

# Causation of Fatal Collisions Involving Commercial Vehicles

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# National Highways Fatality Research Database (NHFRD)

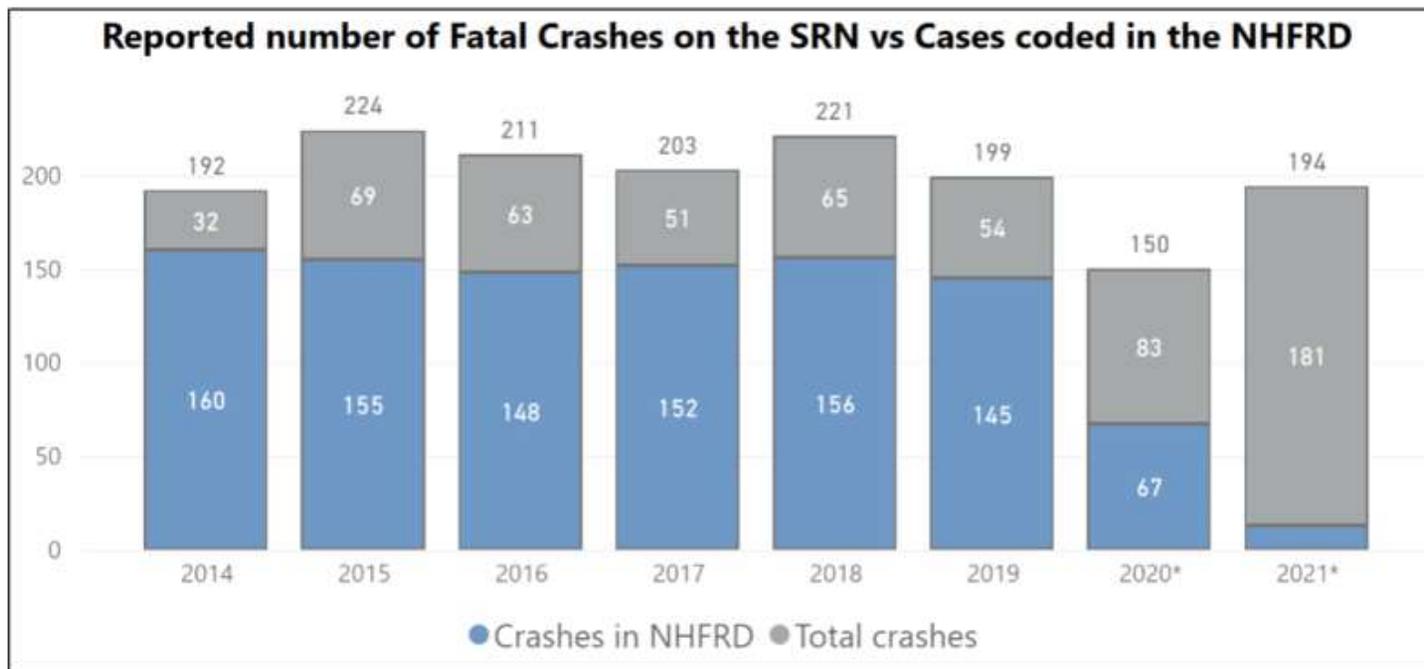
## Overview

- NHFRD is an in-depth fatal collision data collection programme managed by TRL on behalf of National Highways.
- The primary objectives of the programme are to obtain collision investigation files from police forces for fatal collisions that occur on the SRN, analyse the case files and record relevant information in the database.
- The NHFRD programme aims to code 150 cases per year.
- The programme is designed to provide detailed evidence on the causes and consequences of fatal road collisions on the SRN in order to create an evidence base for further interventions to improve road safety on the network.



