

Land transportation safety practice



Acknowledgements

This Report, including its original form and subsequent updates, is the work of the Land Transportation Safety Subcommittee (LTSC).

The mission of the Land Transportation Safety Subcommittee is the sustainable reduction of land transport related injuries and fatalities for its member companies and the oil and gas and new energy industry in general.

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About

Land transport related incidents are historically the single largest cause of fatalities in IOGP Member Company operations. All companies operating land transportation, or providing services involving land transportation, should have a management system in place that covers land transportation operations and is based on a full assessment of risks and mitigations.

This Report is based on experience and current practices that have proven effective in reducing serious incidents.

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Land transportation safety practice

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Introduction

Land transportation safety practice provides an effective way to manage land transportation risks. Application of this Report can be the starting point for energy companies (oil and gas companies and new energy companies) or can supplement existing practices.

This Report supports and is consistent with IOGP Report 459 - [Life-Saving Rules](#), developed to mitigate risk and reduce fatalities. *Life-Saving Rules* focus on changing worker and supervisor behaviour in the workplace by raising awareness of activities that are most likely to result in fatalities and propose simple actions for individuals to protect themselves and others.

This Report is generic enough to adapt to different companies and their cultures worldwide. It is applicable to all parts of the energy industry (upstream, downstream, or new energy businesses) including operators, contractors, and subcontractors. It applies to all land transportation activities (that is, both on- and off-road) in the oil and gas and new energy industry, such as:

- All vehicles (company, contractor, or personal owned or leased) and all drivers operating these vehicles on company roads and premises, and public roads, whilst on company business.
- All transportation activities including personnel, freight, product, equipment and material movements, and mobile equipment used on public roads.

Excluded from its scope:

- all construction and industrial equipment not used for transportation on public roads
- where company's load is transported with loads from other customers (shared or consolidated loads)
- transportation by rail

Contractor includes all subcontracted activities.

This Report consists of 12 Elements (Section 1) to manage the risks of land transportation, including the IOGP Life-Saving Rule on driving.

This Report provides:

- A summary table of the 12 Elements with icons and key guidance for those operating a vehicle, that is, drivers.
- Expectations for drivers, supervisors, managers, and passengers for each of the 12 Elements.
- Detailed vehicle specifications based on vehicle type used (Section 2.2)
- Detailed functional specification for In-Vehicle Monitoring Systems (Section 2.5)
- Detailed functional specification for vehicle camera systems and Active Fatigue and Distraction Detection (AFDD) devices (Section 2.6)
- Driver training criteria (Section 2.6)
- Overview of limitations relating to driving and working hours (Section 2.8)

It also lists high risk countries (Section 2.1), offers guidance on the New Car Assessment Program (NCAP) (Section 2.3), on the use of alternative fuel, low emission type vehicles (Section 2.4), and on the use of the bow-tie model of risk evaluation Training (Section 2.9).

1. Land transportation practice

1.1 Implementation

1.1.1 Management and leadership expectations

Management provides visible commitment and support, setting a clear expectation that the Land Transportation Safety Practice is implemented and communicated. Management, at all levels, ensures an organizational culture where normal behaviour, at all levels, is risk conscious, safe, and promotes learning and collaboration. Management sets a good example in terms of their own attitude and driving.

Processes and practices:

- Leaders - know the safety risks of their position and organization, responsibilities in the company, and how they are managed.
- Take corrective action if risk controls are ineffective.
- Monitor and enforce compliance with company procedures, applicable laws and regulations, and act to correct deficiencies.
- Company management to appoint a Senior Manager to provide Land Transportation Safety oversight, with sufficient authority and resources to effectively implement decisions that affect all, or a substantial part, of the business area.
- Apply consequence management for rule breakers and those who create conditions for rule breaking. It is expected that consequence management is in line with Human and Organizational Performance (HOP) principles, acknowledging human error versus intentional violation or deviation.
- Ensure a land transportation audit, contractor capability assessment, or gap assessment is conducted, with report out to company management.

1.1.2 Safety management systems

An effective Safety Management System (SMS) is in place, appropriate for the size and complexity of the organization, and incorporating all elements of this Report. The Safety Management System should focus on land transportation risk control mechanisms, including improved driving performance, with a corresponding reduction in the number and severity of incidents, reducing injuries and fatalities. Section 4 provides practical guidance on establishing the elements of a land transportation management system within the framework of the operating management system (OMS) described in IOGP Report 510 - [*Operating Management System Framework for controlling risk and delivering high performance in the oil and gas industry*](#).

1.1.3 Adoption status

To drive standardization and consistency, whilst reducing ambiguity within all contracted operations, it is recommended that this Report is adopted, in its entirety, by all companies, for their company and contracted land transportation operations. It is recognized that the adoption of this Report could represent a significant change in approach for some companies (including but not limited to IOGP Member Companies), and that implementation will require a transitional period.

1.1.4 Use in contracts

This Report is applicable during all phases of the contract process, from planning and pre-qualification to final evaluation and close out. The content, structure, language, and style of this Report allow companies to use the documents in contracts to specify the technical scope for contracted operations. This can be as an external document that is referenced from the contract agreement, or alternatively, by embedding this Report's text within agreements with their suppliers.

Companies are encouraged to implement this Report in all new contracts within 12 months of publication.

Land transportation safety risks, when using contractors, to be managed consistently with IOGP Report 423 - [HSE management guidelines for working together in a contract environment](#).

1.1.5 Gap assessment

IOGP Report 365-6 - [Land transportation safety recommended practice – Questionnaire / checklist assessment for the implementation of report 365](#) provides an easy reference to the principal areas of land transport safety management that should be evaluated.

1.1.6 Legal compliance

In the event of a conflict between this Report and law or regulation, the law or regulation must be followed. If this Report creates greater obligation, it should be followed as long as there is also full compliance with law or regulation.

1.1.7 Low emission vehicles (such as Electrical Vehicles (EVs))

When replacing vehicles, low emission vehicles should be selected wherever practical. In this context, 'wherever practical' refers to countries where low emission vehicles are commonly available on the market, where operationally feasible, where in-country regulatory standards and all (vehicle) specifications as set out in this Report are met.

'Low emission vehicles' in this context refers to vehicles that emit much lower volumes of Greenhouse gas (GHG) than common fossil fuel vehicles and encompasses a range of vehicle types and technologies with various levels of emissions, including biofuels, hydrogen, liquified natural gas (LNG), compressed natural gas (CNG), hybrids, and electric vehicles. Low emission vehicle specifications and targets vary depending on the country and type of vehicle (light or heavy).

1.1.8 Exceptions (deviations) process






If one or more items, as stated in this Report, cannot be implemented by the Company or its contractor, an exception should be requested and supported by the relevant contracting company. Where a company has an internal exception process, that process should be followed for this Report.

1.1.9 Continuous improvement




Introducing land transportation safety recommended practices to the workforce is only the starting point. Continuous effort is needed to improve driving safety and eliminate serious road traffic incidents and fatalities.

Identifying land transportation safety practice vulnerabilities, and thoroughly investigating incidents, will highlight practices requiring further reinforcement, or areas where safeguards should be improved.

1.2 Overview of the 12 land transportation elements

VEHICLE-RELATED PRACTICES		
	<p>1. Vehicle specifications</p> <p>Only operate vehicles which are fit for purpose and maintained in safe working order.</p>	
	<p>2. Load securement</p> <p>Only operate vehicles with loads properly secured.</p>	
	<p>3. In-vehicle monitoring system (IVMS)</p> <p>In-scope vehicles to be fitted with IVMS.</p>	
DRIVER-RELATED PRACTICES		
	<p>4. Seatbelts</p> <p>Wear a seatbelt at all times while in a moving vehicle.</p>	<p><i>IOGP Life-Saving Rule on Driving: I always wear a seatbelt</i></p>
	<p>5. Distracted driving and speed</p> <p>Do not use your phone or operate devices while driving.</p>	<p><i>IOGP Life-Saving Rule on Driving: I do not use phones or operate devices while driving</i></p>

DRIVER-RELATED PRACTICES		
	<p>6. Speed</p> <p>Do not exceed speed limits and reduce speed for road conditions.</p>	<p><i>IOGP Life-Saving Rule on Driving: I do not exceed speed limit, and reduce my speed for the road conditions</i></p>
	<p>7. Driver competency</p> <p>Only operate a vehicle if appropriately licensed, trained, and qualified to do so safely.</p>	
	<p>8. Driver fitness, working, driving and rest hours</p> <p>Only operate a vehicle if fully alert and fit to drive.</p>	<p><i>IOGP Life-Saving Rule on Driving: I am fit, rested and fully alert while driving</i></p>
	<p>9. No alcohol or drugs while driving</p> <p>No alcohol or drugs while working or driving.</p>	

JOURNEY-RELATED PRACTICES		
	<p>10. Journey management plan</p> <p>Prescribed journey management plan(s) are in place.</p>	<p><i>IOGP Life-Saving Rule on Driving: I follow journey management requirements</i></p>
	<p>11. Vehicle manoeuvring</p> <p>People to be 'out of danger' when moving, and particularly reversing, a vehicle.</p>	<p><i>Complementary to IOGP Life-Saving Rule on Line of Fire: I position myself to avoid moving vehicles</i></p>
	<p>12. Emergency Response Plan (ERP)</p> <p>Emergency response plan(s) are in place, specifying procedures for handling sudden or unexpected situations.</p>	

VEHICLE-RELATED PRACTICES

1.3 Detailed Guidance



1. Vehicle specifications

Only operate vehicles which are fit for purpose and maintained in safe working order.

- *Vehicles to be fit-for-purpose, based on an assessment of use, and maintained in safe working order, consistent with the manufacturer's specifications and local regulations.*
- *Vehicles to provide maximum safety to occupants in a crash.*
- *New light vehicles to meet 5-star New Car Assessment Programme (NCAP) rating, where available.*

Drivers to:

- Visually verify that the vehicle is in safe working order ⁽¹⁾.
- Report any vehicle defects to their supervisor or person in charge.
- Operate vehicles in accordance with manufacturer specifications.
- Not ride a motorcycle or All-Terrain Vehicle (ATV) (such as Quad).
- Not drive a Utility Task Vehicle (UTV), or any other unconventional vehicle, unless a risk assessment has been completed, signed off, and risk mitigation measures in place.

Supervisors, managers, and leaders to:

- Ensure all vehicles meet specifications set out in Section 2.2 ⁽²⁾.
- Ensure company, leased, or contracted light vehicles have a NCAP rating of 5-stars, where available in the Region as set out in Section 2.2 and Section 2.3.
- Ensure vehicles using an alternative fuel meet criteria set out in Section 2.4.
- Ensure vehicles are designed and constructed for their intended use.
- Verify that vehicles are maintained in safe working order (that is, maintained according to manufacturers' specifications or an equivalent, with up-to-date records held) and intended use of vehicle is appropriate to road and operating conditions.
- Ensure that technical inspections are conducted by an authorized dealer, or by an approved inspection organization ⁽³⁾.
- Check that vehicle defects which compromise safe operations are reported and that repairs are made before a vehicle is put back into use.
- Confirm that risk assessment is in place, with actions implemented prior to using UTVs.

⁽¹⁾ Visually inspect the vehicle for roadworthiness (such as tyres, lights, windscreen wash and so on) on a regular basis (or daily, if prescribed) and after service performed. A good practice is to walk around the vehicle and to visually inspect lights and tyres for any signs of irregular wear, any sharp objects lodged in the tread, and any cuts, tears, cracks, bulges and so on.

⁽²⁾ Emergency response vehicles and mobile equipment are exempted from the specifications set out in Section 2.2, however it is expected that these vehicles are designed, constructed, and maintained for their intended use.

⁽³⁾ Approved' in this context refers to the contracting company approving the performing organization. 'Technical inspection' refers to the verification of the integrity of the vehicle against original equipment manufacturer (OEM) specifications and/or regulatory requirements. Detailed reports of the technical inspection results are maintained. In the absence of any local regulations, or in high driving risk countries, technical inspections to be carried out at least once a year.

VEHICLE-RELATED PRACTICES

More detailed guidance on vehicle specification can be found on the IOGP [Land Transportation Safety website](#) under 'Guidance notes' as well as in:

- IOGP Report 365-15 - [Land transportation safety recommended practice – Bus and coach safety](#)
- IOGP Report 365-16 - [Land transportation safety recommended practice – Emergency Response Vehicles](#)
- IOGP Report 365-17 - [Land transportation safety recommended practice – Mobile Construction Equipment](#)

VEHICLE-RELATED PRACTICES



2. Load securement

Only operate vehicles with loads properly secured.

- *All loads and vehicle equipment are secured to prevent damage, control movement, and avoid loss during and after transit.*
- *In addition to local regulatory requirements, consideration is given to vehicle stability when loading and securing cargo (shape, size, weight, and Centre of Gravity (CoG))*
- *Apply the IOGP Life-Saving Rule for Line of Fire: "I take action to secure loose objects and report potential dropped objects".*

Drivers to:

- Properly secure loads (refer to section below: "when transporting cargo/load").
- Not exceed loads and passenger numbers as per the manufacturer's specifications and local legal limits for the vehicle, including consideration for the weight of the vehicle occupants.
- Keep the vehicle free of loose objects that distract the driver or become hazardous projectiles if a rollover or abrupt vehicle manoeuvre occurs (including in the passenger compartment).
- Secure loose items (including personal luggage, backpacks, and personal protective equipment (PPE)) or store in a locker, trunk, or storage compartment of the vehicle or in any way secured with cargo nets or equivalent. If the vehicle does not have enough storage, assess the risk and ensure loose objects are secured in a safe and responsible manner.

Supervisors, managers, and leaders to:

- Verify that adequate load securing devices and associated equipment are available and serviceable.

When transporting cargo/load:

Drivers to:

- Be competent ⁽¹⁾ in load securement, and apply training received.
- Be aware of the load dimensions, centre of gravity, and weight, to safely adjust driving conditions and respect road infrastructure limitations (such as when a journey includes tunnels, bridges, and overhead lines).
- Carry all relevant documentation when transporting hazardous goods.
- Complete a walk-around check of the vehicle after a break during trip.
- Apply "stop work" if any load (such as packaging) or load securement equipment is unsafe, defective, or missing, or when, during the (un)loading, an individual is in the line of fire.
- Store and care for load securement equipment to maintain it serviceable.
- Check connection and brake system integrity when connecting or disconnecting trailers and follow proper pre-movement procedures (such as conducting a tug test).

VEHICLE-RELATED PRACTICES

- Use approved fall protection equipment when working at heights exceeding 1.8 meters (6 feet) outside of a protected area (such as when going on top of a fuel tanker).
- Visually check, prior to attaching and unleashing load securement aids (anchor points, straps, chains, and so on), if aids can be attached or removed safely.
- Establish an exclusion zone prior to loading and unloading activities (that is, line of fire).

Supervisors, managers, and leaders to:

- Provide necessary training to individuals responsible for load securement and shipping operations, based on vehicle, cargo, and level of involvement in cargo securement.
- Assess that the person in charge of load securement (such as driver, helper, or operator) is competent in load securement.
- Ensure packaging is safe and conforms to industry standards and local regulations, with proper labelling and placarding in place.
- Ensure that vehicles provided are fit for the cargo.
- Confirm that engineered cargo load restraint points are manufactured as per [CSN EN12640](#) or equivalent.
- Ensure that axle loading does not exceed the manufacturer's specifications and local legal limits for the vehicle.
- Verify that adequate load securement devices and associated equipment is available and serviceable.
- Ensure a solid headboard or equivalent is fitted to the vehicle (e.g., trailer) when transporting palletized cargo and a rated headboard when transporting piping.
- Ensure that connection/coupling points of trailers are maintained as indicated by the manufacturer and local regulation.
- Confirm that the Centre of Gravity (CoG) is below the acceptable standard ^[2].
- Ensure that, as part of vehicle design for bulk liquid tankers, baffles or compartments are present that divide the tank into volumes of no more than 7,500 litres. If this is not the case, the filling level of each compartment is more than 80% or less than 20%.

More detailed guidance on load securement can be found on the IOGP [Land Transportation Safety website](#) under 'Guidance notes' as well as in:

- IOGP Report 365-18 - [Load Securement – Land transportation safety recommended practice Guidance Note 18](#)

^[1] Competence is the ability to apply a combination of knowledge, skills, and behaviours to a specific area of expertise.

^[2] Acceptable standard' in this context refers to the height of the loaded object being not greater than its base or in case the height of the centre of gravity (in a fully loaded condition) divided by the wheel track (the distance between the outer points of contact with the ground of the right-hand and left-hand tire of the same axle) is not more than one. If not the case, additional technical information or engineering assistance is needed to determine proper securement techniques. Drivers should be advised of the impact of a high CoG and cargo positioning on the performance of their vehicles and the importance of operating with due consideration and care.

VEHICLE-RELATED PRACTICES



3. In-vehicle monitoring system (IVMS)

In-scope vehicles to be fitted with IVMS (IVMS may include advanced technology such as vehicle camera system or Active Fatigue and Driver Distraction technology).

- *All company-owned, contracted, and leased light vehicles,⁽¹⁾ which are used in road safety high risk countries, all heavy vehicles, all buses/coaches, and any other vehicles as identified by risk assessment⁽²⁾ are provided with an In-Vehicle Monitoring System (IVMS)⁽³⁾ that records journey data.*
- *IVMS data is used to provide regular feedback to drivers and to identify driver performance improvement opportunities.*

Drivers to:

- Operate vehicles with their personally assigned IVMS identification, where appropriate.
- Report any IVMS defects to their supervisor or person in charge.

Supervisors, managers, and leaders to:

- Allocate an operational IVMS to all company-owned, contracted, and leased light vehicles which are used in road safety high risk countries, all heavy vehicles, all buses/coaches, and to any other vehicles identified in a risk assessment and which meet the criteria set out in Section 2.5.
- Ensure that data from the IVMS is analyzed, and the results are communicated to drivers and management on a regular basis.
- Verify that IVMS data is used both to acknowledge good driving practices and to identify improvement opportunities (as part of the feedback to drivers).
- Ensure vehicles are fitted with a vehicle camera system or Active Fatigue and Driver Distraction technology, as defined by Section 2.2 and meeting criteria set out in Section 2.6.

More detailed guidance on the selection and implementation of IVMS can be found on the IOGP [Land Transportation Safety website](#) under 'Guidance notes' as well as in:

- IOGP Report 365-12 – [Implementing an in-vehicle monitoring program – A guide for the oil and gas extraction industry](#).

For more detailed guidance on how to effectively identify improvement opportunities as part of the feedback to drivers, refer to the [IOGP Human Performance principles](#).

