor vehicle crashes, 2000*. Washington, DC, National Highway Traffic Safety Administration, 2002.

- Offset deformable barrier test:** a frontal crash test that aims to reproduce real-world conditions of car-to-car frontal crashes. In this test, the front of the striking vehicle partially overlaps a deformable barrier.
- On-board electronic stability programme:** an on-board car safety system that enables the stability of a car to be maintained during critical manoeuvring.
- “Out of position” occupant:** a vehicle driver or passenger who is out of his or her seating position at the time of the crash, for example, a child lying across the rear seat.
- Padding:** energy-absorbing lining of crash helmets or vehicle interiors, offering protection against crashes.
- Park and ride:** a transport scheme that encourages out-of-town parking and entry into the town by means of public transport.
- Passenger air bags:** safety devices installed in vehicles in front of the front-seat passenger, that inflate to protect the passenger in certain collisions.
- Passenger compartment intrusion:** the collapse or partial collapse of the passenger seating area of a vehicle as a result of impact by another vehicle or object, contributing to greater crash severity and injury.
- Passive safety:** any device that automatically provides protection for the occupant of a vehicle, such as seat-belts, padded dashboard, bumpers, laminated windshield, head restraints, collapsible steering columns and air bags.
- Physical self-enforcing measures:** road engineering measures – such as road humps, chicanes and rumble strips – that force drivers to reduce or lower speeds, without any additional enforcement or intervention by the police.
- Post-crash automatic collision notification:** a manual or automatic emergency notification system installed in a vehicle that can lead emergency rescue services or the police directly to the position of the crash, by means of a satellite-based Global Positioning System.
- Random breath testing:** alcohol breath tests administered randomly at roadside checkpoints by the police, without any necessary cause for suspicion.
- Red-light cameras:** cameras installed at traffic lights that photograph vehicles going through the junction when the traffic lights are on red.
- Reflectors:** materials that reflect light as an aid to visibility. They may also be fitted to non-motorized transport and roadside objects.
- Road infrastructure:** road facilities and equipment, including the network, parking spaces, stopping places, draining system, bridges and footpaths.
- Roadside furniture:** functional objects by the side of the road, such as lamp posts, telegraph poles and road signs.
- Road traffic accident:** a collision involving at least one vehicle in motion on a public or private road that results in at least one person being injured or killed.¹
- Road traffic crash:** a collision or incident that may or may not lead to injury, occurring on a public road and involving at least one moving vehicle.
- Road traffic fatality:** a death occurring within 30 days of the road traffic crash.¹
- Road traffic injuries:** fatal or non-fatal injuries incurred as a result of a road traffic crash.
- Road user:** a person using any part of the road system as a non-motorized or motorized transport user.
- Rumble strips:** a longitudinal design feature installed on a roadway shoulder near the travel lane. Rumble strips are made of a series of indented or raised elements that alert inattentive drivers through their vibration or sound. They may also be used for speed reduction.
- Safety audit:** checks that are carried out at various stages of an individual road project to ensure that its design and implementation are consistent with safety principles, and to determine whether further design changes are needed to prevent crashes.
- Safety barriers:** barriers that separate traffic. They can prevent vehicles from leaving the road or else contain vehicles striking them, thus reducing serious injury to occupants of vehicles.
- Safety performance standards:** definitions or specifications for equipment or vehicle performance that provide improved safety. They are produced nationally, regionally, or internationally by a variety of standard-producing organizations.

¹ Economic Commission for Europe Intersecretariat Working Group on Transport Statistics. *Glossary of transport statistics*, 3rd ed. New York, NY, United Nations Economic and Social Council, 2003 (TRANS/WP.6/2003/6) (<http://www.unece.org/trans/main/wp6/pdfdocs/glossen3.pdf>, accessed 6 January 2004).

- Satellite-positioning system:** a communication system that gives an exact reference for a ground position.
- Seat-belt:** vehicle occupant restraint, worn to protect an occupant from injury, ejection or forward movement in the event of a crash or sudden deceleration.
- Seat-belt anchorages:** points in the vehicle to which seat-belts are attached.
- Seat-belt reminder systems:** intelligent visual and audible devices that detect whether or not belts are in use in different seating positions and give out increasingly aggressive warning signals until the belts are used.
- Self-explanatory road layouts:** the use of engineering measures such as road markings and signs that make clear the course of action by different road users.
- Skid-resistant surfacing:** surface material on a road or pavement designed to prevent vehicles skidding or pedestrians slipping.
- Sobriety checkpoints:** checkpoints at which drivers are stopped by the police and breath-tested if there is reasonable cause for suspicion that alcohol has been consumed.
- Speed bump:** a device for controlling vehicle speed, usually a raised form placed across a road. It can be permanent or temporary.
- Speed cameras:** cameras at fixed sites or employed by mobile police patrols that take photographs of vehicles exceeding the speed limit. Their purpose is to enforce speed limits.
- Speed hump:** a convex elevation installed across the road that acts on the dynamics of vehicles in such a way that drivers have to reduce speed to avoid discomfort to themselves or damage to their vehicles.
- Sustainable transport:** transport that achieves the primary purpose of movement of people and goods, while simultaneously contributing to achieving environmental, economic and social sustainability.
- Traffic calming:** a strategy aimed at significantly reducing vehicle speeds in an urban neighbourhood or on an urban arterial road, in order to protect vulnerable road users and residents and improve the quality of life of those living in the neighbourhood.
- Traffic management:** planning, coordinating, controlling and organizing traffic to achieve efficiency and effectiveness of the existing road capacity.
- Traffic mix:** form and structure of different modes of transport, motorized and non-motorized, that share the same road network.
- Transition zones:** road marking or features forming a gateway which marks transition from higher speed to lower speed roads, for example, rumble strips, speed humps, visual warnings in the pavement and roundabouts.
- Under-run guards in trucks:** front, side and rear guards that can be fitted to trucks to prevent cars and other vehicles running under the trucks in a collision. Under-run guards can also provide energy-absorbing points of contact for other vehicles to protect them in the event of a crash.
- Unforgiving roadside objects:** objects and structures designed and sited in such a way that they increase the chances of collision and severity of injury in case of a crash. Examples are trees, poles and road signs.
- Utility poles:** poles at the roadside with a particular function, such as telegraph poles, road traffic sign poles and lighting poles.
- Vehicle-to-vehicle compatibility:** improving the structural interaction between vehicles when they collide.
- Vehicle speed limitation device:** a device fitted in a vehicle that does not permit speeds in excess of a maximum limit.
- Vertical alignment:** the shape of the roadway in the vertical plane.
- Vulnerable road users:** road users most at risk in traffic, such as pedestrians, cyclists and public transport passengers. Children, older people and disabled people may also be included in this category.