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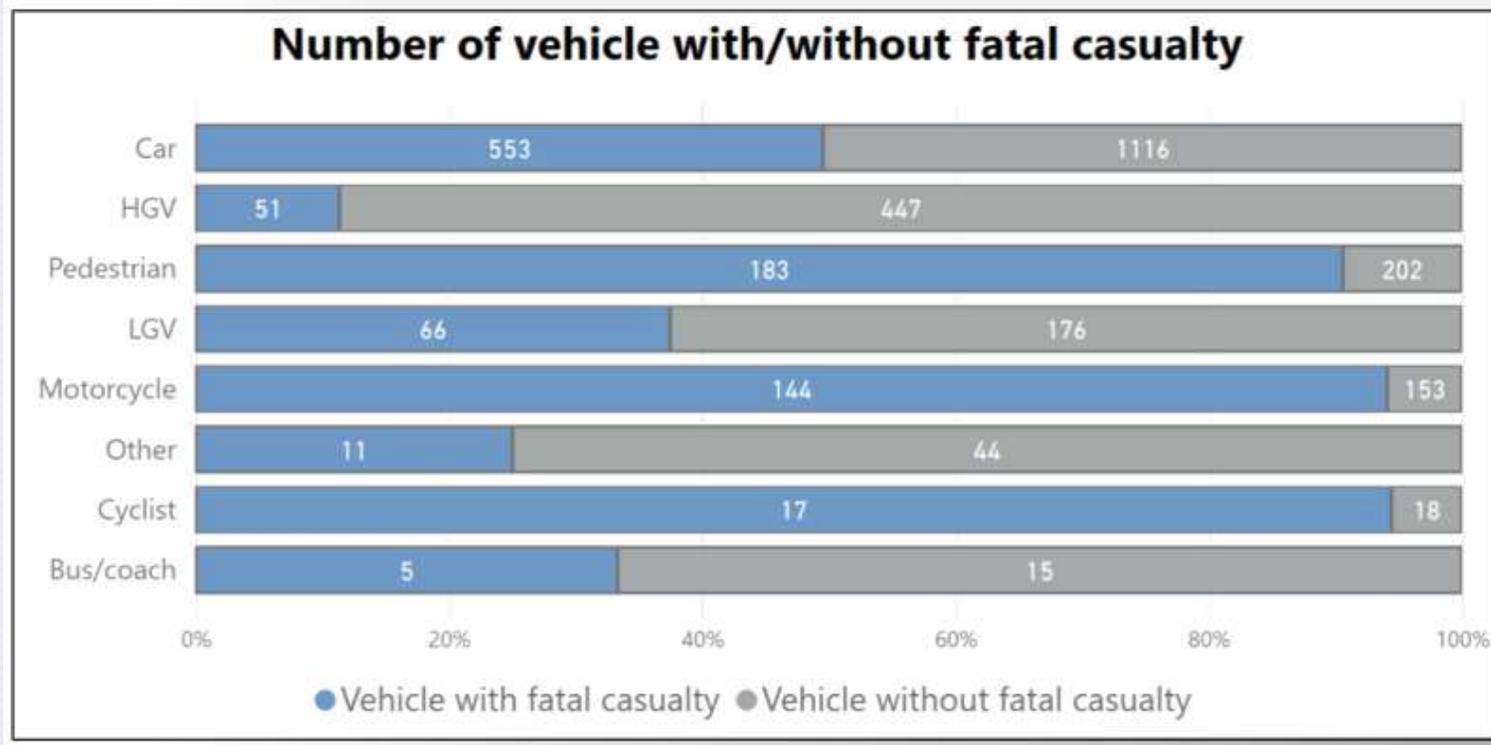
## Overview



*\*Data for 2020/21 is incomplete throughout this report as some files are still being processed*