⁽¹⁾ Vehicles operating at a company owned and operated location, provided that the maximum speed limit does not exceed 25 miles/hr (40 km/hr), are exempt from the IVMS requirement.

⁽²⁾ A risk-based approach could be followed to set the pace for introducing IVMS. Exemption from using IVMS might be justified for some specific vehicles, or groups of vehicles, where the effort required is disproportionate to the achievable risk reduction. Both pace of implementation and possible exemption should be evaluated as part of a documented risk assessment.

⁽³⁾ IVMS can be in the form of hardware installed in the vehicle or a mobile app-based application.

DRIVER-RELATED PRACTICES



4. Seatbelts

Always wear a seatbelt while in a moving vehicle.

- *Drivers and passengers to always wear a seatbelt while in a moving vehicle to reduce the likelihood of an injury in the event of a crash.*
 - *Apply the IOGP Life-Saving Rule for Driving: “I always wear a seatbelt”.*
- Wear a seatbelt in all vehicles including, but not limited to: (rental) cars, taxis, (mini) buses, trucks, cranes or forklift trucks.*

Drivers and passengers to:

- Check that the seatbelt is working. ⁽¹⁾
- Wear a three-point seatbelt properly. ^{(2) (3) (4)}
- Keep seatbelt correctly fastened while in a moving vehicle.
- Check that everyone in the vehicle is wearing a three-point seatbelt suitably before starting to drive.
- Intervene when fellow occupants are not wearing seatbelts properly. ⁽²⁾
- Report any issue that compromise restraining system functionality. ⁽¹⁾

Supervisors, managers, and leaders to:

- Ensure vehicles are fitted with properly working three-point seatbelts. ^{(1) (2) (3)}
- Verify that the functionality of the seatbelt is inspected according to the manufacturer’s recommendation where a vehicle has been involved in a Motor Vehicle Crash (MVC).
- Ensure that jump-seats or foldable seats not equipped with three-points seatbelts are removed or otherwise physically impossible to use.
- Enforce seatbelt use and apply consequences management.

More tools and resources on seatbelts can be found on the IOGP Land Transportation Safety website under “BUCKLE UP”: <https://www.iogp.org/buckleup/>

⁽¹⁾ An effective way for you to verify whether your three-point seatbelt is of the right configuration is to check whether it has automatic retraction and a deceleration-activated emergency locking mechanism (also referred to as an “inertia reel”, for example, a device which allows the seatbelt to unwind freely but which locks under force of impact or rapid deceleration).

⁽²⁾ ‘Properly’ in this context refers to the seatbelt being used with no slack, the lap belt positioned over the pelvic region (not the stomach), the diagonal strap positioned over the shoulder (not the neck), never place the strap behind a person’s back or under their arm and make sure nothing obstructs the smooth movement of the belt.

⁽³⁾ Where it is impossible or economically impractical to implement three-point seatbelts for buses, or coaches used occasionally, lap belts for passengers might be acceptable, subject to risk assessment of the specific case and additional control. For forklift trucks, lap seatbelts might be acceptable in existing vehicles until the vehicle is replaced. Use of vehicles not properly fitted with seatbelts (for example, public transport such as buses) is acceptable if no practical alternatives are available.

⁽⁴⁾ Passengers travelling on a long trip in a bus or coach where toilet facilities are available, subject to risk assessment, may use the bus toilet for emergencies while the bus is in motion. The passenger in question will not be wearing their seatbelt for that period. A documented risk assessment is in place with actions implemented.

DRIVER-RELATED PRACTICES



5. Distracted driving

Do not use your phone or operate devices while driving.

- *Using your phone (even hands-free), texting, interacting with navigation and other devices while driving is a distraction ⁽¹⁾ and increases the risk of losing control of your vehicle.*
- *Apply the IOGP Life-Saving Rule for Driving: “I do not use phones or operate devices while driving”.*

Drivers to:

- Not use a mobile phone (even hands-free, including but not limited to: dictate, listen, watch, read, send messages, participate in conference calls (such as Microsoft Teams, Zoom), or a two-way radio while driving/operating a vehicle, (including autonomous) ⁽²⁾ ⁽³⁾.
- Not use earbuds or any other wearable audio devices while driving/operating a vehicle.
- Focus attention on driving and avoid distractions ⁽¹⁾.
- Find a safe place to pull over if necessary to make a phone call or to perform a non-driving task that could lead to distraction.
- Use any in-vehicle technology (vehicle dashboard, adjusting mirrors, seat position, searching radio stations, and so on) sensibly to avoid distraction.

Passengers to:

- Intervene if a driver is using a mobile phone, other devices, or is otherwise distracted while driving or operating a vehicle.
- Be mindful in engaging the driver without becoming a distraction.

Supervisors, managers, and leaders to:

- Ensure all drivers are aware of the rules regarding mobile phones.
- Avoid contacting drivers, that are on a journey, through proper journey management, and limiting contact while they are at a rest point.
- Monitor adherence to rules and apply consequence management.

It is a good practice to enable phone technology options that limit notifications (such as “phone driving mode”).

⁽¹⁾ Distracted driving is any activity that could divert a person’s attention away from the primary task of driving, such as using a mobile phone, wearable technology (for example, a smart watch), texting, watching a movie, checking social media, playing videogames, adjusting a navigation system (manually or verbally), adjusting a radio or music player, streaming, reading a map, looking at a billboard, and reaching for an object (such as food, drink). Using your phone, or any other cognitive process (lost in thoughts, speculating about an upcoming job/meeting, thinking about a past event and so on) while driving, increases the risk of losing control of your vehicle.

⁽²⁾ The exception to this is for the use of two-way radios as part of radio-controlled traffic management, convoy management, or for use during emergency situations (driving, security, and so on). Radio use in these circumstances is to be kept to the minimum necessary to communicate and control the hazards and risks of the journey.

⁽³⁾ The use of a mobile or smart phone for IVMS or navigation purposes is allowed if the phone is not used for calls, texting, and so on, and is only set and the route adjusted when the vehicle is safely parked. When using a phone or other portable navigation device, make sure to position and secure the device correctly. Position the device in a location where it will not interfere with airbag deployment and that is readily visible but does not restrict your view. Secure the navigation device so that it will not move while the vehicle is in motion.

DRIVER-RELATED PRACTICES



6. Speed

Do not exceed the speed limit and reduce speed for road, environmental, and visibility conditions.

- *Drivers to obey the speed limit and not operate a vehicle above a safe speed for the prevailing road and/or operating conditions, as speeding increases the risk of losing control of your vehicle.*
- *Apply the IOGP Life-Saving Rule for Driving: "I do not exceed the speed limit and reduce my speed for road conditions".*

Drivers to:

- Obey the maximum allowable speed for the vehicle and the road they are driving on, as indicated by road signs, journey management instructions, or defined speed zones.
- Adjust speed to conditions (such as road, traffic, environmental, visibility and so on).
- Use (adaptive) cruise control, where present and allowed, sensibly ⁽¹⁾.

Passengers to:

- Intervene if a driver is exceeding the maximum allowable speed or is not driving safely for the prevailing conditions.

Supervisors, managers, and leaders to:

- Ensure all drivers are aware of speed rules.
- Check that drivers are operating within permitted speed limits with IVMS.
- Enforce consequences management as necessary.
- Consider the use of speed limiting devices where deemed appropriate, based on risk assessment.
- Establish customized speed zones and maximum fleet speed stricter than posted speed limits where a risk assessment has identified that the posted speed limit is too high for the vehicle of operation, for specific conditions (such as the state of the roads, weather, traffic, population density, etc.), or speed limits that are undefined by relevant authorities ⁽²⁾.
- Consider the use of technology that alerts drivers of posted speed limits or otherwise defined speed limitations.
- Develop guidance for drivers when allowing the use of cruise control ⁽¹⁾.

⁽¹⁾ Cruise control is primarily designed for driving in ideal road, weather, and traffic conditions with long distance travel on predominantly highway roads. However, it is always to be used with caution as it might increase risk of fatigue or distractions if not used correctly. Cruise Control is not recommended to be used under the following circumstances: at night, in mountains or hills, in high traffic, in urban areas with frequent intersections, at unsealed roads, during road construction, when transporting a partial load and in adverse driving conditions such as rain, fog, snow, ice, strong winds, or other inclement weather conditions.

⁽²⁾ It is recommended that the maximum fleet speed allowed does not exceed 80mph/130kph.

DRIVER-RELATED PRACTICES



7. Driver competency

Only operate a vehicle if appropriately licensed, trained, and qualified to do so safely.

- *Driver skill, knowledge, and behaviours significantly impact driving safety.*
- *Drivers are appropriately licensed, trained, and qualified to operate the vehicle safely.*

Drivers to:

- Possess a valid driving/operator's licence (issued by a relevant public authority) for the class of vehicle being operated, and, where applicable, the cargo.
- Complete relevant driving training as per frequency set out in Section 2.7.
- Complete additional training, if prescribed, when driving in high-risk environments (such as desert, snow and ice, steep inclines, mud, and off-road), dealing with specific driving situations (such as water crossings), and when driving specialized vehicles (such as bulk liquid tankers, seismic vibrators, mobile cranes, and so on).
- Undergo on-the-road defensive driver training when meeting the criteria of a non-professional driver driving more than 8,000 kilometres annually, when driving in a high-risk country, or when meeting the definition of a professional driver, as set out in Section 2.7.
- Complete on-the-road defensive driver training in the relevant country when driving in a high-risk country.
- Apply "stop work" and "speak up" in the event of a perceived unsafe condition.

Supervisors, managers, and leaders to:

- Before hiring, ensure driver screening and assessment/verification of competency for professional drivers, for the type of vehicle and cargo.
- Confirm that defensive driving training meets criteria set out in Section 2.7
- Define and implement the additional training programme to control the high-risk driving environment and specific driving situations. Ensure all drivers have received their initial defensive driving training within three months of employment, with retraining provided at defined intervals, as set out in Section 2.7.
- Listen to concerns raised and, where appropriate, act on those concerns and follow up.

More detailed guidance on driver competency can be found on the [IOGP Land Transportation Safety website](#) under 'Guidance notes', as well as in:

- IOGP Report 365-11 - [Land transportation safety recommended practice – Commentary Drive Assessment.](#)

DRIVER-RELATED PRACTICES



8. Driver fitness, working, driving, and rest hours

Only operate a vehicle if fully alert and fit-to-drive.

- *Drivers to be fit-to-drive and fully alert while operating a vehicle, as fatigue increases the risk of losing control of a vehicle.*
- *Apply the IOGP Life-Saving Rule for Driving: “I am fit, rested, and fully alert while driving”.*

Drivers to:

- Only operate a vehicle if rested, alert, and fit to drive.
- Be aware of your individual signs of fatigue and stop driving to take a break ⁽¹⁾ ⁽²⁾.
- Not work more than 14 hours within a rolling 24-hour period when driving a vehicle ⁽³⁾.
- Not drive more than 10 hours within a rolling 24-hour period when driving a vehicle ⁽³⁾.
- Take rest breaks as prescribed. Wherever possible, take a 15-minute break after every 2 hours of driving ⁽³⁾.
- Never drive more than 4.5 consecutive hours without taking a 30-minute break.
- Exercise their right to refuse to drive if they feel that they are not fully rested and alert.
- Undertake a driver fitness assessment ⁽²⁾ when meeting the definition of “Professional driver”, before starting to drive on company business and then at least once every five years.
- Advise their supervisor or person in charge if they have a condition that could prevent them from driving safely.

Supervisors, managers, and leaders to:

- Provide drivers with information on how to effectively identify fatigue and lack of alertness, and the means of dealing with them ⁽³⁾.
- Monitor and confirm that driving and working hours, as set out in Section 2.8, are followed by all drivers ⁽⁴⁾.
- Ensure a process is in place to offer the driver fitness assessment ⁽⁵⁾.
- Provide drivers with information, effective mitigations, and transport alternatives for driving after a long-haul flight.

More detailed guidance on Driver fitness can be found on the [IOGP Land Transportation Safety website](#) under ‘Guidance notes’, as well as in:

- IOGP Report 470 – [Fitness to Work](#).

⁽¹⁾ When taking a break, look for a safe place to park the vehicle and take a quick nap (brief sleep) of no more than 15–20 minutes. A quick nap could only offer short-term relief from tiredness. This is a temporary countermeasure to driver tiredness but is not a replacement for an adequate or good night’s sleep.

⁽²⁾ For more guidance, refer to IOGP Report 626 - [Managing fatigue in the workplace](#).

⁽³⁾ Refer to Section 2.8: limitations relating to driving and working hours.

⁽⁴⁾ In jurisdictions with stricter working hours requirements, these will apply.

⁽⁵⁾ Everyone employed as a professional driver undertakes a driver fitness assessment to ensure that they are able to operate a vehicle safely. Driver fitness assessments also referred to as a fitness-to-drive capability screening: an assessment undertaken by a certified health professional, specifically focusing on the functional ability to safely drive a vehicle. This might include assessing medical conditions (for example sleep disorders, such as sleep apnoea) that might affect medical fitness to drive. Applies only if permitted by law.

DRIVER-RELATED PRACTICES



9. No alcohol or drugs while driving

Do not operate a vehicle while under the influence of alcohol, drugs, or while taking medication that could impair ability to safely operate the vehicle.

- *Drivers to not operate a vehicle while under the influence of alcohol, drugs, (including illicit substances), or while taking medication that could impair their ability to safely operate the vehicle.*
- *Drivers to be fit while driving (part of the IOGP Life-Saving Rule for Driving: “I am fit, rested and fully alert while driving” means ensuring that an individual can complete a task safely and without unacceptable risk to themselves or others. This includes not being under the influence of drugs and alcohol.*

It is expected that organizations have existing safety management, containing a workers Fitness for Duty policy including a drugs and alcohol policy.

Drivers to:

- Not operate a vehicle while under the influence of alcohol, drugs, or while taking medication that could impair their ability to safely operate the vehicle.
- Take notice of side-effects and recommendations when taking prescription or over the counter (OTC) medications that could impair driving ability.
- Inform supervisor (or person in charge or company occupational health person) if they are taking medication (either prescription or OTC) that may have an adverse effect on driving performance. If in doubt, always check with your supervisor or the person in charge, who may seek medical advice.
- Intervene and report if they see a suspected case of alcohol or drug misuse.

Supervisors, managers, and leaders to:

- Only assign work to people who are fit to work.
- Ensure a drugs and alcohol policy is in place, enforced, and consequences management applied, as necessary.
- Verify that all drivers are aware of the policy and rules regarding drugs and alcohol.
- Implement a regular (random) drugs and alcohol testing programme, where legally permissible, and based on a risk assessment of the specific local and/or national situation.

More detailed guidance on the potential for alcohol, drugs, or medication to impair the operator’s ability to safely operate the vehicle can be found on the IOGP website:

- IOGP Report 445 - [*Substance Misuse: a guide for managers & supervisors in the oil & gas industry*](#)

JOURNEY-RELATED PRACTICES



10. Journey management

Prescribed journey management plans are in place.

- *Drivers to follow the prescribed journey management plan, where applicable, to help them travel safely.*
- *Apply the IOGP Life-Saving Rule for Driving: “I follow journey management requirements”.*

Drivers to:

- Verify if a journey management assessment or plan is required before the journey.
- Discuss and confirm understanding of the journey management plan with the authorized person before starting the journey.
- Adhere to risk mitigation controls, as specified in the journey management plan, and follow the specified route.
- Advise the authorised person as soon as possible if there is a change.
- Plan the route in advance. This includes knowing directions, likely traffic density, weather conditions, road conditions, how to access work zones/sites, size/weight limitations, and so on.
- Not transport unauthorized passengers.

Supervisors, managers, and leaders to:

- Routinely question the need for journeys, always searching to eliminate the journey or find another way to achieve the journey objective.
- Implement a journey management plan for professional drivers operating in road safety high-risk countries and subject to risk assessment, for specific, identified driving activities (such as transporting oversized or unusually shaped loads, or when driving in a non-high-risk country if exceeding 4.5 hours of driving).
- Determine applicability of detailed journey management plan (specific route) versus a more generic plan for journeys and routes ⁽¹⁾.
- Define geographical areas to exempt from the journey management plan.
- Check that the journey management plan is in place and approve/reject journeys, where appropriate.
- Check that the driver understands and complies with the journey management plan.
- Define and execute a road hazard assessment for frequent journeys, new roads, or for specific activities/risks (such as rig moving).
- Define journey management restrictions (such as night driving, convoy, or escort requirements) based on the country/local driving risk assessment and security conditions.

More detailed guidance on Journey Management can be found on the [IOGP Land Transportation Safety website](#) under ‘Guidance notes’, as well as in:

- IOGP Report 365-19 - [Land transportation safety recommended practice – journey management](#)
- IOGP Report 365-20 - [Secure ground transportation in high threat environments \(Restricted to IOGP Members\)](#)

⁽¹⁾ As an example, a more generic plan for journeys and routes might be more appropriate for journeys and routes that are short (such as less than 25 kilometres/15 miles round trip outside of the city) or for complete urban areas (for instance, a specific city).

JOURNEY-RELATED PRACTICES



11. Vehicle manoeuvring

People⁽¹⁾ to be 'out of danger' when moving, and particularly reversing, a vehicle.

- *Wherever possible, eliminate the risk by separating vehicles and people⁽¹⁾.*
- *Keep yourself and others out of the line of fire. Position yourself in a safe zone in relation to moving and energized equipment.*
- *This practice is complementary to the IOGP Life-Saving Rule for Line of Fire: "I position myself to avoid vehicles".*

Drivers to:

- Check before commencing, and throughout reversing and other vehicle manoeuvres, that the path is clear of obstructions, vehicles, equipment, and that no one is 'in the line of fire'.
- Confirm safety precautions with the supervisor or person in charge prior to driving a vehicle into a work-related location (such as well-sites, depots, bases, refineries, and so on).
- Follow the instructions of the flagman or person in charge, where practical to be present.
- Make sure that people in any area where the vehicle operates (worksites, but also public areas like refuel stations, public parking lots, rest areas), are aware of its presence before and during the movement and manoeuvre.

All workers (including flagmen/spotters/banksmen) to:

- Confirm safety precautions with the supervisor or person in charge of the work when working near moving vehicles and equipment.
- Follow traffic control measures (such as signage, barriers) or instructions of the flagman or the person in charge of vehicle or equipment movements.
- Confirm with the person in charge that it is safe to enter and/or work in the (restricted) zone.
- Maintain eye contact with drivers of moving vehicles or equipment to ensure that drivers see them.

