SAFER TRUCKS

Protecting vulnerable road users in London

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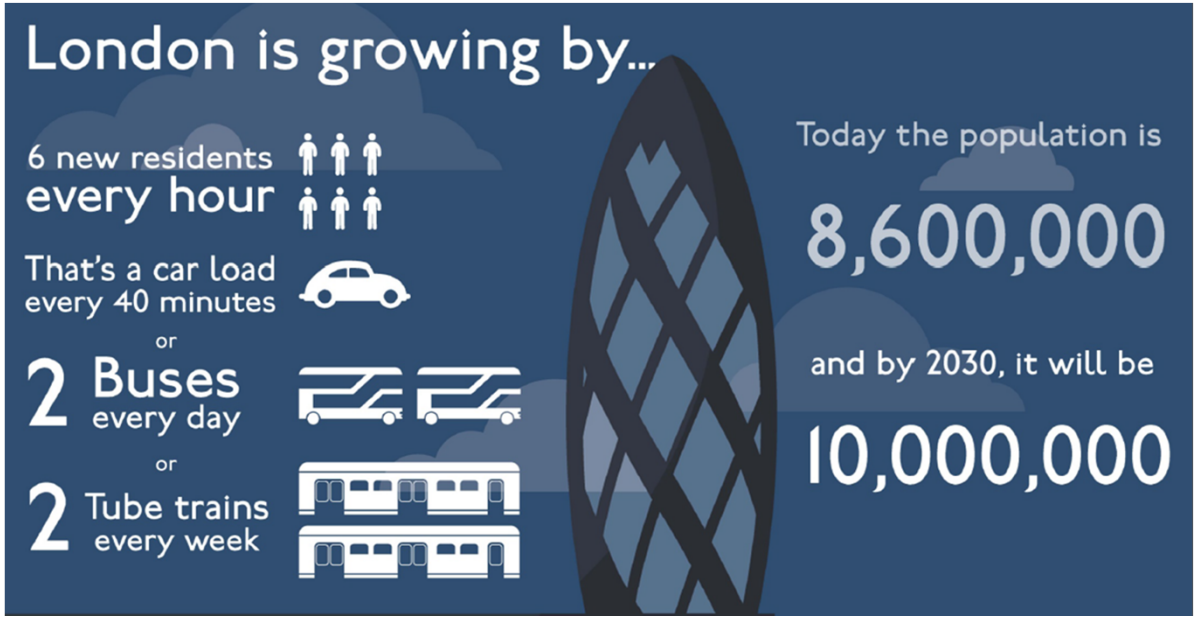
London Context

- 8.6 million people + visitors
- Elected Mayor – Greater London Authority
- 33 Boroughs

- 30 millions trips per day
  - 4m by bus
  - 3m by underground
  - 3m by rail
  - 11m by car / motorcycle
  - 7m on foot
  - 600,000 by bicycle