# National Highways Fatality Research Database (NHFRD)

Overview

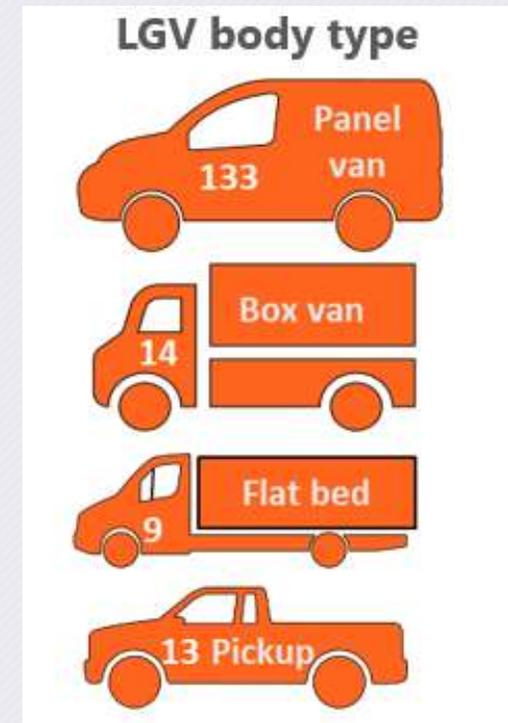
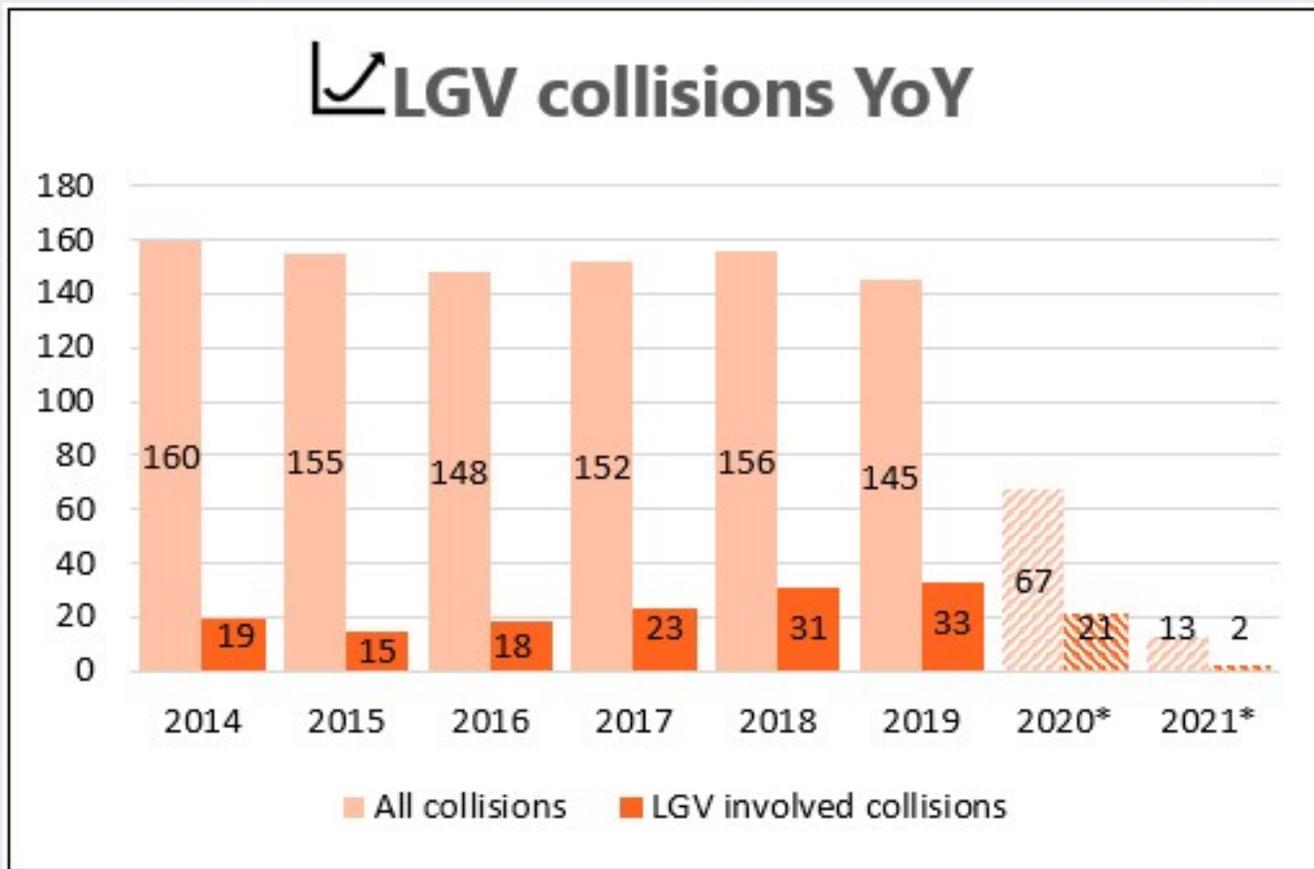