Supervisors or person in charge of the work to:

- Implement a worksite traffic management plan or controls to separate people⁽¹⁾ from vehicles.
- Ensure access to dangerous areas is restricted, well-marked, and with barriers in place.
- Verify that only authorized personnel are working in a restricted zone.
- Confirm that signalling methods and communications are agreed and understood by everyone.
- Ensure that the site is properly lit and/or that high visibility clothing is worn.
- Adopt technology and engineering controls that help people recognize and avoid line of fire, and facilitate manoeuvring safely (such as sensors, cameras, virtual perimeter lights, alarms, proximity detectors, and so on.)

⁽¹⁾ 'People' in this context, refers to vulnerable road users such as pedestrians, cyclists, and so on.

JOURNEY-RELATED PRACTICES

More detailed guidance on emergency response vehicles and construction equipment can be found on the [IOGP Land Transportation Safety website](#) under 'Guidance notes':

- IOGP Report 365-16 - [Land transportation safety recommended practice – Emergency Response Vehicles](#)
- IOGP Report 365-17 - [Land transportation safety recommended practice – Mobile Construction Equipment](#)

JOURNEY-RELATED PRACTICES



12. Emergency response plan

Emergency response plans (ERP) are in place which specify procedures for handling sudden or unexpected situations.

- *When an emergency, or a deviation from normal operation with potential for undesired consequences, occurs, the first priority is always the preservation of life. The second priority is stabilization of the incident.*
- *It is expected that, as a minimum, an appropriate ERP is in place for high risk land transport activities, such as transporting people and dangerous goods.*

Drivers to:

- Be aware of the cargo and associated hazards.
- Understand what should be done in an emergency (for example, initiate the applicable emergency response plan).
- Have the necessary risk-based equipment (such as spill kit, reflective vest, mobile phone).
- Support emergency services, as necessary.

Supervisors, managers, and leaders to:

- Conduct a risk assessment to identify potential emergency scenarios ^{(1) (2)}.
- At a minimum, verify that an appropriate ERP for transporting people and dangerous goods is in place, validated, and tested regularly.
- Define the ERPs needed as part of the journey management plan.
- Check that the ERP includes scenarios and actions to take in the event of a vehicle rollover, loss of primary containment, vehicle breakdown, lost/disabled in remote area, and security events.
- Establish recovery services and support programmes (such as towing/maintenance/road services vendors and response vehicles).
- Provide drivers (and passengers) with instructions for actions in case of various emergency scenarios or vehicle breakdowns.
- Provide drivers/vehicles with a high visibility reflective safety vest or PPE.

More detailed guidance on Journey Management can be found on the [IOGP Land Transportation Safety website](#) under 'Guidance notes':

- IOGP Report 365-19 - [Land transportation safety recommended practice – journey management](#)
- IOGP Report 365-20 - [Secure ground transportation in high threat environments \(Restricted to IOGP Members\)](#)

⁽¹⁾ The ERP specifies actions to be taken to manage an event, the persons authorized to intervene at the scene of the incident, deployable rescue means (emergency services, technical means including crane, pollution control, material transfer equipment). A good practice when developing an ERP is to conduct a risk assessment to identify potential emergency scenarios relevant to high risk land transportation activities, for example, a vehicle accident resulting in a vehicle rollover and/or loss of primary containment, members of the public collecting product (scramble scenario), vehicle breakdown, disabled/lost in extremely remote areas (lost-individual scenario), and security events. An understanding of what can happen will help determine resource requirements and develop plans and procedures to prepare your business.

⁽²⁾ Consider making use of the bow tie model (refer to Section 2.4) as a risk evaluation method to demonstrate and analyze causal relationships in risk scenarios.

2. Supporting specifications and guidance

2.1 High-risk country (land transport)

This Report is focused on land transportation safety and the term ‘high-risk country’ is based on specific land transportation (road safety) risk in that country. The term ‘high-risk country’ or a similar term, could also be used in relation to security and health.

High-risk countries have an estimated road traffic death rate of 10.0 or more per 100,000 population, based on two consecutive years (excluding 2020)¹ of the “[estimated road traffic death rate](#)” as published by the [World Health Organization \(WHO\)](#).

The following principles apply:

- If a country’s estimated road traffic death rate becomes 10.0 or more for two consecutive years¹, or becomes 12.0 or more for the most recent year, it will be added to this table with a 12-month implementation period.
- If a country is listed in the below table, it is only removed after two consecutive years¹ have shown the country road traffic death rate as below 10.0.
- Where a country is reclassified out of the high-risk country list, company could decide to continue to apply high-risk country controls.
- Where a “Global Status Report on Road Safety” published by the WHO contains more recent road traffic death rate, this data can be used as well.

The following countries are exempted from the above logic:

- **Brunei** - although the road traffic death rate per 100,000 population is below the threshold, due to other considerations (e.g., road user behaviour), Brunei is considered to be in scope for high-risk country.
- **United States of America (USA)** - although the road traffic death rate per 100,000 population is above the threshold, due to other traffic, road network and conditions, regulatory, health care, and emergency response conditions, the USA is not considered a high-risk country. However, any operation (business travellers could be exempted) in the Permian Basin (West Texas and New Mexico) should be viewed as high risk and be treated as “high-risk country”.

¹ WHO estimated road traffic death rate from 2020 is excluded from the logic on two consecutive years. 2020 has shown an artificial reduction in the road traffic death rate due to the Covid-19 situation. At time of publication of this Report (January 2024), Table 1 is based on the WHO estimated road traffic death rate of 2019 and 2021.

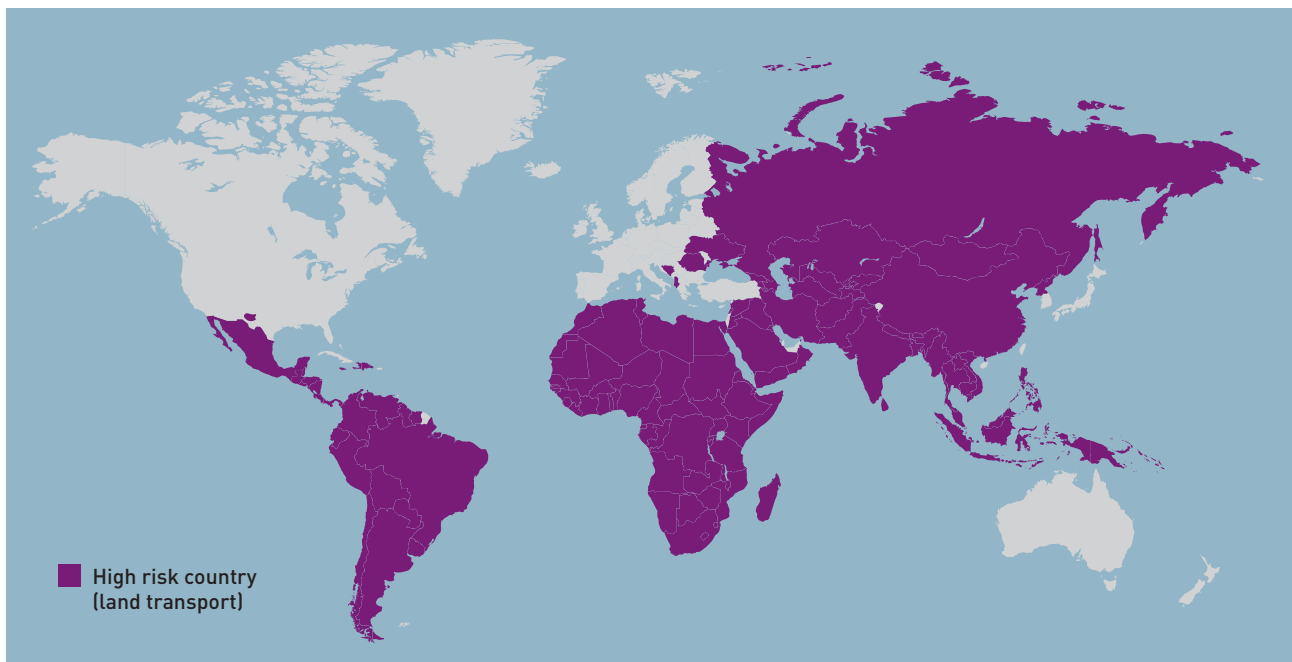


Figure 1: World map with overview of high risk countries meeting the criteria

Table 1: Overview of the high-risk countries meeting the criteria

Afghanistan	Colombia	India	Namibia	Sri Lanka
Albania	Comoros	Indonesia	Nepal	Sudan
Algeria	Congo	Iran (Islamic Republic of)	Nicaragua	Suriname
Angola	Costa Rica	Iraq	Niger	Syrian Arab Republic
Argentina	DPR of Korea	Jamaica	Nigeria	Tajikistan
Armenia	DR of the Congo	Jordan	Oman	Tanzania
Azerbaijan	Djibouti	Kazakhstan	Pakistan	Thailand
Bangladesh	Dominican Republic	Kenya	Panama	Timor-Leste
Belize	Ecuador	Kuwait	Papua New Guinea	Togo
Benin	Egypt	Kyrgyzstan	Paraguay	Tonga
Bhutan	El Salvador	Lao PDR	Peru	Tunisia
Bolivia	Equatorial Guinea	Lebanon	Philippines	Turkmenistan
Bosnia and Herzegovina	Eritrea	Lesotho	Romania	Uganda
Botswana	Eswatini	Liberia	Russian Federation	Ukraine
Brazil	Ethiopia	Libya	Rwanda	United States of America Permian Basin only
Brunei	Fiji	Madagascar	Saint Lucia	Uruguay
Burkina Faso	Gabon	Malawi	Samoa	Uzbekistan
Burundi	Gambia	Malaysia	Sao Tome and Principe	Vanuatu
Cote Ivoire	Georgia	Mali	Saudi Arabia	Venezuela
Cabo Verde	Ghana	Mauritania	Senegal	Vietnam
Cambodia	Guatemala	Mauritius	Seychelles	Yemen
Cameroon	Guinea	Mexico	Sierra Leone	Zambia
Central African Republic	Guinea-Bissau	Mongolia	Solomon Islands	Zimbabwe
Chad	Guyana	Morocco	Somalia	
Chile	Haiti	Mozambique	South Africa	
China	Honduras	Myanmar	South Sudan	

Table 2: Overview of the land transportation safety controls for high-risk countries

Section	Difference between non-high and high driving risk countries
<p>1. Vehicle specifications Only operate vehicles which are fit-for-purpose and maintained in safe working order.</p>	<ul style="list-style-type: none"> • In non-high driving risk countries, inspections are conducted according to manufacturer specifications, or an equivalent regulatory requirement. • In high driving risk countries, technical inspections are carried out at least once a year.
<p>3. In-vehicle monitoring system (IVMS) Company-owned, contracted, or leased vehicles to be fitted with IVMS.</p>	<ul style="list-style-type: none"> • In non-high risk countries, IVMS is only required for heavy vehicles, buses/coaches, and those vehicles required by risk assessment. • In high-risk countries, IVMS is required for all vehicles (company-owned/leased).
<p>7. Driver competency Only operate a vehicle if appropriately licensed, trained, and qualified to do so safely.</p>	<ul style="list-style-type: none"> • In non-high risk driving countries, on-the-road defensive driver training is only required for drivers with higher exposure (more or equal to 8,000 km per year on company business), driving a job-allocated car or being a professional driver. • In high-risk countries, on-the-road defensive driver training is required for all drivers.
<p>10. Journey management Prescribed journey management plans are in place.</p>	<ul style="list-style-type: none"> • In non-high risk driving countries, the journey management plan (JMP) is required based on the results of a risk assessment for specific driving activities/conditions (such as transport of oversized or unusually shaped loads, new roads, security concerns, and so on). • In high-risk countries, the JMP is required for all journeys by professional drivers.
<p>Table 5 – In-scope heavy vehicle dangerous goods specifications</p>	<ul style="list-style-type: none"> • In non-high risk countries, the vehicle camera system and fatigue and distraction detection technology (where legally allowed) is in place before 31 December 2026. • In high-risk countries, the vehicle camera system and fatigue and distraction detection technology (where legally allowed) is in place before 31 December 2025 (that is, one year earlier).
<p>2.7 Criteria for defensive driver training</p>	<ul style="list-style-type: none"> • In non-high risk countries, on-the-road driver training is required for professional drivers and high exposure drivers (over 8,000 kilometres per year). • In high-risk countries, on-the-road driver training is required for all drivers.

2.2 Vehicle specifications

Table 3: In-scope light vehicle specifications

Vehicle type:	Specification, upfitting, or safety feature:
<p>All vehicles (including privately owned ⁽¹⁾ and rental vehicles ⁽²⁾ operating on company business) meet the following specification, or be installed with:</p>	<ul style="list-style-type: none"> • three-point seatbelts for all occupants ⁽³⁾ • seats with appropriately adjusted head restraints for all occupants ⁽⁴⁾ • anti-lock braking system (ABS) ⁽⁵⁾ • airbags (front) for driver and front seat passenger and, wherever possible, extended with side (curtain) airbags • driver- and passenger-side mirrors • tyres manufactured to a recognized international tyre standard, ⁽⁶⁾ matching manufacturer load and speed rating, properly inflated (as per OEM specification), appropriate for the conditions and operating environment, ⁽⁷⁾ and have a minimum tread depth of 1.6 millimetres across 75% of the width of the tyre
<p>All company owned, leased, or contracted vehicles ^{(1) (5) (8)} also to meet the following specification, or be installed with:</p>	<ul style="list-style-type: none"> • IVMS meeting the criteria set out in Section 2.5, if required by element 3 of this document • daytime running lights ⁽⁹⁾ • high-mounted (3rd) brake light • Electronic Stability Control (ESC) • side (curtain) airbags (b-pillar or integrated in front seats) ⁽¹⁰⁾ • climate control ⁽¹¹⁾ • seatbelt reminder, at least for the front seats • tyre repair kit, spare tyre, or run flat tyres ⁽¹²⁾ • one high visibility vest and, where possible, one for each vehicle occupant • a New Car Assessment Program (NCAP) safety rating of 5 stars in the region where the vehicle is purchased, by 31 December 2026 ^{(13) (14) (15) (17)} • Active Fatigue and Distraction Detection (AFDD) technology meeting the criteria as set out in Section 2.6, where legally allowed, when vehicle is dedicated and used for transporting people (such as chauffeur type service) before 31 December 2025 ⁽¹⁹⁾
<p>Company owned, leased, or contracted vehicles ^{(1) (8)} which are newly purchased, leased, or contracted after 1 January 2021 ⁽¹⁶⁾ also to meet the following specification, or be installed with:</p>	<ul style="list-style-type: none"> • a New Car Assessment Program (NCAP) safety rating of 5 stars in the region where the vehicle is purchased ⁽¹³⁾ • Autonomous Emergency Braking (AEB) or Forward Collision Warning (FCW) when AEB is not available, with pedestrian and cyclist detection functionality ^{(17) (18) (19)} • Lane Departure Warning (LDW) ^{(17) (18) (19)} • parking sensors or parking assist systems (such as a backup camera) ⁽¹⁹⁾ • blind spot detection/monitors/indicators ^{(17) (18) (19)}
<p>Company owned, leased, or contracted vehicles, ^{(5) (8)} if required by the contracting Company, also to be installed with:</p>	<ul style="list-style-type: none"> • Active Fatigue and Distraction Detection (AFDD) technology meeting the criteria as set out in Section 2.6 ⁽¹⁹⁾

Vehicle type:**Specification, upfitting, or safety feature:**

Notes for in-scope light vehicle specifications:

1. 'Privately owned vehicle' in this context means that it is owned or paid for by the individual (including car allowance scheme). However, where individuals are required to have a vehicle as a condition of their work (such as sales manager, chauffeur, pipeline inspection engineer, and typically drive more than 5,000 miles/8,000 km per year on company business), these privately owned vehicles are in-scope of, and meet the required safety features as set out for company owned vehicles.
2. 'Rental' in this context means that the vehicle is rented for short periods, typically ranging from a few hours to a few weeks, with a maximum of 12 consecutive weeks.
3. A vehicle with a seat without a three-point seatbelt or head restraint (for example, the middle seat in the back row of a car) can still be used for company travel if this seat is not used.
4. A head restraint which cannot be adjusted (such as an integrated head restraint or fixed head restraint) but designed by the OEM to prevent or mitigate whiplash injuries are also suitable.
5. Vehicles operating in an airport area or at a company owned and operated location, provided that the maximum speed limit does not exceed 20 miles/hr (30 km/hr) are exempt from these specifications.
6. 'Tyres manufactured to a recognized international tyre standard' in this context refers to [UNECE R30 for Pneumatic Tyres \(Passenger Vehicles\)](#) or [Federal Motor Vehicles Safety Specifications \(FMVSS\) Standard No. 109 New Pneumatic Tyres for Passenger Cars](#) or equivalent.
7. 'Appropriate for the conditions and operating environment' in this context means that the tyre is suitable for the road and weather conditions, such as a tyre tread depth of more than 1.6 millimetres depending on road and/or weather conditions, or selection of all-season or winter tyres.
8. Vehicles that are spot chartered, hired for individual movement(s) of people, product, goods, or materials, with a contract duration of less than 3 months are exempt from these specifications.
9. When daytime running lights are not commonly available, an acceptable alternative is using vehicle headlights during daytime to improve visibility to other road users, where permitted by local laws.
10. Vans (cargo or OEM designed van to transport people) are exempt from this requirement. Vehicles that have an NCAP safety rating of at least four stars (or equivalent) are exempt from this requirement until 31 December 2026.
11. Heater and/or air conditioner as appropriate for ambient climatic conditions.
12. Unless the risk assessment determines otherwise and vehicles traveling in isolated areas are equipped with a spare wheel or run flat tyres (repair kit not sufficient).
13. Applicable to countries where a regional NCAP programme is available. In countries/regions where 5-star NCAP vehicles are unavailable, refer to Section 2.7 for guidance.
14. Modifications (such as roll over protection device) for vehicle driving off-road with an NCAP safety rating of 5-stars is likely not required, subject to consultation with the OEM.
15. Vehicles with a kerb weight of more than 3.5 tonnes but with a Gross Vehicle Weight (GVW) less than 7.5 tonnes are exempted from the NCAP rating as long as these vehicles meet the international UNECE standards for vehicle design standards as listed in Section 2.3 of this Report.
16. Newly purchased, leased, or contracted vehicles after 1 January 2021, unless otherwise specified by the contracting company. Note: listed safety features were already included in the previous version (4.0) of [IOGP Report 365 - Land transportation safety recommended practice](#), issued in August 2020.
17. Unless the risk assessment determines otherwise. The risk assessment is approved by the land transportation advisor/authority of the contracting company.
18. Where commonly available (such as an optional stand-alone extra or safety package) from the OEM. 'Commonly available' in this context refers to 3 or more manufacturers in the country are able to supply (even if it means requiring equipment to be imported as additional features) and are capable of providing local, accredited maintenance of the equipment. If the safety feature is not commonly available in the market, this does not result in non-conformance with this Report, however, agreement by the contracting company is required.
19. This feature is also referred to as an Advanced Vehicle Safety Technology/Feature.

