International Association of Oil & Gas Producers

BUSINESS CASE | JUNE 2018

The case for Safer Vehicles

Part of IOGP Project Safira, for no more fatalities in the upstream industry

IOGP calls on its Members to purchase, lease or contract new light vehicles that have a 5-star NCAP rating from the 1st of January 2019 where available.

No loss of life is acceptable, people are vulnerable, and we share the road. If we acknowledge this, we realise that crashes may happen even to the best trained, well rested, experienced drivers.

So what can we do to protect our workforce? We can commit to putting them in vehicles that will provide maximum safety in case of a crash.

Why safer vehicles?

Since 2005, land transportation-related incidents reported by IOGP Members resulted in **186 workforce fatalities**. IOGP Members used to report more than 25 fatalities per year, in 2009 this number went down to 8 but there has been no significant progress since.

We need to do something different if we are to achieve zero fatalities. Moving to 5-star NCAP rated vehicles will help us get there.

This improved safety will also benefit the communities we work in. IOGP Members typically sell vehicles after 3-5 years of use; vehicles have an average lifecycle of 20 years, therefore we will create an enduring legacy in our communities by only adding 5-star NCAP rated vehicles to the second-hand market.

A 5-star rated vehicle lowers the risk of fatal injury by 68% compared to a 2-star rated vehicle, and by an estimated 12% compared to 4-star rated vehicle.

Source: European Commission report: Vehicle Safety 2016

Every year 1.25 million people are killed on the road. If nothing changes, road traffic injuries will become the fifth leading cause of death by 2030 (Source: WHO). **IOGP Members can help**

What is NCAP?

Nine regional New Car Assessment Programs (NCAPs) conduct **independent research and testing** programmes to assess the comparative safety characteristics of motor vehicles in a given market, and rate them 0 to 5-stars. The link between NCAP crash-testing and real life crash outcomes is proven through multiple USA and European research studies.

The nine NCAPs are: ANCAP (Australia), ASEAN NCAP (Southeast Asia), C-NCAP (China), EURO NCAP (Europe), IIHS & NHTSA (USA), JNCAP (Japan), KNCAP (Korea), LATINNCAP (Latin America & Caribbean). An NCAP for India is just starting off. More information can be found at http://www.globalncap.org/

Readiness to execute

5-star vehicles are available in all NCAPs, except in India where NCAP has just started. **In most regions over 50% of tested vehicles were 5-stars**. In Europe for example, 72% of cars tested in 2017 were 5-star rated, however, there were still cars receiving zero stars.

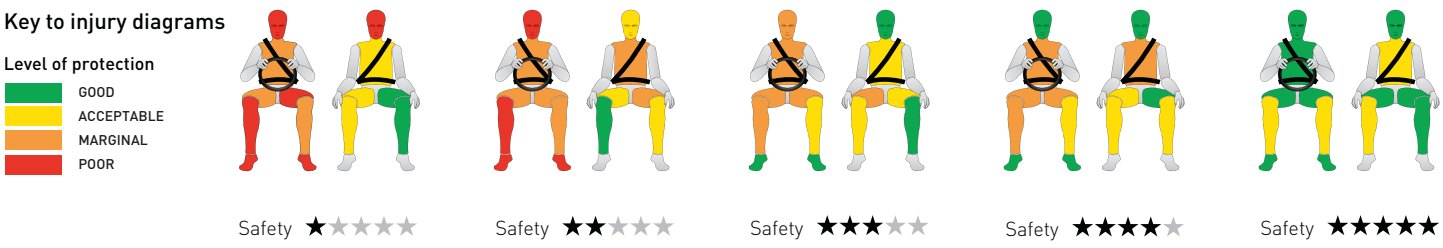

Figure 1: Injury diagrams for each star rating – example from ANCAP

The same car model will not necessarily be built to the same standards and be equipped with the same safety features around the world. Therefore, **IOGP recommends Members ensure newly purchased vehicles are 5-star rated by the relevant Regional NCAP**.