## Report structure

Full report is in your delegate packs



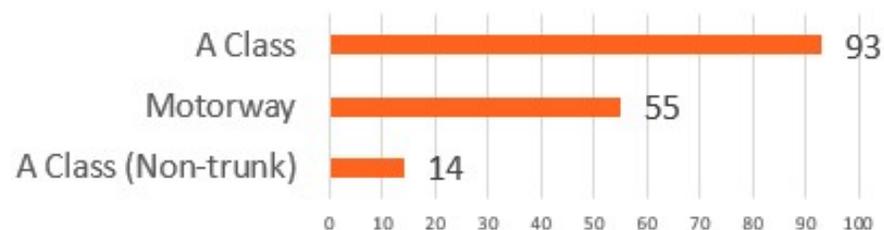
## Focus on LGVs



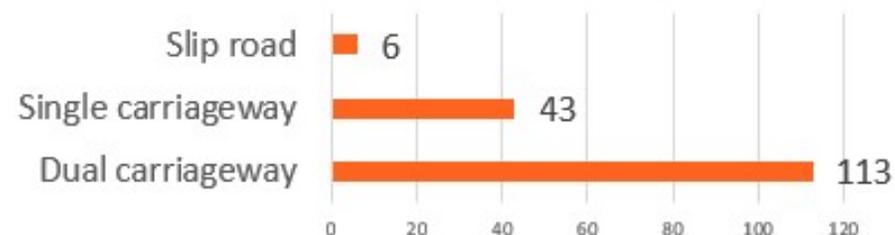
## Where do these collisions happen

- A higher proportion of LGV crashes occur on the 'A' class roads (57%) followed by Motorways (34%)
- Majority of the LGV crashes on the SRN occur on dual carriageways (70%)

### Road class

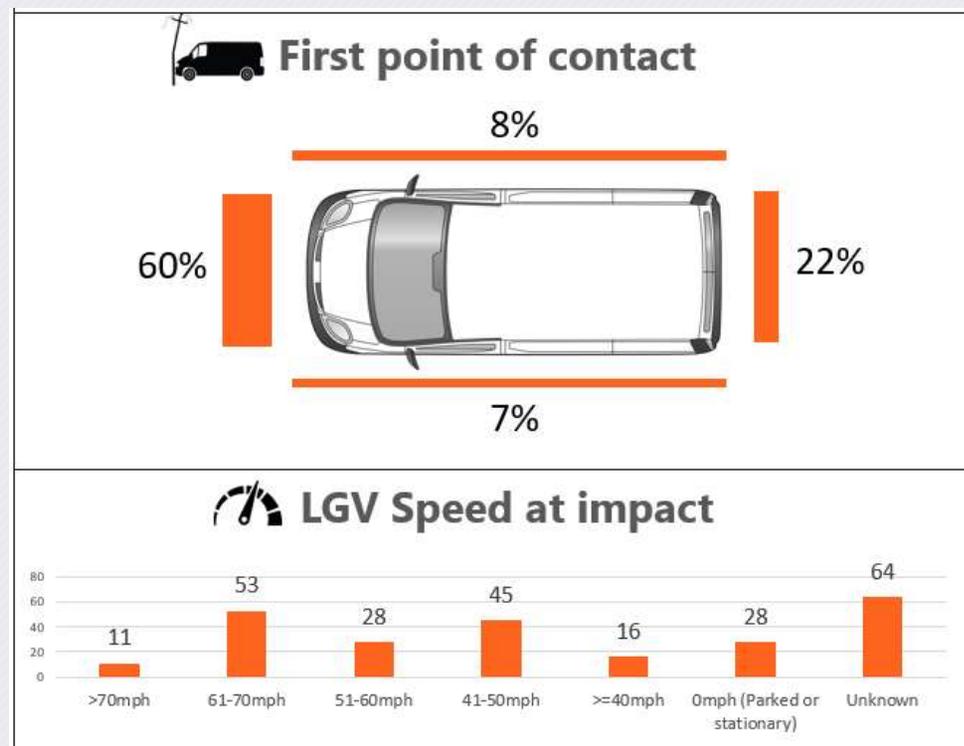


### Carriageway type



## Types of collision

- Majority of the LGV collisions involve two vehicles (57%), and a notable proportion (36%) of LGV crashes involve multiple vehicles (3+)
- The most frequent collision types are rear-end collisions, head-on collisions, and hitting an obstruction.
- 26% of LGV collisions occur at speeds exceeding 60mph, emphasizing the need for swift action on high-speed incidents.