Table 4: In-scope heavy vehicle (goods/cargo transport) specifications

Vehicle type:	Specification, upfitting, or safety feature:
All company owned, leased, or contracted vehicles to meet the following specification, or be installed with:	<ul style="list-style-type: none"> • three-point seatbelts for all occupants ⁽¹⁾ • adjustable seat with (integrated) head restraint ⁽²⁾ • anti-lock braking system (ABS) on truck and trailer ⁽³⁾ • braking system as per UNECE Regulation 13 or equivalent • tyres manufactured to the recognized international tyre standard, ⁽⁴⁾ matching manufacturer load and speed rating, properly inflated (as per OEM specification), appropriate for the conditions and operating environment, ⁽⁵⁾ and having a minimum tread depth of 1.6 millimetres across 75% of the width of the tyre • tyre brand, type, and dimensions on the same axle are identical • tyres on the steer axles are not retread or regrooved tyres ⁽⁶⁾ • cabin superstructure as per UNECE Regulation 29 or equivalent ^{(3) (6)} • wide-angled, fully adjustable rear vision mirrors or equivalent technology (such as cameras) on both driver and passenger sides of the vehicle and convex mirrors fitted to ensure vision of blind spots, including passenger side and in front of cab, as per UNECE Regulation 46 or equivalent • front and rear underrun protection, as per UNECE Regulation 93 and UNECE Regulation 58 or equivalent (for third party vehicles) ^{(3) (6)} • side underrun protection, as per UNECE Regulation 73 or equivalent ^{(3) (6) (12)} • conspicuous rear and side markings, as per UNECE Regulation 104 or equivalent ^{(3) (6)} • all prime mover, tractor units, and trailers to be fitted with road spray suppressors on all mudguards, as per UNECE Regulation 91/226 or equivalent ⁽³⁾ • audible reversing alarm • two-wheel chocks (whose dimensions are appropriate for the vehicle's maximum admissible gross weight and the diameter of the wheels) ⁽¹³⁾ • laminated (non-splintering) safety glass for windscreen ⁽⁶⁾ • wheel nut position indicators ^{(3) (6) (14)} • daytime running lights ^{(3) (6) (7)} • IVMS meeting criteria set out in Section 2.6, if required by element 3 of this document ^{(3) (6)} • Active Fatigue and Distraction Detection (AFDD) technology meeting criteria set out in Section 2.6, where legally allowed, before 31 December 2025, ⁽¹⁴⁾ when vehicle is operated by a rotational professional driver exceeding 60 working hours within a 7-day period ^{(3) (6) (17)}
Company owned, leased, or contracted vehicles ⁽⁶⁾ which are newly purchased, leased, or contracted after 1 January 2021 ⁽⁹⁾ also to be installed with:	<ul style="list-style-type: none"> • adjustable steering column • Electronic Stability Control (ESC), including electronic trailer stability control ⁽³⁾ • climate control ⁽⁶⁾ • seatbelt reminder for driver's seat ^{(10) (11)} • Autonomous Emergency Braking (AEB) or Forward Collision Warning (FCW) when AEB is not available ^{(3) (10) (11) (17)} • Lane Departure Warning (LDW) ^{(3) (10) (11) (17)} • parking sensors or parking assist systems (for example, a backup camera) ⁽¹⁷⁾ • blind spot monitors and indicators ^{(10) (11) (17)}
Company owned, leased, or contracted vehicles ^{(3) (6)} , if required by the contracting company, also to be installed with:	<ul style="list-style-type: none"> • Active Fatigue and Distraction Detection (AFDD) technology meeting criteria set out in Section 2.6 ⁽¹⁷⁾ • steering wheel airbag (where available from OEM) ⁽¹⁷⁾ • vehicle camera system ⁽¹⁷⁾ • tyre pressure monitoring system ⁽¹⁷⁾ • side collision avoidance support or proximity detection technology ⁽¹⁷⁾

Table 5: In-scope heavy vehicle dangerous goods specifications

Vehicle type:	Specification, upfitting, or safety feature:
<p>All vehicles ⁽⁶⁾ transporting dangerous bulk liquids to meet the following specification, or be installed with:</p> <p>['dangerous bulk liquids' in this context means products such as: liquefied petroleum gas (LPG), liquified natural gas (LNG), compressed natural gas (CNG), hydrogen, acids, diesel, gasoline, jet A1, gasoil, crude oil and so on]</p>	<ul style="list-style-type: none"> • all vehicle specifications and safety features as listed in Table 4 • electronic Braking System (EBS) and Electronic Stability Control (ESC) on the prime mover and straight truck (rigid) • electronic Braking System (EBS) and Rollover Control System (RCS) installed on the trailer and semi-trailer • front axle tyres to have a minimum tread depth of 3.0 millimetres over the entire tread pattern and all other axle tyres (such as rear and trailer axle tyres) to have a minimum tread depth of 1.6 millimetres across 75% of the width of the tyre • internal foot valves (with shear grooves) and secondary shut-off valves on each outlet when carrying flammable products ⁽¹⁵⁾ • rollover protection device on the tanker in case top hatches are present, in the form of coaming, additional rails, or extrusion fitted to the tank shell (or as otherwise prescribed according to in-country requirements) with a minimum of 25mm above the highest protruding equipment protecting the product ⁽¹⁵⁾ • static electricity discharge point, and the bonding system of the discharge point, to be compatible with facilities at the loading/unloading point ⁽¹⁵⁾ • a spill kit able to deal with small spills of up to 10 litres • batteries that are securely mounted inside a battery box • vapour-proof electrical systems which include all light housings • hot parts (such as engine, exhaust system, brakes, endurance braking, and heaters) to be protected from direct contact with fuel from overfilled tanks and leaks • pressure/vacuum/emergency vents for each separate compartment (details as specified by country/regional legislation, based on compartment size); in case of flammable products transportation, vents to be equipped with flame/spark arrestors • minimum three fire extinguishers: at least one of two kilograms (four pounds) in the cab, and at least two of six kilograms (thirteen pounds) on the trailer, or where otherwise prescribed by local regulation ⁽¹⁵⁾ • approved master switch within 60 centimetres (two feet) of the batteries ⁽¹⁵⁾ • exhaust for diesel engine that includes a muffler, silencer, or spark arrestor ⁽¹⁵⁾ • vehicle camera system and Active Fatigue and Distraction Detection (AFDD) technology meeting criteria set out in Section 2.6, where legally allowed, before 31 December 2025, when operating in a high risk country and before 31 December 2026 for all other countries ⁽¹⁶⁾
<p>Company owned, leased, or contracted vehicles (3) (6), if required by the contracting company, also to be installed with:</p>	<ul style="list-style-type: none"> • high-visibility/pulse tail, brake, and indicator lights, mounted as high as practical on the rear bulkhead/end dish (duplicated and installed as wide as possible and above centre line of tank) ⁽¹⁷⁾ • steering wheel airbag (where available from OEM) ⁽¹⁷⁾ • tyre pressure monitoring system ⁽¹⁷⁾ • speed limiter set at the maximum speed allowed in-country for dangerous goods ⁽¹⁷⁾ • system to prevent the vehicle from driving away whilst it is connected to either a loading rack or a discharge point (interlocks) such as a brake interlock connected to foot valve for tankers/trailers with bottom loading ⁽¹⁷⁾ • where drum brakes are present, automatic slack adjuster in place ⁽¹⁷⁾ • side collision avoidance support or proximity detection technology ⁽¹⁷⁾

Vehicle type:	Specification, upfitting, or safety feature:
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Notes for in-scope the heavy vehicle specifications:

1. A vehicle with a seat without a three-point seatbelt or head restraint (for example, the middle seat in the back row of a car) can still be used for company travel if this seat is not used.
2. A head restraint which cannot be adjusted (such as an integrated head restraint or fixed head restraint) but designed by the OEM to prevent or mitigate whiplash injuries are suitable as well.
3. Vehicles operating in an airport service area or at a company owned and operated location, provided that the maximum speed limit does not exceed 20 miles/hr (30 km/hr) are exempt from these specifications.
4. 'Tyres manufactured to a recognized international tyre standard' in this context refers to [UNECE R30 for Pneumatic Tyres \(Passenger Vehicles\)](#) or [Federal Motor Vehicle Safety Specifications \(FMVSS\) Standard No. 109 New Pneumatic Tyres for Passenger Cars](#) or equivalent.
5. 'Appropriate for the conditions and operating environment' in this context might require a tyre tread depth of more than 1.6 millimetres, depending on road and/or weather conditions.
6. Vehicles that are spot chartered, such as hired for individual movement(s) of people, product, goods, or materials, with a contract duration of less than 3 months are exempt from these specifications. Also, vehicles operating under Mode 3 (that is, non-dedicated) may be exempt from these specifications, subject to a risk assessment, when approved by the contracting Company.
7. When daytime running lights are not commonly available, an acceptable alternative is using vehicle headlights during daytime to improve visibility for other road users, where permitted by local laws and regulations.
8. Heater and/or air conditioner, as appropriate, for ambient climatic conditions.
9. Newly purchased, leased, or contracted vehicles after 1 January 2021, unless otherwise specified by the contracting Company. Note: these specified safety features were already included in the previous version (4.0) of [IOGP Report 365 - Land transportation safety recommended practice](#), issued in August 2020.
10. Unless the risk assessment determines otherwise. The risk assessment to be approved by the land transportation advisor/authority of the contracting company.
11. Where the safety feature is commonly available in the market (such as an optional stand-alone extra or safety package) from the OEM. 'Commonly available' in this context refers to 3 or more manufacturers in the country that can supply (even if it means requiring equipment to be imported as additional features) and OEMs are able to provide local, accredited maintenance of the equipment. If the safety feature is not commonly available, this does not result in non-conformance with this Report, however, agreement by the contracting company is required.
12. Companies operating in North America are exempt from the side underrun protection until 31 December 2027. Protection bars to be installed on side sections that are not protected by a piece of equipment (fuel tank, spare wheel, and so on) of the tractor/straight truck and of the trailer.
13. If a failsafe brake interlock system is installed, then wheel chocks may be excluded, unless legislated.
14. Wheel nut position indicators that identify when wheel nuts have loosened. This could be a device, process or tool (for example using paint markings), with aligned marks on the rim and bolts.
15. Applicable to vehicles transporting dangerous bulk liquids with a flash point of less than 61°C (142°F).
16. Contracting Company may decide to implement earlier.
17. This feature is also referred to as an Advanced Vehicle Safety Technology/Feature.

Table 6: In-scope bus/coach (people transport) vehicle specifications

Vehicle type:	Specification, upfitting, or safety feature:
All vehicles to be designed and built for the intended use and to meet the following specification, or be installed with:	<ul style="list-style-type: none"> • three-point seatbelts for all occupants ⁽¹¹⁾⁽¹⁰⁾⁽¹¹⁾ • seats with (integrated or adjusted) head restraint for all occupants ⁽²⁾⁽¹⁰⁾ • anti-lock braking system (ABS) ⁽³⁾⁽⁴⁾ • braking system as per UNECE Regulation 13 or equivalent. • tyres manufactured to recognized international tyre standard ⁽⁵⁾, matching manufacturer loads and speed rating, properly inflated (as per OEM specification), appropriate for the conditions and operating environment ⁽⁶⁾ and having a minimum tread depth of 1.6 millimetres across 75% of the width of the tyre • brand, type, and dimensions of tyres on same axle are identical ⁽⁴⁾ • not use retread or regrooved tyres on steer axles ⁽⁴⁾ • Electronic Stability Control (ESC) • daytime running lights ⁽⁴⁾⁽⁷⁾ • Seatbelt anchorages as per UNECE Regulation 14 or equivalent • safety belts and restraints as per UNECE Regulation 16 or equivalent • seat anchorage as per UNECE Regulation 17 or equivalent • audible reversing alarm • climate control • one high visibility vest and, where possible, one for each occupant • IVMS, a vehicle camera system, and Active Fatigue and Distraction Detection (AFDD) technology, as set out in Section 2.6, where legally allowed, before 31 December 2025 ⁽⁴⁾⁽⁹⁾
Vehicle designed to transport 15 or fewer passengers (such as passenger van) also to be installed with:	<ul style="list-style-type: none"> • airbags (front) for driver and front seat passenger and, wherever possible, extended with side (curtain) airbags for passenger seats • Driver and passenger-side mirrors • high-mounted (3rd) brake light • NCAP safety rating of 5 stars or at least Gold award (applicable for Euro NCAP), in the region where the vehicle is purchased, by 31 December 2026
Vehicle designed to transport 16 or more passengers (such as mini-bus, bus, or coach, typically M3 type vehicles) also to be installed with:	<ul style="list-style-type: none"> • wide-angled, fully adjustable rear vision mirrors or equivalent technology (such as cameras) on both driver and passenger sides of the vehicle and convex mirrors fitted to ensure vision of blind spots, including passenger side and in front of cab, as per UNECE Regulation 46 or equivalent • front and rear underrun protection (for third party vehicles) ⁽⁴⁾ • spray-suppression flaps ("mud flaps") ⁽⁴⁾ • wheel nut position indicators ⁽³⁾⁽⁴⁾⁽⁸⁾ • rollover protection as per UNECE Regulation 66 or equivalent. • Rollover Control System (RCS) ⁽⁴⁾. • passenger doors are located on the side of the vehicle and opposite the driver's seat; there are at least two passenger doors (two service doors or one service door and one emergency door/exit) • emergency exit door signs/indication ⁽⁴⁾⁽¹²⁾ • emergency exit side windows, with hammers for smashing windows in case of an emergency fitted at or near the windows ⁽⁴⁾⁽¹¹⁾ • passenger emergency exits (door or window) are clearly indicated • roof fitted with escape hatches (in addition to the emergency exits) ⁽⁴⁾⁽¹²⁾ • segregated luggage space for all occupants ⁽⁴⁾ • jump (foldable) seats are not allowed
Vehicles which are newly purchased, leased, or contracted after 1 January 2021 ⁽¹³⁾ also to be installed with:	<ul style="list-style-type: none"> • Autonomous Emergency Braking (AEB) or Forward Collision Warning (FCW) when AEB is unavailable ⁽³⁾⁽⁴⁾⁽¹⁴⁾ • Lane Departure Warning (LDW) ⁽³⁾⁽⁴⁾⁽¹⁴⁾ • parking sensors or parking assist systems (for example, backup camera) ⁽¹⁴⁾ • blind spot detection/indicators ⁽³⁾⁽⁴⁾⁽¹⁴⁾ • side collision avoidance support or proximity detection technology ⁽¹⁴⁾ • adjustable steering column for M3 type bus/coach ⁽¹⁴⁾

Vehicle type:

Specification, upfitting, or safety feature:

Notes for bus/coach vehicle specifications

1. A vehicle with a seat without a three-point seatbelt or head restraint (for example, the middle seat in the back row of a car) can still be used for company travel if this seat is not used.
 2. A head restraint which cannot be adjusted (such as an integrated head restraint or fixed head restraint) but designed by the OEM to prevent or mitigate whiplash injuries, is suitable as well.
 3. Vehicles operating in an airport service area or at a Company owned and operated location, provided that the maximum speed limit does not exceed 20 miles/hr (30 km/hr) and supported by an approved risk assessment, are exempt from these specifications.
 4. Vehicles that are spot chartered, such as hired for individual movement(s) of people, product, goods, or materials with a contract duration of less than 3 months are exempt from these specifications.
 5. 'Tyres manufactured to a recognized international tyre standard' in this context refers to [UNECE R30 for Pneumatic Tyres \(Passenger Vehicles\)](#) or [Federal Motor Vehicles Safety Specifications \(FMVSS\) Standard No. 109 New Pneumatic Tyres for Passenger Cars](#) or equivalent.
 6. 'Appropriate for the conditions and operating environment' in this context might require a tyre tread depth of more than 1.6 millimetres, depending on road and/or weather conditions.
 7. When daytime running lights are not commonly available in the market, an acceptable alternative is using vehicle headlights during daytime to improve visibility for other road users, where permitted by local laws and regulations.
 8. Wheel nut position indicators that identify when wheel nuts have loosened. This could be a device, process or tool (for example using paint markings), with aligned marks on the rim and bolts.
 9. Contracting company may decide to implement earlier.
 10. For short term contracted busses/coaches in-scope for a turnaround, operating at a Company owned and operated location, lap seatbelts and seats without head restraints are acceptable.
 11. There are at least three passenger emergency exits for a 15-seater vehicle and there is at least one additional exit for every 15 additional seats. They are on both sides of the vehicle and distributed over its length. The size of the emergency windows is at least 500 x 700 mm.
 12. A vehicle that does not carry more than 20 passengers, does not require an escape hatch. A vehicle that does not carry more than 30 passengers has one escape hatch; all other vehicles have two escape hatches. These escape hatches are installed in parts of the roof that do not represent a hazard when they are used. The escape hatches are at least 600 x 700 mm.
 13. Newly purchased, leased, or contracted vehicles after 1 January 2021, unless otherwise specified by the contracting company. Note: these specified safety features were already included in the previous version (4.0) of [IOGP Report 365 - Land transportation safety recommended practice](#), issued in August 2020.
 14. This feature is also referred to as an Advanced Vehicle Safety Technology/Feature.
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2.3 New Car Assessment Programme (NCAP)

There are several regional NCAPs across the world: Australia, China, Europe, Japan, Korea, Latin America, Southeast Asia, and the United States. Regional NCAPs promote and conduct independent research and testing that assess safety and environmental characteristics and comparative safety performance of motor vehicles available for purchase in that region. The same vehicle model in different markets can have different build quality and safety features.

The number of stars (zero through five) reflects how well the car performs in NCAP tests. A five-star safety rating would indicate good performance in crash protection. Additional crash avoidance technology could be present.