In countries with no NCAP, or no 5-star rated vehicle available, IOGP recommends the following:

1. Work directly with the OEMs to make availability of 5-star cars a reality – see the change in Australia in just a few years.
2. If OEMs can not make the vehicle available in country, explore if you can import vehicles from a region with NCAP rating
3. If importing vehicles is also not feasible, require compliance with the following (and document this via a deviation process):
   - Frontal & Side collision protection (UN Regulation 94 & 95)
   - Seat belt anchorages belts and restraint systems (UN Regulation 14 & 16)
   - Electronic stability control (UN Regulation 140/GTR)
   - Pedestrian safety (UN Regulation 127/GTR 9)

   (If Autonomous Emergency Breaking is available, IOGP also highly recommended it)

Will a 5-star NCAP rated vehicle increase cost?

A safer vehicle will better protect employees from serious injury and death, as a consequence it will reduce financial impacts of a crash. Research by the Network of Employers for Traffic Safety (NETS) shows that a fatal crash is 10x more costly on average than a non-fatal injury, which is itself 10x more costly on average than a property damage only crash.

5-star rated vehicles are available in many markets at lower or equivalent price points than vehicles in the same class. For example, in the USA, the Ford F-Series was the bestselling truck in 2017, it is rated 5-stars and costs about $54k for the RWD model. An equivalent RAM 1500 (third most popular) is rated 4-stars, it costs $46k. However, a Honda Ridgeline, rated 5-stars, costs about $43k – cheapest of all three.

The cost of airbags, Electronic Stability Control and body strengthening is about $250-300 to a manufacturer (these are the fundamentals for a 5-star NACP rating). In general safety packs available to raise vehicles to 5-stars cost around $500-1000 but may include non-safety related items. In the UK you can purchase a Toyota Hilux that is 3-star rated, if you add a Safety Sense pack to bring up to a 5-star rating, it'll cost you an extra £437 (~$612).

Has anyone done this already?

BHP Billiton committed to 5-star ANCAP rating in 2012

- Banned the fitment of devices such as bull-bars and rollover protection that could impact the 5-star rating, saving ~A$15,000 per vehicle in aftermarket costs
- Reduced contractor compliance verification from months to days
- Allowed contractors a up to 4 years to conform
- Successfully influenced Toyota to upgrade the popular Hilux from 4 to 5-Star ANCAP and as a result lifted the safety standard of 40,000 light vehicles per year in Australia.

View from another IOGP Member with offices in Australia: ***"We can now purchase 5-star rated vehicles at base spec, and in most cases cheaper than they were several years ago"***

Appendix – Example contract clause

All CONTRACTOR provided Light Vehicles used during the performance of the WORK that are newly purchased, leased or subcontracted after DATE, shall have New Car Assessment Program (NCAP) safety rating of five (5) stars where available in the region of purchase. In regions where a 5-star Regional NCAP rated vehicle is not available, 5-star NCAP rated vehicles shall be imported from another region, or a deviation shall be requested from the contract manager.

Avoiding the financial costs of crashes

Calculation of 5-star vs 3-star NCAP vehicle for an example company

WorldWideOil has on average 155 vehicle crashes a year of which 5 are resulting in non-fatal injury. Once every 10 years a vehicle crash results in fatality. Current fleet mainly 3-star NCAP rated vehicles. Fleet is replaced once every 4 years.

	Costs in USD per crash	# Crashes	Total costs in USD	Reduction %	Cost saving in USD (per year)	Total cost saving over vehicle lifecycle (4 years) in USD
Crash – property damage only	5,890	150	883,500	10% (#15)	88,350	
Crash – non fatal injury	64,981	5	324,905	20% (#1)	64,981	
Crash – fatal injury	671,514	0.1	67,151	24% (#0.024)	16,116	
Totals					**169,447**	**677,788**

In general safety features available to raise vehicles to 5-stars cost around $500-1000 at point of sale. Applying a $750 average per new purchased 5-star vehicle means that *WorldWideOil* could purchase 900 vehicles and still be financially covered by the avoided costs of crashes ($678k).

Source: NETS report: *Cost of Motor Vehicle Crashes to Employers – 2015*, and try their online Cost of Crashes Calculator