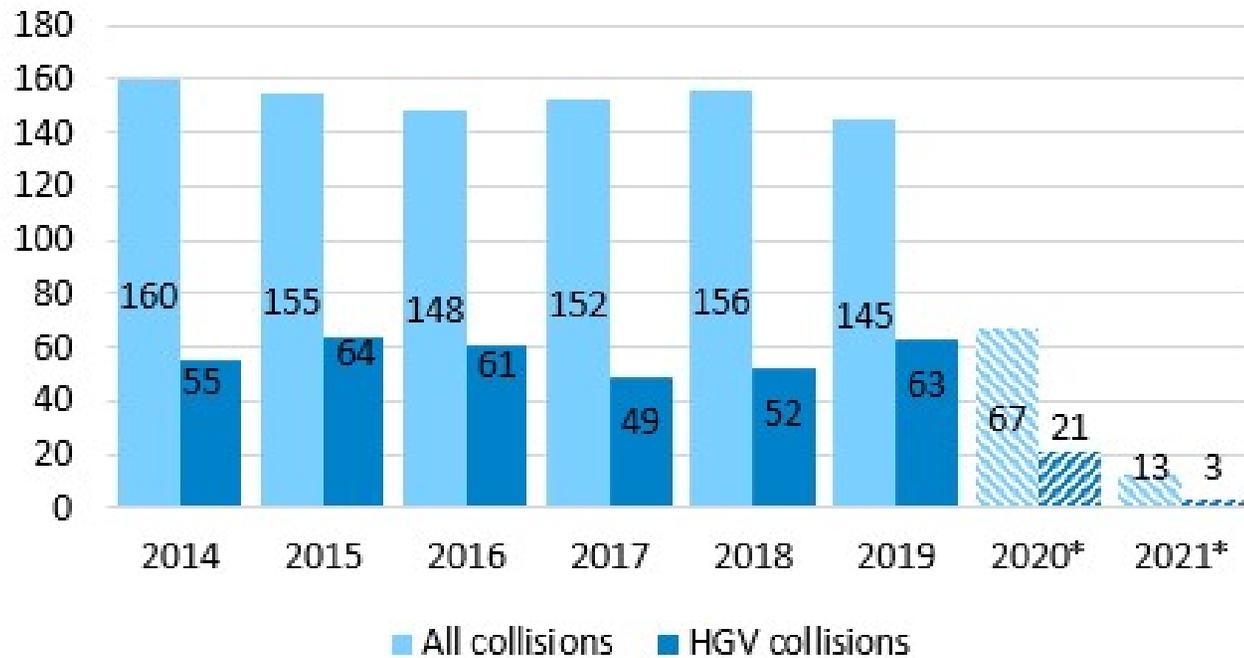
## Human factors

- Causation is primarily related to driver factors, highlighting the urgency for driver-centric safety measures
- 13% of the LGV drivers were impaired by alcohol and/or drugs
- 12% of LGV occupants were found not wearing seatbelts, urging immediate attention to reduce injury severity