How to use the NCAP safety rating:

- Use the most recent NCAP safety rating from the relevant regional NCAP programme for the selected vehicle model.
- The NCAP safety rating for the selected vehicle model is not older than 5 years from date of purchase or lease of the vehicle.
- In the US, two NCAP rating systems are present: National Highway Traffic Safety Administration (NHTSA) and Insurance Institute for Highway Safety (IIHS). Although NHTSA's ratings and IIHS ratings are complementary, IIHS does not use the star rating. An IIHS Top Safety Pick (TSP) or Top Safety Pick plus (TSP+) rated vehicle performs well in small overlap crashes. It requires crash prevention measures such as Automatic Emergency Braking (AEB). As such, an IIHS Top Safety Pick (TSP) or Top Safety Pick plus (TSP+) rated vehicle, in this context, is equivalent to a five-star rated vehicle.
- In countries where there is no regional NCAP programme available:
 - Verify with the OEM that the vehicle model sold in-country is of the same design and specifications used by one of the regional NCAP programmes.
 - Confirm that the vehicle is competitively available through importation from a region or country where the vehicle has received a five-star NCAP rating.
 - If importation is not feasible, consult with the land transportation advisor/authority of the contracting company. It is best practice for the land transportation advisor/authority to refer to international UNECE standards for vehicle design standards such as:
 - [UNECE Regulation 12](#) for steering mechanism, frontal impact
 - [UNECE Regulation 94](#) for frontal collision protection
 - [UNECE Regulation 95](#) for side collision protection
 - [UNECE Regulation 135](#) for pole side impact protection
 - [UNECE Regulation 14](#) for seatbelt anchorages
 - [UNECE Regulation 16](#) for seatbelt restraint systems
 - [UNECE Regulation 17](#) for strength of seats, anchorages, and head restraint
 - [UNECE Regulation 140/GTR 8](#) for Electronic Stability Control (ESC); and
 - [UNECE Regulation 127/GTR 9](#) for pedestrian protection
- In case no NCAP rating is (yet) available for the selected vehicle model (such as for a new vehicle model or type such as electric vehicle (EV) which is just introduced to the market), consult with the land transportation advisor/authority within company.

Table 7: NCAP programme overview - countries

Name of programme	Countries the programme covers	Website
ANCAP Australasian New Car Assessment Program	Australia and New Zealand	http://www.ancap.com.au
ASEAN NCAP New Car Assessment Programme for Southeast Asia	Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam	http://www.aseancap.org
C-NCAP China New Car Assessment Programme	China	中汽测评官网首页 (c-ncap.org.cn)
Euro NCAP European New Car Assessment Programme	United Kingdom and all 27 countries in the European Union: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden.	http://www.euroncap.com
IIHS Insurance Institute for Highway Safety	United States of America	http://www.iihs.org
JNCAP Japan New Car Assessment Program	Japan	http://www.nasva.go.jp/mamoru/en/index.html
KNCAP Korean New Car Assessment Program	Republic of Korea	http://www.kncap.org/indexNew.jsp
Latin NCAP New Car Assessment Program for Latin America and the Caribbean	Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, French Guiana, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, Martinique, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Saint-Barthélemy, Saint-Martin, Suriname, Uruguay, Venezuela.	http://www.latinncap.com/en/
NHTSA's NCAP National Highway Traffic Safety Administration's New Car Assessment Program	United States of America	https://www.nhtsa.gov/ratings Note: see also IIHS https://www.iihs.org/ratings
Safer Cars for India Programme	India Refer to AIS India from 2024 onwards: https://certification-india.com/	http://www.globalncap.org/results/
Safer Cars for Africa Programme	Africa	https://www.globalncap.org/news/tag/%23SaferCarsForAfrica

2.4 Use of alternative fuel and low emission type vehicles

'Low emission vehicles' in this context refers to vehicles that emit significantly less greenhouse gas (GHG) than common fossil fuel vehicles. A range of vehicle types and technologies are encompassed, with various levels of emissions, including biofuels, Liquefied Natural Gas (LNG), Compressed Natural Gas (CNG), Hydrogen (H₂), and Hybrid and Electrical Vehicles (EV). Low emission vehicle specifications and targets vary depending on the country and type of vehicle (light or heavy).

When using an alternative fuel (low emission) vehicle, safety should not be compromised.

Only operate low emission vehicles which are fit-for-purpose and maintained in safe working order, meeting the following criteria:

- Ensure vehicles to meet expectations on vehicle specifications set out in 1.3.1 and in Section 2.1.
- Confirm that drivers are aware of specific risks and hazards when operating the vehicle. For example, the absence of noise from the engine, risk of battery runaway, including exposure to smoke deriving from battery fires for EVs.
- Verify that an emergency response plan is in place to cover scenarios involving LNG, CNG, H₂, and EV powered vehicles, including battery fire for EV.
- Ensure vehicles used to transport dangerous goods meet local dangerous goods legislation. In its absence, a Management of Change (MOC) to be followed. In particular, LNG, CNG, H₂, and EV powered vehicles are becoming important for the heavy goods and long-haul transport market. The European agreement concerning the International Carriage of Dangerous Goods by Road (referred to as ADR, derived from the French name for the treaty) has for instance been revised to allow natural gas vehicles to operate under most ADR classes, and EV certified as All-Terrain (AT) according to ADR as of 1 January 2023, meaning that EV powered AT vehicles cannot be refused for offloading at a site, unless there is a compelling reason for refusing.

For company operated locations with controlled access (such as a construction site, manufacturing site, warehouse, refinery, and so on), the entity should have a vehicle access procedure in place for LNG, CNG, H₂, and EV vehicles, addressing the following:

- Ensure vehicles (and drivers) are announced to the site before entering.
- Confirm that vehicles are clearly labelled for identification by site staff and emergency responders. A good practice is to label LNG, CNG, H₂, and EV vehicles entering the site and to stock spare labels for installation at the site gate if missing on the vehicle. It is recommended that the labelling of the truck follows ISO 17840-4 Road vehicles — Information for first and second responders — Part 4: Propulsion energy identification.
- Ensure classified areas are clearly identified to prevent unauthorized vehicle entry.
- Verify that an emergency response plan is in place to cover scenarios involving LNG, CNG, H₂, and EV powered vehicles, including battery thermal runaway and fire for EV and scenarios for loading and unloading these vehicles.
- Ensure a risk assessment is conducted considering the specific risks and hazards of the vehicle type involved, including but not limited to, items listed in Table 8.

Table 8: Alternative fuel vehicles - risk assessment items

Fuel type	Items for the risk assessment:
Electric vehicles (EVs) (including fuel cell)	<ul style="list-style-type: none"> • verify that site entry is prohibited if an alarm of the battery or the electric system on the vehicle is activated. • confirm that batteries are not charged in an area where a flammable atmosphere can occur (EX area) or in a closed area, unless properly ventilated. • ensure that the vehicle is designed so that batteries are protected against an external impact that can cause a thermal runaway. • verify, assess, and minimize the likelihood of other users (such as vehicle, forklift) crashing against the battery. • confirm that the vehicle is compliant with one of the following design standards: UNECE Regulation 100, UN GTR 20 Global Technical Regulation on Electric Vehicle Safety (EVS), Electric Vehicle Safety Requirements and Electrical Vehicle Traction Battery Safety Requirements (GB 18384-2020 and GB 38031-2020), NFPA855, ECE/TRANS/180/Add.20 • verify that inspection, maintenance, and repair of EV high voltage systems on site takes place under Permit to Work and only by EV specialist contractors using OEM instructions.
H2 vehicles (fuel cells and Internal Combustion Engine (ICE))	<ul style="list-style-type: none"> • verify that site entry is prohibited if the H2 fuel tank exceeds its inspection or expiration date and if the H2 fuel tank actual pressure is above 90% of the setting of the safety relief valve. • ensure that vehicles are designed so that shut-off valves are protected against an external impact that can break them. • confirm that the vehicle is compliant with one of the following design standards: UNECE Regulation 134, UN GTR13, ISO 23273 Fuel cell road vehicles – Safety specifications – Protection against hydrogen hazards for vehicles fuelled with compressed hydrogen, SAE J2578, SAE J2579, ISO/TR 15916, Reg[EC] No 79/2009, Reg[EU] 2021/535 • verify that access to an area where a flammable atmosphere can occur (EX area) takes place under Permit to Work or after an MOC process.
LNG fuelled vehicles	<ul style="list-style-type: none"> • verify that site entry is prohibited if the LNG fuel tank actual pressure is above 13 bar (190 psi). • confirm that vehicle is compliant with one of the following design standards: UNECE Regulation 110, NFPA 52, CSA B109-17, AS/NZ 2739/2009. • ensure that the engine has encapsulated spark ignition (Coil on Plug (COP)) • verify that LNG vehicles are prohibited from being parked on loading/unloading sites for more than 72 hours.
CNG fuelled vehicles	<ul style="list-style-type: none"> • verify that site entry prohibited if the CNG fuel tank exceeds its inspection or expiration date and if the CNG fuel tank actual pressure is above 90% of the setting of the safety relief valve. • ensure that vehicle is compliant with one of the following design standards: UNECE Regulation 110, NFPA 52, CSA B109-17, AS/NZ 2739/2009, and ISO 11439 for their CNG fuel tank(s). • confirm that the engine has encapsulated spark ignition (Coil on Plug (COP)).

2.5 Criteria for in-vehicle monitoring system (IVMS)

In-Vehicle Monitoring Systems (IVMS) are integral to managing land transport operations. IVMS to include the minimum parameters listed in Table 9.

Table 9: IVMS minimum specifications

Requirement	Functional description
Speed ⁽¹⁾	<ul style="list-style-type: none"> recording speed data per second driven recording excess speed when higher than posted limit, set (fleet) limit, or limit as per digital mapping system (geo mapping) containing local speed limits excess speed allowing up to 16 km/h or 10 miles/h or a small percentage (such as up to 10%) above the speed limit for up to 20 seconds before an event is recorded ⁽¹⁾.
GPS (Global Positioning System)	<ul style="list-style-type: none"> recording of GPS position for tracked events such as speeding, and harsh braking, acceleration, and cornering. Recording of GPS coordinates
Harsh acceleration	<ul style="list-style-type: none"> measuring acceleration data per second driven recording events when accelerations exceed user defined thresholds defined threshold to be within the following range: 6 to 16 km/h or 4 to 10 miles/h per second driven
Harsh braking	<ul style="list-style-type: none"> measuring deceleration data per second driven recording events when decelerations exceed user defined thresholds defined threshold to be within the following range: 10 to 16 km/h or 6 to 10 miles/h per second driven
Harsh cornering	<ul style="list-style-type: none"> measuring rate of turn data per side-to-side values (G-force) recording events when rate of turn exceeds user defined thresholds defined threshold to be within the following range: 0.2 - 0.4 G
Driving and rest hours	<ul style="list-style-type: none"> recording driving timings in minutes per 24 hours recording events when driving timings exceed user defined maximum driving hours and recording events when driving times exceed user defined minimum resting hours
Driver identification	<ul style="list-style-type: none"> driver identification, via a tag, smart card, login credential, or other equivalent tamper-proof device.
Seatbelt detection ⁽²⁾	<ul style="list-style-type: none"> recording seatbelt use (such as connection to seatbelt sensors) and report exemptions based on user defined thresholds when the seatbelt is not engaged whilst the vehicle is moving.

Notes for Table 9 above:

- All companies to ensure legal compliance in the countries they operate in, as part of the decision-making process around speed settings. Consult with the appropriate legal and land transportation safety advisor/authority to agree on any over-speeding settings, including consideration of the local risk context of your operations. For more specific details on determining speed settings, see section 1.4.2, "Threshold Settings" in IOGP Report 365-12 – [Implementing an in-vehicle monitoring program – A guide for the oil and gas extraction industry](#).
- Where available, as this functionality may not exist with the IVMS mobile app functionality. More detailed guidance on the selection and implementation of IVMS can be found on the [IOGP Land Transportation Safety website](#) under 'Guidance notes' as well as in IOGP Report 365-12 – [Implementing an in-vehicle monitoring program – A guide for the oil and gas extraction industry](#)

2.6 Vehicle camera systems and Active Fatigue and Distraction Detection (AFDD) devices

2.6.1 Vehicle camera system

The objective of a vehicle camera system is to improve land transport safety by strengthening risk management, as well as increasing driver performance. Vehicle camera systems, both inward and outward facing, are used in a variety of settings, ranging from the continuous recording of the driving environment (such as dashcams) to event driven video recording and Artificial Intelligence (AI) camera systems that process, analyze, and understand image based recordings, such as those used in advanced driver assistance systems (ADAS) and active fatigue and distraction detection (AFDD) technologies.

Monitoring and influencing driver behaviour reduces risk. IVMS, vehicle camera systems, and AFDD technologies provide important information to support safe driving. However, they are only one component of a comprehensive land transportation safety programme. Effective use of these systems to improve driving includes regular feedback to the driver, monitoring and analyzing trends, and using these insights with organizational processes and strategies (refer to Element 3: IVMS in Section 1.3).

Vehicle camera systems also provide great support for motor vehicle crash investigations, with recordings from the forward and driver facing cameras offering advanced insights into timelines, activities, and potential causes.

A forward-facing camera combined, wherever legally allowed, with a driver facing camera, is most effective. The driver facing camera system records inside the cabin. It is good practice to support driver training by capturing real emotions and reactions from drivers faced with challenges during normal driving or during a crash. These video recording are especially effective when connected to driver-triggered devices (such as a panic button), to capture difficulties faced by the driver.

The company using vehicle camera systems should have a written policy, including Data Privacy, on the use of cameras, covering all cameras fitted to their vehicles, describing how footage will be recorded, stored, and used.

Where legally allowed and with driver consent, it is good practice to use the camera recordings (including recordings from incident investigation) for lessons, driver toolbox meetings, and to enhance driver training.

It is good practice that the forward-facing camera is linked to other vehicle technologies like IVMS, AFDD, and ADAS to create one overall integrated performance management platform.

Vehicle camera systems to include the minimum parameters listed in Table 10 below.

Table 10: Vehicle camera system minimum specifications

Requirement	Functional description
Event driven technology	<ul style="list-style-type: none"> • event driven video recording technology combined, wherever legally allowed, with constant recording
Duration of recording	<ul style="list-style-type: none"> • minimum of 5 seconds before and 5 seconds after the event • record and store a minimum of 24 hours of footage
Camera view	<ul style="list-style-type: none"> • a forward-facing camera combined, wherever legally allowed, with a driver facing camera able to record external driving conditions with a preferred viewing angle of 170 degrees
Video resolution	<ul style="list-style-type: none"> • record video at a resolution of no less than 720p, higher resolutions are preferred if local mobile streaming network has the capacity • record images at a frame rate of at least 15 frames per second (fps)
Recording storage	<ul style="list-style-type: none"> • inform user if card is not inserted or card reading failure • record and overwrite storage once recording is full; first data in to be the first overwritten
Position of camera/cable	<ul style="list-style-type: none"> • camera position and cables not to obstruct the driver's line of sight through the windscreen; wireless or WIFI enabled camera system is preferred • forward-facing camera to be positioned with full view in front of the vehicle through the windscreen wherever practical • driver facing camera to be positioned allowing view of the driver, preferably showing full view of the cabin including passenger • camera(s) are securely mounted and remain fixed in a crash
Night vision	<ul style="list-style-type: none"> • record clearly in low light; a 0.1 Lux or lower and ability to record in colour at night is preferred
Time stamp	<ul style="list-style-type: none"> • display time and date stamp of video recording
GPS functionality	<ul style="list-style-type: none"> • track vehicle GPS location for video recordings, either through the vehicle camera system or through interface with other systems (such as IVMS)
Manual activation	<ul style="list-style-type: none"> • able to manually activate vehicle camera system for an event, to be recorded by the driver either through video event recording or still image (photo) (also called panic button functionality)

² U.S. Department of Transportation, National Highway Traffic Safety Administration, [2016 Fatal Motor Vehicle Crashes: Overview](#). 2017.

Table 11: Vehicle camera system optional features

Optional	Functional description
Link to other vehicle (safety) systems	<ul style="list-style-type: none"> link to other vehicle technologies like IVMS, AFDD, and ADAS to create one overall integrated performance management platform link to other additional, external cameras to provide greater visibility for the driver around the vehicle, and support incident investigation (such as blind spot side cameras and reversing cameras, where fitted)
Position of camera/cable	<ul style="list-style-type: none"> for two driver operations, it is optional that the camera is located on the A pillar so that footage covers both drivers in vehicle
Recording storage	<ul style="list-style-type: none"> video recordings stored in tamper proof location recorded events to be accessed remotely and transferred through wireless data service (such as 3G-5G or the cloud) constant recording rolling footage to be stored on the SD card or hard drive where access remotely is preferred
Camera housing	<ul style="list-style-type: none"> external (outside vehicle) camera to have ingress protection rating of IP66 (Note: if there is a need to have rated waterproof up to 1m including to withstand water jet, protection rating of IP67 is needed)
Live Streaming	<ul style="list-style-type: none"> able to live stream video recording via portable device (such as a smartphone)
Microphone	<ul style="list-style-type: none"> record audio from cabin for event driven video recording (so not applicable for constant recording)
Geofencing	<ul style="list-style-type: none"> record a geofenced triggered event (entering a hot/blackspot)

2.6.2 Active Fatigue and Distraction Detection (AFDD) devices

External research² shows that 94% of all motor vehicle crashes are caused by human error. Distracted driving is driving while engaging in other activities which distract the driver’s attention away from the road. Distractions while driving can be separated into three groups: visual, manual, and cognitive. Distractions are shown to compromise the safety of the driver, passengers, pedestrians, and people in other vehicles. Driver fatigue is a state of tiredness that impairs driving. Fatigue negatively affects a driver’s physical, cognitive, psychomotor, and sensory processing capabilities, which are needed for safe driving.

Active Fatigue and Distraction Detection (AFDD) technology assesses the human physical state indirectly, such as through fatigue and distraction proxies like eye gaze and closure, eyesight direction and position, and recognizing driving or steering patterns exhibiting reduced alertness. It provides a direct, in-vehicle audible alert to the driver. The company using AFDD devices, as when using a vehicle camera system, should have a written policy, including Data Privacy, on the use of the device, describing how footage will be recorded, stored, and used.

Active Fatigue and Distraction Detection (AFDD) devices can provide the following benefits:

- Alert the driver, in real-time, following a potential fatigue event (such as microsleep, yawning, drowsiness) to prevent a crash.
- Alert the driver, in real-time, following a distraction event (such as cell phone use and so on) to prevent a crash.
- Prompt supervisors of fatigue/distraction events to either intervene in real-time (such as replace a driver) or coach drivers on their performance, post- journey.
- Supports post-journey analysis of driver fatigue/distraction events and causes.

- Helps collate trends to support road transport management, transport operations planning, and enhance driver coaching or tailored driver support.
- Assists the identification of potential underlying organizational problems (such as rosters, work stress) that contribute/cause undesirable driver behaviours.

If effectively used, Active Fatigue and Distraction Detection (AFDD) devices can be a strong engineering control (barrier/safeguard) to reduce human error.