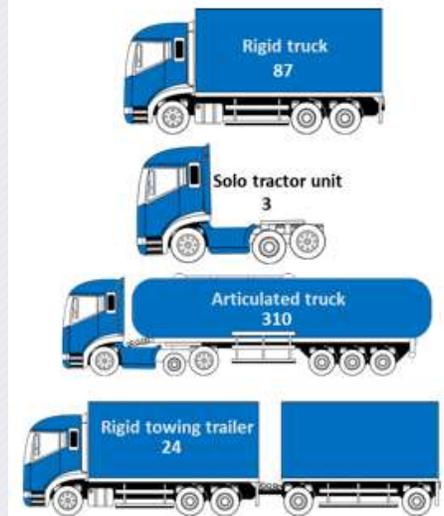


## Focus on HGVs

### ✓ HGV collisions YoY

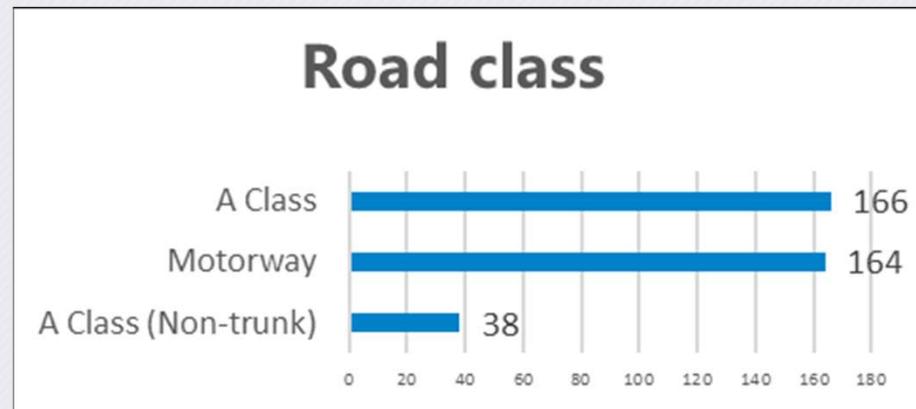
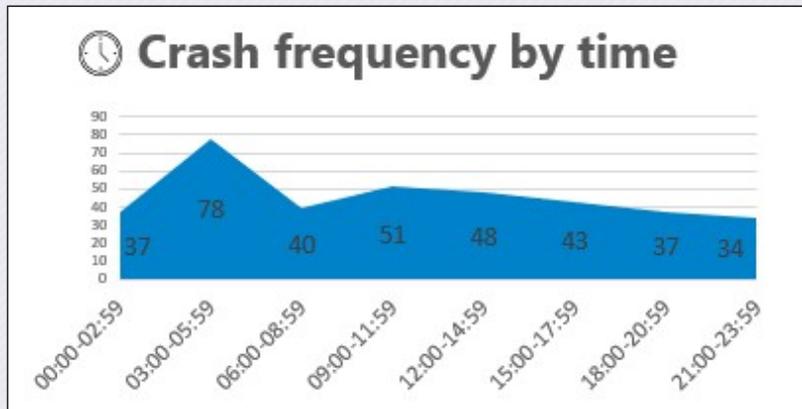


### HGV body type



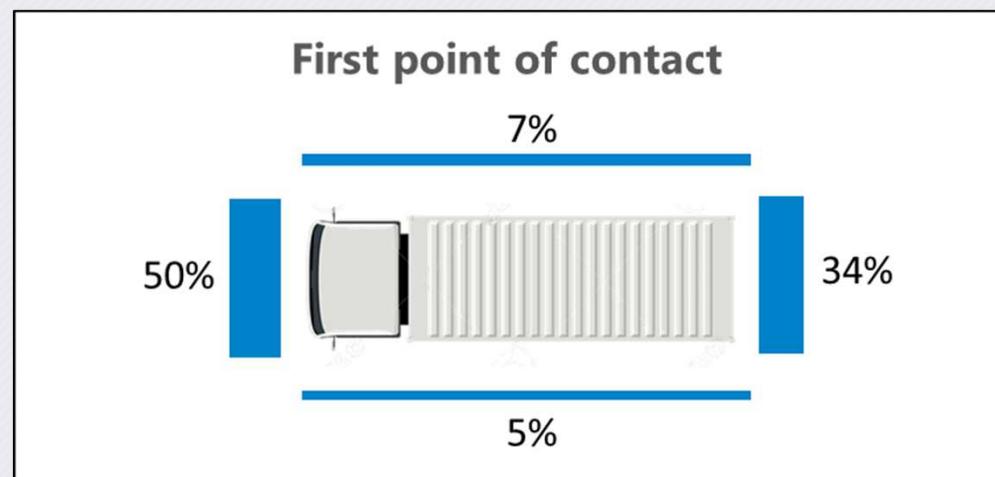
## Where do these collisions happen

- Peak collision time for HGVs is 03:00-05:59, followed by 09:00-11:59 and 12:00-14:59, indicating the need for targeted safety measures.
- Majority of the HGV crashes occur on dual carriageways (76%).



## Types of collision

- Predominant collision partners are Cars and HGVs with 65% of them being 2-vehicle collision.
- Majority of the HGV collisions involve two vehicles (66%), followed by multiple vehicles (3 or more vehicles, 31%) and single-vehicle collisions (4%).
- Within the database, 76% of collisions involving a collision with an obstruction (includes parked or broken-down vehicle) involve HGVs, urging the need for in-depth analysis.



## Human factors

- Causation is primarily related to driver factors, highlighting the urgency for driver-centric safety measures.
- Inattention, fatigue and distraction are commonly recorded as driver causation factors, underscoring the need for interventions to enhance driver attentiveness.



## Rear-end collisions

More than two thirds of rear-end collisions involve a commercial vehicle (43% HGV + 25% LGV)

997 cases within the NHFRD (2014 – 2022)

**12% (120 of 997)**

**involves a rear end collision**

Out of the 120 cases - **355 vehicles** directly involved and  
**434 recorded occupants**

## What can we do?

**25%** of all rear end fatal collisions could have been prevented if the last vehicle had stayed back



### Top five countermeasures for rear-end collisions



Driver alert for approaching temporary hazard (roadworks, broken down vehicle, queue)



System design to reduce distraction from in-vehicle devices



# Thank you

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