Active Fatigue and Distraction Detection (AFDD) devices hardware/software characteristics:

- artificial Intelligence (AI) camera-based technology
- tested for their accuracy (reliability and validity) by the manufacturer in a variety of scenarios
- comply with local data privacy requirements and laws

Table 12: Active Fatigue detection and Distraction Device (AFDD) minimum specifications

Requirement	Functional description
Fatigue event	<ul style="list-style-type: none"> • monitor driver’s eye movements to identify fatigue (detection of a high-risk fatigue/drowsiness or microsleep event) <p><i>Examples include high-risk fatigue events equivalent to a Karolinska Sleepiness Scale (KSS) score of greater than 7 or microsleeps defined by, for example, eye closure duration greater than 1.5 seconds</i></p>
Distraction event	<ul style="list-style-type: none"> • monitor driver’s eye or head movements to identify distraction (detection of a high-risk distraction event) <p><i>Examples of a high-risk distraction event include, eyes off the road for more than 4 seconds</i></p>
Real-time warning alerts	<ul style="list-style-type: none"> • a real-time, in-vehicle driver alert, at a minimum, for fatigue and distraction events (such as audio, seat vibration, haptic or supplementary visual mechanisms) • alarms do not interfere with other alarms and the driver is able to differentiate between them and act accordingly
Automated event recording	<ul style="list-style-type: none"> • event driven recording of fatigue and distraction events, at least 5 seconds before and 5 seconds after the event <p><i>It is good practice to record 10 seconds before the event. It is also important to have an event verification process in place either as part of the AFDD vendor capabilities or through Company asset employees</i></p> <ul style="list-style-type: none"> • vehicle speed threshold to activate the AFDD device <p><i>The current threshold recommendation to activate event recording is 10 km/h or 6 mph</i></p> <ul style="list-style-type: none"> • record and store a minimum of 24 hours of recording, to access specific time-based video recordings in the event of a crash that was not caused by a fatigue or distraction event
Driver Identification	<ul style="list-style-type: none"> • either directly through the system or by a defined secondary means (such as through pre-existing IVMS technology)
GPS functionality, recording storage	<ul style="list-style-type: none"> • refer to vehicle camera functional specifications

Table 13: Active Fatigue detection and Distraction Device (AFDD) optional features

Optional feature	Functional description
Lower risk fatigue events and sub-metrics/categorization	<ul style="list-style-type: none"> detecting a low-risk fatigue/drowsiness event <p><i>Examples include fatigue events with KSS scores of less than 8, such as yawning, steering wheel adjustments, body posture, eye glance, shoulder drooping, and so on.</i></p>
Real-time warning alerts	<ul style="list-style-type: none"> real-time watchkeeper/fleet supervisor (high-level) alert functionalities (such as through phone, email, or other means, to start the AFDD event handling process)
Cumulative risk/event escalation	<ul style="list-style-type: none"> event escalation based on number and duration of escalating events
Lower risk distraction events and sub-metrics/categorization	<ul style="list-style-type: none"> detection of distraction events less than 4 seconds long <p><i>Examples include cell phone use, eating, and smoking.</i></p>
Concurrent events	<ul style="list-style-type: none"> identify simultaneous events
Driver feedback metrics	<ul style="list-style-type: none"> providing aggregated metrics on driver feedback, system interventions, and line manager response <p><i>For example, was the driver contacted, how was the driver contacted, to which warnings did the driver react, how long did it take the driver to react, and so on.</i></p>
External road conditions	<ul style="list-style-type: none"> recognize external road environment and other conditions, for example, traffic light, road sign, speed limits, pedestrian collision detection, safe following distance, forward collision warning, and so on
Seatbelt use	<ul style="list-style-type: none"> detect driver and passenger seatbelt use
Interfaces with other systems	<ul style="list-style-type: none"> interface with other vehicle systems like IVMS, ADAS, and On Board Computers (OBCs) <p><i>This will support incident investigations, driver coaching, and the generation of actionable insights.</i></p>
Telematics (IVMS)	<ul style="list-style-type: none"> capable of replacing other vehicle systems like IVMS and vehicle camera system <p><i>For example the AFDD is also capable of recording harsh braking, harsh acceleration, turning, speeding, etc.</i></p>

When a vehicle camera system and AFDD device is required per Table 5 and 6, the minimum parameters of both the vehicle camera system and the AFDD device are applicable. It is good practice that the AFDD system consists of all combined parameters to avoid the use of different systems. However, when it is not feasible that the selected AFDD system features all combined parameters, a separate vehicle camera system is to be implemented in parallel.

2.7 Criteria for defensive driver training

Table 14: Defensive driving overview by driver type

Driver type	High Risk Country?	Type of training	Frequency - Option 1 ^{[5] [6]}	Frequency - Option 2 ^{[5] [6]}
Non-professional driver driving less than 5,000 miles/8,000 km per year on company business	Yes	On-the-road driver training ^{[1] [2] [3]}	3 years	4 years
		e-learning/classroom training ^[3]	-	2 years
	No	e-learning/classroom training ^[4]	3 years	2 years
	Non-professional driver driving more than, or equal to, 5,000 miles/8,000 km per year on company business or driving a job allocated car	Yes	On-the-road driver training ^{[1] [2] [3]}	3 years
		e-learning/classroom training ^[4]	-	2 years
	No	On-the-road driver training ^{[1] [2]}	3 years	4 years
		e-learning/classroom training ^[4]	-	2 years
Professional driver	Yes	On-the-road driver training ^{[1] [3]}	3 years	3 years
	No	On-the-road driver training ^[1]	3 years	3 years

Notes for Table 14 above:

1. When driving on public roads.
2. When on-the-road training is extended to 4 years (option 2), training is always in combination with e-learning or classroom training every 2 years, mid-way through the four-year period for the on-the-road driver training.
3. When driving a vehicle in a high-risk country, on-the-road driver training is conducted in the country where driving takes place. For non-residents (such as an individual visiting the country) in a high-risk country, consider making other travel arrangements, such as train, chauffeur, and/or approved taxi service. Contact the local host.
4. Training can be a face-to-face classroom, virtual classroom, or self-learning/computer based as required, based on a risk assessment and considering resources, logistics, and education/literacy of the learners.
5. This table is the default frequency for driver training, however, companies may decide on a different frequency. Where IVMS is present, training frequency can be considered with support from by the IVMS data, trends, and individual driver performance.
6. Company to select one of the frequency options in its entirety.

2.7.1 E-learning/classroom training

This training aims to help drivers improve their knowledge of defensive driving techniques, risk factors, attitudes, behaviours, and environmental conditions. An e-learning or classroom session typically lasts one or two hours.

In case of only e-learning or classroom training, initial training should be completed within the first three months of driving on company business. It is good practice for the induction programme for new employees to cover initial driver training.

When combining e-learning and on-the-road driver training, the e-learning or classroom training acts as refresher training. A good practice is to conduct this training midway through the four-year period for the on-the-road driver training (for instance, 4-year frequency is as follows: year 0: on-the-road driver training, year 1: e-learning, year 2: no training, year 3: e-learning, year 4: on-the-road driver training, year 5: e-learning, and so on).

2.7.2 On-the-road driver training

Effective on-the-road Defensive Driver Training (DDT) typically consists of a practical (in-vehicle coaching) session, a theoretical session, and an assessment. When the driver has successfully completed training and passed the assessment, a certificate should be provided.

“Accredited” refers to the DDT provider holding a certificate of competency from an authority in the country where driving takes place, from an industry association (such as [OPITO](#) or [RoSPA](#)), or approved by the contracting company.

Initial on-the-road driver training is completed within 3 months of employment. It is good practice that initial on-the-road driver training is completed prior to driving for the first time on company business for professional drivers.

To cover all material, DDT should last at least four hours, however, it typically takes six to eight hours.

Drivers who only drive a vehicle in an airport service area or at a company operated location, such as a refinery or depot are exempt from this training.

Good practice is for drivers of an emergency response vehicle to receive different, fit for purpose training.

2.7.3 Theoretical Defensive Driver Training (DDT) session

The theoretical DDT session typically includes education and information on:

- applicable legal and regulatory requirements for driving in the relevant country
- company policies and standards related to land transportation and/or driving (such as mobile phone policy, seatbelt policy, and so on)
- defensive driving techniques, risk factors, environmental conditions, and so on
- the effects of medication and substance misuse
- vehicle restraint systems, available safety equipment, and the benefits of 5-star rated NCAP vehicles
- proper seating position, mirror position, and other factors critical to ensuring best possible visibility(See and Be Seen)
- correct adjustment of head restraints
- what to do in case of a vehicle accident and vehicle breakdown, including the use of a high visibility reflective safety vest when leaving the vehicle
- correct seatbelt use, for example, advising driver on the following points:
 - wear the belt without slack
 - position the lap belt over the pelvic region, not the stomach
 - position the diagonal strap with rest over the shoulder, not the neck, and never place the strap behind a person’s back or under their arm
 - make sure nothing obstructs the smooth movement of the belt
- the impact distractions can have such as eating, drinking, taking medication, or being tired

- functionality and proper use of installed safety features such as Anti-lock braking system (ABS) (for example, to apply firm and continuous pressure to the brake pedal) and Electronic Stability Control (ESC).
- functionality and proper use of Advanced Driver Assistance Systems (ADAS), where present on the vehicle, such as Autonomous Emergency Braking (AEB), adaptive cruise control, Forward Collision Warning (FCW), Lane Departure Warning (LDW), parking sensors or parking assistance systems, and blind spot monitors or indicators
- information on the relevant country or regional incident rates and statistics
- addressing journey management expectations
- driver fatigue, including the following:
 - awareness of the dangers of driver fatigue and the reasons drivers find themselves tired behind the wheel
 - help drivers and those managing shift patterns to understand personal health and organizational responsibilities regarding tiredness
 - challenge some of the mistaken ideas that people could have about driver tiredness and how to cope with it
 - provide effective countermeasures for drivers to minimize risk and cope with tiredness

2.7.4 Practical Defensive Driver Training (DDT) session

The practical session of the DDT typically includes:

- at least one instructor for every three participants
- in-vehicle coaching or commentary drive
- practice (by conducting) pre-trip checks
- defensive driving techniques
- driving in different terrain, road, and environmental conditions (if applicable)
- reversing and blind area demonstrations
- mitigating certain risk factors, such as:
 - attention to driving
 - anticipating the actions of other roads users and the impact of abnormal driving conditions
 - awareness of hazards including speed for the prevailing road conditions and applying a safe distance
- individual driver's specific improvement areas based on available data, such as data or footage from IVMS, vehicle camera, or the Active Fatigue and Distraction Detection (AFDD) device
- how to conduct an effective vehicle safety check

The DDT assessment typically includes a defensive driving techniques test to verify that drivers have applied the techniques and understood the training. Depending on the outcome of the assessment, the driver may need to complete DDT again.

2.8 Limitations relating to driving and working hours

Table 15 lists the limitations to driving and working hours.

Table 15: Driving and working hours

Condition	Driving and working hours
Maximum driving time and minimum break time	<p>4.5 hours followed by at least a 30-minute break</p> <p>However, it is strongly advised to have 15-minute breaks every two hours, and more frequent breaks during periods of circadian lows (such as early morning/ later evening/after lunch).</p> <p>When taking a quick (20 minute) nap during your break, consider extending the break to 40 minutes to recover from napping.</p> <p><i>Circadian low are periods through the day, in particular from 3:00 to 5:00 and 15:00 to 17:00, during which the urge to sleep is stronger.</i></p>
Maximum working hours within a rolling 24-hour period	<p>14 hours (that is, employees cannot drive after 14 working hours)</p> <p>Standard working hours for shift workers is 12 hours within a rolling 24-hour period. To cope with unforeseen circumstances (such as heavy traffic), an additional two hours beyond a 12-hour shift is allowed.</p> <p>Working hours include: driving, loading, unloading, waiting, rest breaks, and any other work, including air travel, on company business. Working hours are also referred to as duty hours.</p> <p>For long journeys where 2 drivers are assigned to the vehicle, the maximum working hours could be extended by 2 hours, up to a maximum of 16 working hours.</p>
Maximum driving hours within a rolling 24-hour period	<p>10 hours maximum, excluding commuting time</p> <p>If commute driving to and from work is long (such as exceeding one hour in total in a day), consider the impact of this from a driving safety perspective.</p>
Maximum working hours in a rolling 7-day and 14-day period	<p>120 hours maximum in a 14-day period⁽¹⁾.</p> <p>Subject to a maximum of 72 hours in any 7-day period and an average of 60 hours per 7 days over an extended 14-day period.</p>
Off working period in a rolling 7-day period	<p>Minimum of a continuous 24-hour break before driving again after a continuous 6-day on-working period⁽¹⁾.</p> <p>The maximum working week cannot exceed 6 consecutive days.</p> <p>A 36-hour break is further advised wherever practical.</p>
<p>Notes for Table 15 above:</p> <p>1. Rotational (professional) drivers could be exempted from the 120 working hours maximum in a 14-day period and the minimum of a continuous 24-hour break before driving again after a continuous 6-day on-working period, subject to a fatigue risk assessment and approval from the contracting company.</p>	

2.8.1 Respond preventatively to fatigue

The joint IOGP-IPIECA Health Committee has produced a '[Managing driver sleepiness](#)' Info Sheet, with information about understanding the risks and what can be done. Awareness materials, (including video, posters, and safety moments) are also available from the [IOGP website](#).

This is supported by the detailed guidance in [IOGP Report 626 – Managing fatigue in the workplace](#), a practical guide to fatigue risk management and an overview of the issues around fatigue with a focus on developing, implementing, and evaluating a Fatigue Risk Management System (FRMS). It gives managers and other personnel an outline of the fatigue risk issues inherent in operations and offers guidance on their assessment and management.

2.9 Bow tie model of risk evaluation

The bow tie model is a risk evaluation method that can be used to analyze and demonstrate causal relationships in risk scenarios.

A bow tie has been developed to support this practice. It gives a visual summary of all the elements and control measures required to effectively manage the hazard (activities involving land transportation) and the related top event (loss of control of a motor vehicle).

For more information, and to download the bow tie in pdf format, visit <https://www.iogp.org/workstreams/safety/safety/land-transport-safety/>

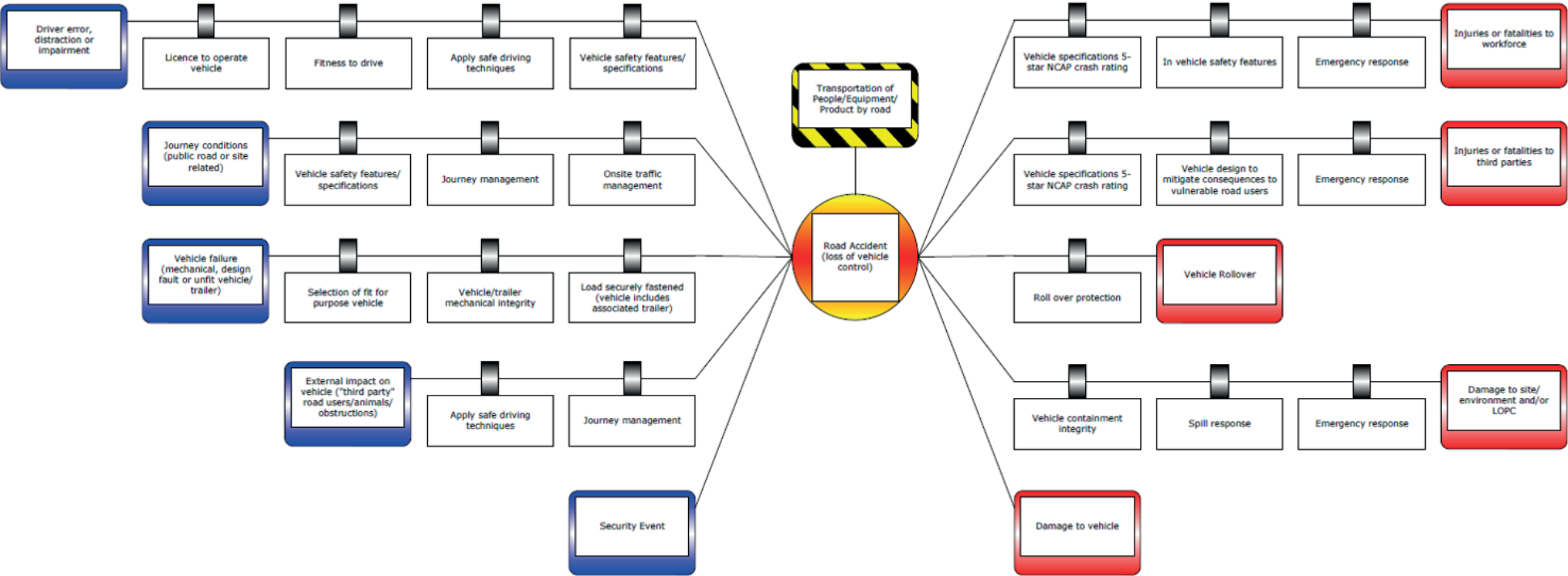


Figure 2: Land transportation bow tie risk model

3. Common Key Performance Indicators (KPIs) for motor vehicle crashes

The (KPIs) in this section were collected from Member Company employees, contractors, and subcontractors, and cover all light-duty vehicles, mobile construction equipment, and heavy-duty vehicles, including buses and coaches.

Exclusions

The following scenarios are not expected to be classified as a motor vehicle crash if the vehicle is properly parked:

- injuries when entering or exiting the vehicle
- any event involving loading or unloading from the vehicle
- another vehicle crashes into the parked vehicle

In addition, the following scenarios are not classified as a motor vehicle crash:

- damage to, or total loss of, a vehicle solely due to environmental conditions or vandalism related to the theft of a vehicle
- superficial damage, such as a stone/rock damaging a windscreen/or paintwork while the vehicle is being driven
- an event where there has been no collision or any other damage than to the vehicle itself, including but not limited to: engine fire, losing a wheel, and brake failure while maintaining control of the vehicle
- mobile construction equipment while stationary or manoeuvring and performing its main function

Defining a 'crash': A crash is a work-related motor vehicle incident, such as collision or other event, which resulted in vehicle damage, vehicle rollover, personal injury, or fatality.

3.1 Motor vehicle crash categories

Company is encouraged to classify their Motor Vehicle Crashes (MVC) in these four main categories and eight subcategories:

3.1.1 Category C – catastrophic events

- Any MVC resulting in one or more company, contractor, or subcontractor fatalities.
- Any MVC resulting in one or more third party fatalities associated with the MVC involving a company, contractor, or subcontractor vehicle or vehicles.

3.1.2 Category M – major events

- Any MVC resulting in company, contractor, or subcontractor injury where the most severe outcome is a Lost Work Day Case (LWDC).
- Any MVC resulting in company, contractor, or subcontractor vehicle rollover.

3.1.3 Category S – serious events

Any MVC resulting in company, contractor, or subcontractor injury where the most severe outcome is a recordable injury (medical treatment case and/or restricted work day case).

3.1.4 Category O – other events

- Any MVC resulting in company, contractor, or subcontractor injury where the most severe outcome is a Minor Injury (first aid case).
- Any MVC where company, contractor, or subcontractor vehicle cannot be driven from the scene under its own power in a roadworthy state (disabling damage).
- Any other MVC involving a company, contractor, or subcontractor vehicle that does not meet any of the above criteria.

3.2 Motor vehicle crash rate calculations

3.2.1 Motor vehicle mileage

Companies are encouraged to record kilometres/miles driven by motor vehicles on company business. This includes company, contractor, or subcontractor vehicles. This data is required to calculate Motor Vehicle Crash Rates (MVCR).

‘Kilometres driven’ is the preferred and most relevant normalizer of risk exposure in land transport activities.

Companies are encouraged to use these common definitions for classifying MVC frequency:

3.2.2 Severe MVCR

This combines Catastrophic, Major, and Serious vehicle crashes vs. kilometres driven exposure.

$$r_{\text{severe}} = \frac{n_C + n_M + n_S}{d}$$

3.2.3 Total MVCR

This combines Catastrophic, Major, Serious, and Other vehicle crashes vs. kilometres driven exposure.

$$r_{\text{total}} = \frac{n_C + n_M + n_S + n_O}{d}$$

where

r_{severe} = severe Motor Vehicle Crash rate

r_{total} = total Motor Vehicle Crash rate

n_{C} = number of Category C (Catastrophic) motor vehicle crashes

n_{M} = number of Category M (Major) motor vehicle crashes

n_{S} = number of Category S (Serious) motor vehicle crashes

n_{O} = number of Category O (Other) motor vehicle crashes

d = total driven distance (in million kilometres)

Companies are encouraged to create an open reporting culture and to report all motor vehicle crashes, including minor (category O) events. Open reporting will enable companies to learn from events, provide trend analysis, and identify areas and activities to focus on to bring about the greatest improvement in performance.

A good practice is to consider using the ratio of the Severe Motor Vehicle Crashes versus the Total Motor Vehicle Crashes as a KPI to validate the safety pyramid/triangle.

4. Land transportation safety – elements of a management system

Guidance documents can help companies develop Health Safety Environment HSE management systems. The main objective is ensuring that activities are planned, carried out, controlled, and directed so that risks from all activities, including land transportation, are understood, assessed, and minimized. The IOGP recommendation is that land transportation safety should be managed in line with the principles of [IOGP Report 510 - Operating Management System Framework for controlling risk and delivering high performance in the oil and gas industry](#) and its supplement [IOGP Report 511 - OMS in practice. A supplement to Report No. 510, Operating Management System Framework](#).

This section provides practical guidance on how to establish a land transportation management system within the framework of the OMS described in Report 510.



Figure 3: The OMS Framework – Four Fundamentals underpin ten Elements

Element 1 Commitment and accountability

Management to set **clear expectations** that the **Land transportation safety practice** is implemented, communicated, and visible **commitment and support provided**.



- E1.1 The *Land transportation safety practice* is implemented, with priorities established, authorities and accountabilities assigned, and resources allocated. Everyone involved in land transportation activities is competent. The same expectations exist for all contracted land transportation, including subcontractors.

- E1.2 Management, at all levels, sets a good example in terms of their own attitude and driving. Managers commit to learning from land transportation events, measure and benchmark land transportation performance, using the outcomes to drive continuous improvement.

- E1.3 The workforce is committed to performing in accordance with the company land transportation management system. The importance of land transportation safety is clearly communicated to the workforce.

- E1.4 Land transportation Life-Saving Rules are in place, clearly communicated, and employees at all levels are held accountable.

- E1.5 Land transportation accountabilities are clearly defined and aligned with job responsibilities. Responsibility for land transportation safety management is specifically defined at all levels of the organization.

- E1.6 Communication and engagement mechanisms are established and sustained to ensure clear, consistent reinforcement of the land transportation safety management system.

- E1.7 Processes are in place to manage land transportation management system records and documents.

- E1.8 Land transportation incidents are investigated and improvement opportunities/lessons are applied. Land transportation safety performance objectives and targets are set and measured. Performance is benchmarked internally and externally.



Element 2

Policies, standards, and objectives

Management to make a clear policy statement committing to continuously improve road safety through the implementation of the *Land transportation safety practice*. The land transportation policy gives a clear message that land transportation safety is as important as other business objectives and that transportation incidents are avoidable. The policy should be supported by setting objectives and targets to drive implementation and improvement.

- E2.1 Land transportation policies, standards, and objectives are defined, documented, and communicated across all organization levels and to contractors and other stakeholders. All employees and contractors are aware of the policy and its implications. The policy and supporting standards and objectives are regularly reviewed by management for relevance and scope.
- E2.2 Line managers are responsible for land transportation safety at all organizational levels. Land transportation policies, standards, and objectives are authorized at the highest level of management appropriate to each activity.
- E2.3 Policies and standards establish risk-based requirements, including:
- the commitment to comply with, or exceed, regulations
 - challenging the need for land transportation and considering alternatives
 - consideration of environmental impact (fuel consumption and pollution)
- E2.4 Objectives and performance targets are in place that minimize risk exposure, drive continuous improvement, and ensure compliance.
- E2.5 Policies and standards of contractors and other third parties working on company operations are aligned, and compliant, with the company’s land transportation policies, standards, and objectives. Appropriate bridging documents, where necessary, are in place.
- E2.6 There is a system in place to manage and document the approval/rejection of deviation requests.

Element 3 Organization, resources, and capability

Successful delivery of the company’s land transportation objectives depends on having the right organization, resources, and capabilities present and appropriately structured. This organizational and management structure should extend to, and embrace, relevant contractors.



E3.1 The responsibilities, accountabilities, and authorities for implementing and managing the land transportation management system are defined at all levels of the organization. Individuals at all levels are aware of their responsibilities.

Management creates an environment that reduces multitasking culture through proper organization and assignment of resources.

E3.2 Recruitment and career development plans are in place. Training and coaching programmes for personnel, supervisors, and drivers are present to drive performance improvement and ensure compliance.

E3.3 The management system includes a competency assurance process that ensures all company and contractor personnel involved in land transportation activities are appropriately selected, trained, and periodically assessed to meet the requirements of their job.

E3.4 Internal and external resources required to meet the company’s land transportation requirements are in place.

E3.5 Processes are enacted, ensuring that company personnel and those of its contractors, partners, and others involved in land transportation activities are aware of the company’s requirements, and, where appropriate, are involved in planning, management of change (MoC), and improvement activities.

E3.6 There is a land transportation contractor management process that ensures that at all stages of the contracting chain, the contractor company and its personnel comply with requirements of the (contracting) company’s land transportation management system.



Element 4 Stakeholders and customers

Processes should be in place to **assess, manage, and engage** with customers and other stakeholders (including local communities, where appropriate) regarding issues of mutual concern associated with the company’s **land transportation activities**.

- E4.1 Stakeholders relevant to the company’s land transportation activities, including local communities and contractors, are identified and relationships established.
- E4.2 Processes are in place to assess, manage, and engage with customers and other stakeholders on the company’s land transportation activities. Concerns associated with the company’s land transportation activities are identified and addressed.
- E4.3 Mechanisms exist to document, evaluate, and address stakeholder and customer expectations and feedback regarding the company’s land transportation activities.
- E4.4 Positive relationships are established with stakeholders and customers. There is active two-way communication and engagement, particularly where local communities may be affected by the company’s land transportation activities.

Element 5 Risk assessment and control

All hazards related to land transportation activities to be identified, documented, and risk assessed. Where eliminating risks is not feasible, risk controls should be defined to reduce risk to an acceptable level.



E5.1 Procedures and processes to manage land transportation risk to an acceptable level are enacted. Hazard identification is systematically applied, and associated risks are assessed and ranked. Effective risk reduction controls are implemented and escalation controls established. Preventative measures are applied wherever practical, such as enhancing driver performance, security of vehicles and cargo, and proactive environmental protection.

E5.2 Hazard information gained from risk assessment is documented and incorporated into the management system, and demonstrates that:

- all foreseeable hazards of land transportation have been
- the likelihood and consequences of an incident have been assessed
- controls exist to mitigate significant risks
- emergency response measures to mitigate incidents are in place

E5.3 Changes related to land transportation are subject to a risk-based management of change process, with formality proportional to the significance of the change and the associated risks.

E5.4 A risk awareness culture prevails at all levels of the organization, such that all personnel involved in land transportation recognize risks and vulnerabilities related to their job.



Element 6 Asset design and integrity

Land transportation vehicles and equipment to meet or exceed applicable standards and **operated, inspected, and maintained** to manage risks of land transportation.

- E6.1 Regulatory and contractual requirements, local and worksite conditions, and the results of risk assessments are used as used for design or selection decisions for land transportation vehicles and equipment.
- E6.2 Criteria and specifications for design, selection, or modification of land transportation vehicles and equipment are defined to address risks and verify conformance throughout their lifecycle. A process is in place to ensure that the safest, most appropriate, and most reliable vehicles are purchased, leased, or used by company contractors.
- E6.3 Procedures are enacted to ensure land transportation vehicles and equipment are always operated within defined design and operating limits, for example, through the use of IVMS. Personnel operating land transportation vehicles and equipment are familiar with and understand operating limits.
- E6.4 Processes are in place to identify and manage critical risk controls/barriers to prevent a major incident. The land transportation bow tie model is used.
- E6.5 There is evidence that land transportation vehicles and equipment are maintained in safe working order, such as up-to-date records demonstrating maintenance according to manufacturer recommendations or to an equivalent, fit-for-purpose, maintenance programme.
- E6.6 Due diligence is applied when land transportation vehicles and equipment are acquired or divested, and to all phases of the contract lifecycle where land transportation activities are carried out by a contracted entity (pre-qualification, award, execution).



Element 7 Plans and procedures

Land transportation operations should be planned in line with land transportation policy and objectives and the IOGP **Land transportation safety practice**. Plans should optimize performance and drive continuous improvement. Procedures should be established and implemented to ensure risk controls are effectively applied. Risks introduced by changes in planned activities and deviations from policies, procedures, and practices should be periodically assessed, eliminated, or mitigated, and approved by management.

- E7.1 Land transportation-specific plans and procedures are in place that integrate the results of the risk assessments and are in accordance with regulatory, legal, and company requirements. There are documented procedures for all safety-critical land transportation activities. There is an operational risk-based journey management system.

- E7.2 All plans and procedures are approved by the appropriate authority in the organization.

- E7.3 There is a system in place ensuring that all relevant personnel, from managers to drivers, are informed whenever new, or revised, plans and procedures are published, and that appropriate guidance and training is provided as part of implementation.

- E7.4 Plans and procedures are reviewed periodically, or whenever there is an incident or non-conformity, to ensure their continued relevance. The latest version of approved plans or procedures is available at the point of use.

- E7.5 Contingency and emergency response plans, and resources, are in place for all foreseeable land transportation emergencies. Contingency and emergency plans incorporate the lessons of incidents and there is a planned training and drill programme in place.



Element 8

Execution of activities

Safe, reliable, and responsible execution of land transportation activities involves consistent implementation of practices and procedures, and management intervention when a risk control proves ineffective or requirements are not being met. To consistently meet specified requirements, adequate resources (personnel and equipment) will need to be prepared for the task (including supervision, competence, and fitness-for-work), together with a culture of discipline.

- E8.1 Processes and procedures consistent with the IOGP *Land transportation safety practice* are in place to prepare for land transportation activities.

- E8.2 During work, processes are consistently applied to ensure that land transportation activities are carried out safely and reliably.

- E8.3 Suitable and sufficient supervision exists to control land transportation operations and ensure expectations are met and tasks executed as planned.

- E8.4 There is a culture at all levels of the organization whereby everyone understands their responsibility to stop and intervene during land transportation activities when a risk is not adequately controlled.

- E8.5 In-vehicle monitoring systems (IVMS), are used to review driver performance and behaviour and provide feedback. Positive behaviour is recognized and reinforced. Inadequate performance or unacceptable behavior is managed in a fair and transparent manner.



Element 9 Monitoring, reporting, and learning

Successful implementation of a land transportation management system depends on clearly understanding if risk controls are functioning well and planned safety performance is being achieved. This requires that monitoring, reporting, investigation, and data analysis processes exist to ensure that the management system is effective and improvement opportunities identified.

- E9.1 The land transportation management system includes defined processes for monitoring, measuring, and recording data from, for example, incidents, near misses, inspections, audits, and non-conformances.
- E9.2 Land transportation incidents and non-conformances are investigated to an appropriate level to determine causes.
- E9.3 The outcomes of investigations into land transportation incidents and non-conformances, for example, preventative and corrective actions and improvement opportunities, are applied, communicated, and closure of such actions is verified.
- E9.4 Leading and lagging land transportation safety key performance indicators (KPI) are defined and communicated. KPI data are regularly reviewed to monitor performance and establish improvement opportunities. KPI data is benchmarked internally and externally. KPI definitions are reviewed regularly to ensure continued provision of meaningful information about land transportation safety performance.
- E9.5 Land transportation safety data is subject to quality control and verification before use.



Element 10

Assurance, review, and improvement

The land transportation management system should be assessed at scheduled intervals to determine its continuing suitability and effectiveness in controlling risks associated with land transportation.

- E10.1 There is a documented, risk-based land transportation management system assurance process in place, including scheduled audits, inspections, and reviews. The assurance process is designed to evaluate how effectively the management system is performing in terms of compliance with expectations, meeting objectives and business needs and identifying improvements.
- E10.2 Land transportation safety performance information, including the outcome of audits, inspections, and incident investigations, are consolidated and input to the management review process.
- E10.3 Land transportation KPIs are assessed regularly and benchmarked internally and externally to identify improvement opportunities. The outcomes of KPI assessment are inputs to management review.
- E10.4 Outputs from the assessment process are applied and communicated to drive continuous improvement.
- E10.5 Management formally review and document the effectiveness of the land transportation management system, based on audits, inspections, investigations, and KPI performance analyses. Improvement actions are planned, communicated, and tracked to completion.

5. Glossary

Term	Definition
Airbag	<p>An airbag is a vehicle safety device and occupant restraint system, designed to inflate extremely rapidly during a collision to provide the occupants with soft cushioning and restraint to prevent any impact or impact-caused injuries between the flailing occupant and the interior of the vehicle.</p> <p><i>Note: Modern vehicles may contain multiple airbag modules in various configurations. Side-impact air bags are inflatable devices that are designed to help protect your head and/or chest in the event of a serious crash involving the side of your vehicle. There are three main types of side airbags: chest or torso (mounted in the side of the seat or in the door), head (usually mounted in the roof rail above the side windows) and head/chest combination (or “combo”) (usually mounted in the side of the seat and are typically larger than chest (or torso) airbags.</i></p>
Anti-lock Braking System (ABS)	An ABS is a vehicle safety system that allows the wheels on a motor vehicle to maintain tractive contact with the road surface while braking, preventing the wheels from locking up (ceasing rotation) and avoiding uncontrolled skidding.
Active Rollover Prevention (ARP)	<p>An Active Rollover Prevention (ARP) installed on the trailer, is a system that recognizes impending rollover and selectively applies brakes to resist. Excessive lateral force, generated by excessive speed in a turn, could result in a rollover. ARP automatically responds whenever it detects a potential rollover. ARP rapidly applies the brakes with a high burst of pressure to the appropriate wheels and sometimes decreases the engine torque to interrupt the rollover before it occurs.</p> <p><i>Note: ARP builds on the control systems already on the vehicle, such as Anti-lock Braking System (ABS), Electronic Braking System (EBS), and Electronic Stability Control (ESC).</i></p>
All-Terrain Vehicles (ATVs)	An all-terrain vehicle (ATV), also known as a quad, quad bike, three-wheeler, four-wheeler, or quadricycle, is a vehicle designed to be used off-road that travels on low-pressure tires, with a seat that is straddled by the operator, and with handlebars for steering control.
Autonomous Emergency Braking (AEB)	Autonomous Emergency Braking (AEB) is a vehicle safety system that improves safety in two ways: firstly, they help avoid accidents by identifying critical situations early and warning the driver. Secondly, they reduce the severity of crashes that cannot be avoided by lowering the speed of collision and, in some cases, by preparing the vehicle and restraint systems for impact. Autonomous: the system acts independently of the driver to avoid or mitigate the accident. Emergency: the system intervenes only in a critical situation. Braking: the system tries to avoid the accident by applying the brakes.
Blind spot monitors or/ indicators	The blind spot monitor is a vehicle-based sensor that detects other vehicles located to the driver’s side and rear. Warnings can be visual, audible, or vibrating. The light or symbol often seen on the outside mirrors themselves, should illuminate when a vehicle is detected in the blind spot.
Bus or coach	Any motor vehicle designed to transport more than 9 people (including driver).
Conspicuous rear and side markings	High visibility red or yellow reflective stickers marking the vehicle at the rear end, side reflector tape or vehicle markings and side marker lights provide high visibility along the side of the vehicle.
Commentary drive	A training technique whereby the driver conducts a typical journey and, while driving, explains what hazards they see or can anticipate on the road ahead. This includes unseen hazards, and what safe driving techniques they would use to eliminate or minimize the threat. The driver is accompanied by a qualified instructor who assesses if the driver is employing correct defensive driving techniques and proper observational habits to identify and avoid hazards. At the end of the drive, the assessor provides feedback and coaching to the driver.
Commuting	Refer to IOGP Report - Safety data reporting user guide – Scope and definitions (latest edition) .
Commute travel	Refer to IOGP Report - Safety data reporting user guide – Scope and definitions (latest edition) .
Company	Refer to IOGP Report - Safety data reporting user guide – Scope and definitions (latest edition) .
Construction and industrial equipment	<p>Construction equipment refers to road transport mobile equipment primarily intended for construction and maintenance, such as bulldozers, cranes, and heavy mining trucks working in the mining location.</p> <p>Industrial equipment refers to road transport equipment primarily intended for plant use or maintenance, such as forklift trucks, motorized carts, and personnel lifting devices.</p>

Term	Definition
Contractor	Refer to IOGP Report - Safety data reporting user guide – Scope and definitions (latest edition) .
Contracted (vehicle)	See Owned, contracted, or leased.
Daytime Running Lights (DRL)	Vehicle lights that are automatically switched on when the vehicle engine is turned on or when the vehicle is moving forward, emitting white, yellow, or amber light to increase visibility of the vehicle in daylight conditions.
Dangerous goods	<p>Substances, such as solids, liquids, or gases, that pose a risk to people, property, or the environment, due to their chemical or physical properties. They are usually classified with reference to their immediate risk.</p> <p><i>Note: In the US, dangerous goods are more commonly known as hazardous materials, (abbreviated as HAZMAT or HazMat). Most countries regulate hazardous materials by law whereby United Nations (UN) recommendations on the transport of dangerous goods forms the basis for most regional, national, and international regulatory schemes. Refer to the dangerous goods transportation regulations of the country of interest.</i></p> <p><i>Dangerous goods include materials that are radioactive, flammable, explosive, corrosive, oxidizing, asphyxiating, biohazardous, toxic, pathogenic, or allergenic. Also included are physical conditions such as compressed gases and liquids or hot materials, including all goods containing such materials or chemicals, or that might have other characteristics that render them hazardous in specific circumstances. Typical examples of relevant dangerous goods are: acetic acid, acetic anhydride, gasoline, petrol, diesel fuel, aviation fuel, petroleum crude oil, petroleum distillates, kerosene, shale oil, natural gas, LPG, and ethanol.</i></p>
Defensive driving	The application of proactive defensive behaviours coupled with risk assessment and skills by a driver in order to prevent any type of crash or other form of loss during the operation of a motor vehicle.
Disabling damage	Vehicle damage that prevents a motor vehicle from leaving the scene of the accident, in its usual manner, after simple repairs. This includes damage to motor vehicles that could have been driven, but would have been further damaged if so driven.
Distracted driving	Any activity that could divert a person's attention away from the primary task of driving, such as using a mobile phone, texting, adjusting a navigation system or radio, reading a map, or reaching for an object.
Driver	An individual who operates a motor vehicle.
Driver fitness assessment (also referred to as a fitness-to-drive capability screening)	An assessment undertaken by a certified health professional, with specific focus on the functional ability to safely drive a vehicle.
Duty hours	Refer to definition of Working hours.
Electronic Stability Control (ESC)	ESC helps you to maintain or regain control of your vehicle in difficult driving situations, such as during unexpected turns or while negotiating icy roads. ESC uses computer controlled technology to apply individual brakes and help bring the vehicle safely back on track.
Emergency response vehicle (ERV)	<p>A vehicle that is designated and authorized to respond to a life-threatening emergency situation.</p> <p><i>Note: Typical examples include firefighting vehicles, ambulances, and hazardous material response vehicles. A security vehicle is not normally considered an emergency response vehicle, unless it is a specially designed or modified security vehicle, such as an armoured vehicle or vehicle modified to carry sniffer dogs.</i></p>
Fatality	Refer to IOGP Report - Safety data reporting user guide – Scope and definitions (latest edition) .
Fatigue	Refer to IOGP Report - Safety data reporting user guide – Scope and definitions (latest edition) .
First aid case	Refer to IOGP Report - Safety data reporting user guide – Scope and definitions (latest edition) .
Forward Collision Warning (FCW)	<p>A system to warn the driver via visual or audible warning without automatic brake activation.</p> <p><i>Note: When the vehicle is installed with AEB, this includes forward collision mitigation. A forward collision mitigation system detects how far and fast the vehicle ahead is moving, and automatically applies the brakes if there is no response.</i></p>

Term	Definition
Gross Vehicle Weight (GVW)	The maximum laden weight of any vehicle as recommended by the manufacturer, including loads, passengers, and/or any trailer.
Hands-free (device)	A mobile or smart phone connected via Bluetooth with the vehicle or a vehicle installation whereby a mobile phone is docked or wirelessly connected to fixed equipment wired to the vehicle, and where there is no cable connection between the equipment and the driver.
Head rest	Head rest or head restraints are attached or integrated into the top of seats to limit the rearward movement of the occupant's head relative to the torso in a collision – to prevent or mitigate whiplash or injury to the cervical vertebrae.
Heavy Vehicle (HV) or Heavy-duty vehicle	Any motor vehicle having a kerb weight of 3.5 tonnes and heavier or GVW greater than 7.5 tonnes that is specifically designed to pull a trailer and/or carry cargo.
High level third brake light	A third, separated brake light mounted centrally. This helps other drivers respond more quickly, and to more easily determine the difference between rear lights and brake lights.
Home away from home	Refer to IOGP Report - Safety data reporting user guide – Scope and definitions (latest edition) .
In-Vehicle Monitoring System (IVMS)	An IVMS is a device installed in the vehicle that monitors and records data such as position, speed, acceleration, deceleration, harsh braking, distance driven, and driver hours. These data are tagged with the vehicle and driver's ID to create a profile of the individual driver's actual driving performance on work-related journeys. This data profile should be used to identify improvement opportunities and to coach the driver.
Journey manager	A journey manager oversees the implementation of the defined journey management process, prepares the journey management plan, monitors progress, and responds to deviations and/or emergencies.
Journey Management Plan (JMP)	The Journey Management Plan (JMP) is part of a journey management system and is the agreed plan between driver and supervisor or journey manager. The JMP covers the time between departure and arrival at the final destination. The JMP details the safest route in order to avoid or mitigate any potential hazards, and includes relevant information such as alternate routes, communication requirements, and safe rest or refuelling locations.
Kerb (curb) weight	The unladen weight of the vehicle recorded at registration (also known as the tare weight).
Lane Departure Warning (LDW)	An LDW system is designed to warn the driver when the vehicle begins to move out of its lane (visual, audible, and/or vibration warnings), unless a turn signal is on in that direction.
Leased (vehicle)	See Owned, contracted, or leased.
Light Vehicle (LV) or light-duty vehicle	Any motor vehicle having a kerb weight less than 3.5 tonnes or GVW less than 7.5 tonnes. <i>Note: a vehicle having a kerb weight of more than 3.5 tonnes but with a GVW of less than 7.5 tonnes is still considered a light vehicle.</i> <i>A motor vehicle designed to transport more than 9 people (including driver) is considered as a Bus or Coach definition.</i>
Lost Work Day Case (LWDC)	Refer to IOGP Report - Safety data reporting user guide – Scope and definitions (latest edition) .
M3 (vehicle type as per UN classification)	Vehicles used for the carriage of passengers, comprising more than eight seats in addition to the driver's seat, and having a maximum mass exceeding 5 tonnes, such as a bus.
Medical Treatment Case (MTC)	Refer to IOGP Report - Safety data reporting user guide – Scope and definitions (latest edition) .
Mobile (construction) equipment	Motorized equipment used in a controlled location where the main function of the motorised equipment is for lifting, mechanical load handling, construction, drilling, agricultural work, and digging work. <i>Note: Any other Heavy Vehicle and/or Light Vehicle used within a controlled site is not deemed to be mobile equipment.</i>

Term	Definition
Motor vehicle	<p>Any mechanically powered vehicle used to transport people or property, including any load on or attached to the vehicle, such as a trailer. This includes motorcycles. Specifically excluded from the definition of motor vehicle are vehicles operated on fixed rails and on-site vehicles that are not capable of more than 10 mph (16 km/h).</p> <p>Vehicles are split into four sub-categories:</p> <ul style="list-style-type: none"> • Heavy Vehicle (HV) • Light Vehicle (LV) • Mobile equipment • Motorcycles <p><i>Note: for the purposes of this Report, all types of pickup truck (including those exceeding a gross vehicle weight of 3.5 tonnes) are to be considered as a Light Vehicle and all types of cargo trucks (including those with a gross vehicle weight less than 3.5 tonnes) are to be considered as a heavy vehicle.</i></p>
Motor Vehicle Crash (MVC)	<p>A work-related motor vehicle incident such as a collision or other event, which resulted in vehicle damage, vehicle rollover, personal injury, or fatality.</p> <p><i>Note: Contractor Motor Vehicle Crash includes any vehicle operated by a contractor or subcontractor while performing work on behalf of the company, where injuries, kilometres driven, or hours worked should be recorded [e.g., delivery/courier services are excluded].</i></p>
MVC work-relatedness	<p>Any crash involving a vehicle while performing company business.</p> <p><i>Note: Work-relationship is presumed for crashes resulting from business being conducted on behalf of the company while operating a company assigned vehicle. Examples of company business include driving a client to the airport, driving to the airport for a business trip, taking a client or work colleague out for a meal, deliveries, visiting clients or customers, or driving to a business-related appointment. Personal business which should not be counted includes, but is not limited to, personal shopping, getting a meal by yourself, commuting to and from home, or driving to a private medical appointment.</i></p>
Near miss	Refer to IOGP Report - Safety data reporting user guide – Scope and definitions (latest edition) .
New Car Assessment Program (NCAP)	<p>A program developed to provide consumers with information about crash protection of light vehicles. A star ranking system of 0 to 5 is used, where the number of stars reflects how well the car performs in NCAP tests. A five-star safety rating would indicate good performance in crash protection and additional crash avoidance technology might be present.</p> <p><i>Note: Refer to the Global New Car Assessment Program (NCAP). Global NCAP is the umbrella organization for regional NCAPs across the world: Australia, China, Europe, Japan, Korea, Latin America, Southeast Asia, and United States NCAP.</i></p>
Non-professional driver	<p>A person who is not primarily employed to drive a vehicle.</p> <p><i>Note: In this document, a distinction is made between a person driving more or less than 5,000 miles/8,000 kilometres on public roads for driver training. Refer to Section 1.3 - element 7 and Section 2.7 of this document.</i></p>
Off-road	A route used for access to places which are not accessible by a road (see 'Road').
Owned, contracted, or leased	<p>In relation to vehicles of any type:</p> <ul style="list-style-type: none"> • Owned means owned by the company. • Contracted means owned or leased by a contractor (including sub-contractor) and used for the scope of the transport service of the contract on behalf of the company. • Leased means vehicle leased by the company (not including personal lease option cars offered as part of an employee's benefit package) or rented for work activities on behalf of the company.
Parking sensors or assistance systems	Parking sensors are proximity sensors for vehicles designed to alert the driver to hazards or obstacles while parking. A backup camera provides an image of the area behind the vehicle.
Professional driver	<p>A person who is primarily employed to drive a vehicle.</p> <p><i>Note: In this document, this means any person driving a heavy vehicle, bus or coach and any person employed as a chauffeur. Refer to Section 1.3 - element 7 and Section 2.7 of this document.</i></p>
Properly parked vehicle	<p>A properly parked motor vehicle is one that is completely stopped and parked where it is legal to park such a vehicle or to stop for the purpose of loading or unloading persons or goods. The parking brake(s) should be set as appropriate, and all doors closed.</p> <p><i>Note: A disabled vehicle is only considered properly parked when it is completely off the main travelled portion of the road (for example the hard shoulder or layby), displays proper warnings such as hazard lights and warning triangles/cones, and all other (country/state) legal requirements are met.</i></p>

Term	Definition
Restricted Work Day Case (RWDC)	Refer to IOGP Report - Safety data reporting user guide – Scope and definitions (latest edition) .
Road (on-road)	A thoroughfare which has a prepared, graded, and levelled surface designed for the conveyance of motor vehicles (see also 'off-road'), such as asphalt, tarmac, concrete, aggregate, dirt/sand, or ice.
Rollover	Any crash, at any speed, where the vehicle has flipped onto any of its sides (90 degrees), top, and/or rolled 360 degrees via any axis. <i>Note: If a vehicle lands on its side but has flipped less than 90 degrees due to vehicle design, load, or elevation of the road (or side of the road), it is still considered a rollover. If a vehicle tips less than 90 degrees but then recovers (all wheels back on the ground), or if a vehicle flat spins around the vertical axis (such as a quick turning movement round and round), it is not considered a rollover.</i>
Rollover Control System (RCS)	A vehicle stability function that reacts to an impending rollover to stabilize the power-driven vehicle, or towing vehicle and trailer combination, or the trailer during dynamic manoeuvres, within the physical limits of the vehicle.
Rollover Protection Device (RPD)	A mechanical structure fitted within the vehicle body to prevent the structural collapse of the vehicle's roof and/or supporting pillars, in the event of a rollover. <i>Note: The RPD should be designed not to cause injury to vehicle occupants in the event of a rollover, or pedestrians outside the vehicle in event of a collision.</i>
Rotational driver	An individual working at sites where a rotational work pattern is normal for that driver (such as a fixed number of days on, where accommodation is provided at the site, followed by a similar number of days off where the driver leaves the site to return home).
Safe driving/operate the vehicle safely	The use of proactive safe behaviours, risk assessment, and skill to avoid hazards and/or prevent the loss of control of a motor vehicle.
Seatbelt - three-point seatbelts	A vehicle safety device designed to secure the driver or a passenger of a vehicle against harmful movement that may result during a collision or a sudden stop. A three-point seatbelt is a type of belt that covers the chest, pelvis and the shoulders. <i>Note: Seatbelt use is the most important factor in reducing the severity of injuries from traffic collisions. Wearing a seatbelt reduces the risk of fatal injury up to 50% for front seat occupants. A three-point seatbelt spreads the energy of the moving body over the chest, pelvis, and shoulders.</i>
Seatbelt reminder	Seatbelt reminders are intelligent, visual, and audible devices that detect whether seatbelts are in use in various seating positions and give out increasingly urgent warning signals until the belts are used.
Side impact protection system	System to protect against injury in a side crash/collision.
Side and rear underrun protection	Side and rear underrun protection in the form of a barrier or wing to prevent a cyclist or pedestrian from getting under the vehicle and minimize the potential severity of incidents and injuries.
Third party	Refer to IOGP Report - Safety data reporting user guide – Scope and definitions (latest edition) .
Trailer stability control	Trailer stability control is an active rollover protection system installed on a trailer that recognizes impending rollover and selectively applies brakes and/or decreases the engine torque to prevent the rollover before it occurs.
Transport – land (as a type of activity)	Refer to IOGP Report - Safety data reporting user guide – Scope and definitions (latest edition) .
Unauthorized passenger	For drivers, unauthorized passengers are strangers or hitchhikers. For professional drivers unauthorized passengers are persons who do not have a business purpose to be a passenger in a vehicle.
Upfitting	Customization to make vehicles more useful, efficient, and/or appropriate for their designated purpose.
Utility Terrain Vehicle (UTV)	A type of small vehicle, like an ATV, but designed for greater occupational functionality than ATVs, such as increased payload capacity, more seats, and elements of a cabin such as a roof or windshield.
Vehicle	See Motor Vehicle.

Term	Definition
Vehicle operating in an airport service area or at a company owned and operated location	<p>A vehicle that is only used in an airport service area, or on a company owned and operated location (such as a refinery, terminal, or chemical plant) with no open access to members of the public (no public roads) and where the maximum posted speed limit does not exceed 30 km/h (20 mph), with the exception of incidental operational related travel on public roads.</p> <p>The exception for incidental operational related travel on public roads is limited to travel for maintenance or movement between adjoining sites, where the distance on public roads is less than 10 kilometres (6 miles), or when the distance on public roads is greater than 10 kilometres (6 miles), but with a maximum of four journeys a year.</p>
Wheel nut indicators	Wheel nut indicators allow the visual identification of loose wheel nuts, alerting the driver/operator to a situation that could, if unchecked, lead to a wheel detaching.
Work(ing) hours	<p>Refer to IOGP Report - Safety data reporting user guide – Scope and definitions (latest edition).</p> <p>In the context of this document, working hours include: driving, loading, unloading, waiting, rest breaks, and any other work, including air travel, on company business. Working hours are also referred to as duty hours.</p>

6. Symbols and Abbreviations

ABS	Anti-lock Braking System
AEB	Autonomous Emergency Braking
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR is derived from the French name for the treaty)
AFDD	Active Fatigue and Distraction Detection
ATV	All-Terrain Vehicles
DDT	Defensive Driver Training
EBS	Electronic Braking System
ERP	Emergency Response Plan
ESC	Electronic Stability Control
FCW	Forward Collision Warning
GPS	Global Positioning System
GVW	Gross Vehicle Weight
HSE	Health Safety Environment
HV	Heavy Vehicle
IOGP	International Association of Oil and Gas Producers
IVMS	In-Vehicle Monitoring System
JMP	Journey Management Plan
LDW	Lane Departure Warning
LV	Light Vehicle
LWDC	Lost Work Day Case
MPH	Miles per Hour
MVC	Motor Vehicle Crash
NCAP	New Car Assessment Program
OEM	Original Equipment Manufacturer
OMS	Operating Management System
RCS	Rollover Control System
UN	United Nations

7. References

IOGP Report 365 is supported by a series of supplemental guidance documents providing additional detail on specific aspects of land transportation safety.

IOGP Report 365-4 - [Land transportation safety recommended practice – Road/vehicle accident checklist](#)

IOGP Report 365-6 - [Land transportation safety recommended practice – Questionnaire / checklist assessment for the implementation of report 365.](#)

IOGP Report 365-11 - [Land transportation safety recommended practice – Commentary Drive Assessment](#)

IOGP Report 365-12 - [Implementing an in-vehicle monitoring program – A guide for the oil and gas extraction industry](#)

IOGP Report 365-15 - [Land transportation safety recommended practice – Bus and coach safety](#)

IOGP Report 365-16 - [Land transportation safety recommended practice – Emergency Response Vehicles](#)

IOGP Report 365-17 - [Land transportation safety recommended practice – Mobile Construction Equipment](#)

IOGP Report 365-18 - [Load Securement – Land transportation safety recommended practice Guidance Note 18](#)

IOGP Report 365-19 - [Land transportation safety recommended practice – journey management](#)

IOGP Report 365-20 - [Secure ground transportation in high threat environments \(Restricted to IOGP Members\)](#)

IOGP Report 510 - [Operating Management System Framework for controlling risk and delivering high performance in the oil and gas industry.](#)

IOGP Report 445 - [Substance Misuse: a guide for managers & supervisors in the oil & gas industry](#)

IOGP Report 459 - [Life-Saving Rules](#)

IOGP Report 423 - [HSE management guidelines for working together in a contract environment](#)

IOGP Report 470 – [Fitness to Work](#)

[IOGP Land Transportation Safety website](#)

Clarification and FAQs (formerly Report 365-13): Visit: <https://www.iogp.org/workstreams/safety/safety/land-transport-safety/> and click on 'FAQs'.



Land transport related incidents are historically the single largest cause of fatalities in IOGP Member Company operations. All companies operating land transportation, or providing services involving land transportation, should have a management system in place that covers land transportation operations and is based on a full assessment of risks and mitigations.

This Report is based on experience and current practices that have proven effective in reducing serious incidents.

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