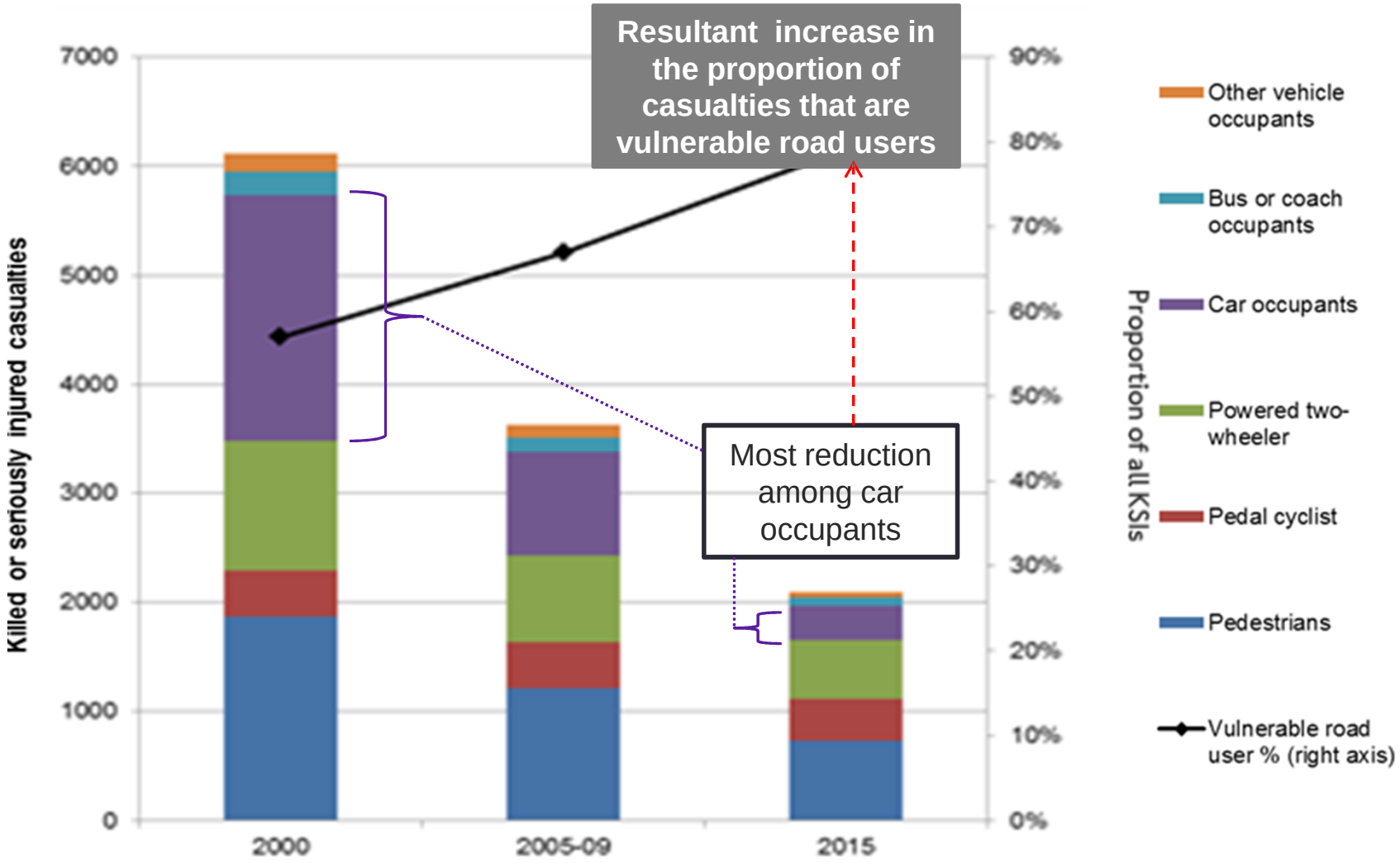
Mayoral Priorities

- Healthy Streets
- Improving Air Quality
- New homes and jobs
- **Vision Zero**

'No loss of live inevitable or acceptable'

'Eliminate death and serious injuries on the transport network by 2041'

Road safety in context

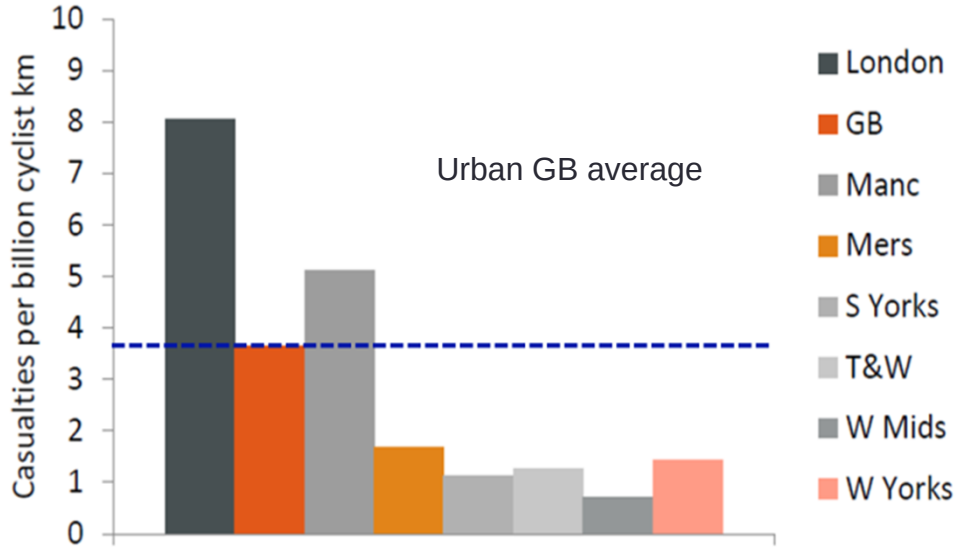


Specific issue with Heavy Goods Vehicles (HGVs) and vulnerable road users

HGVs disproportionately involved in fatalities with pedestrians and cyclists

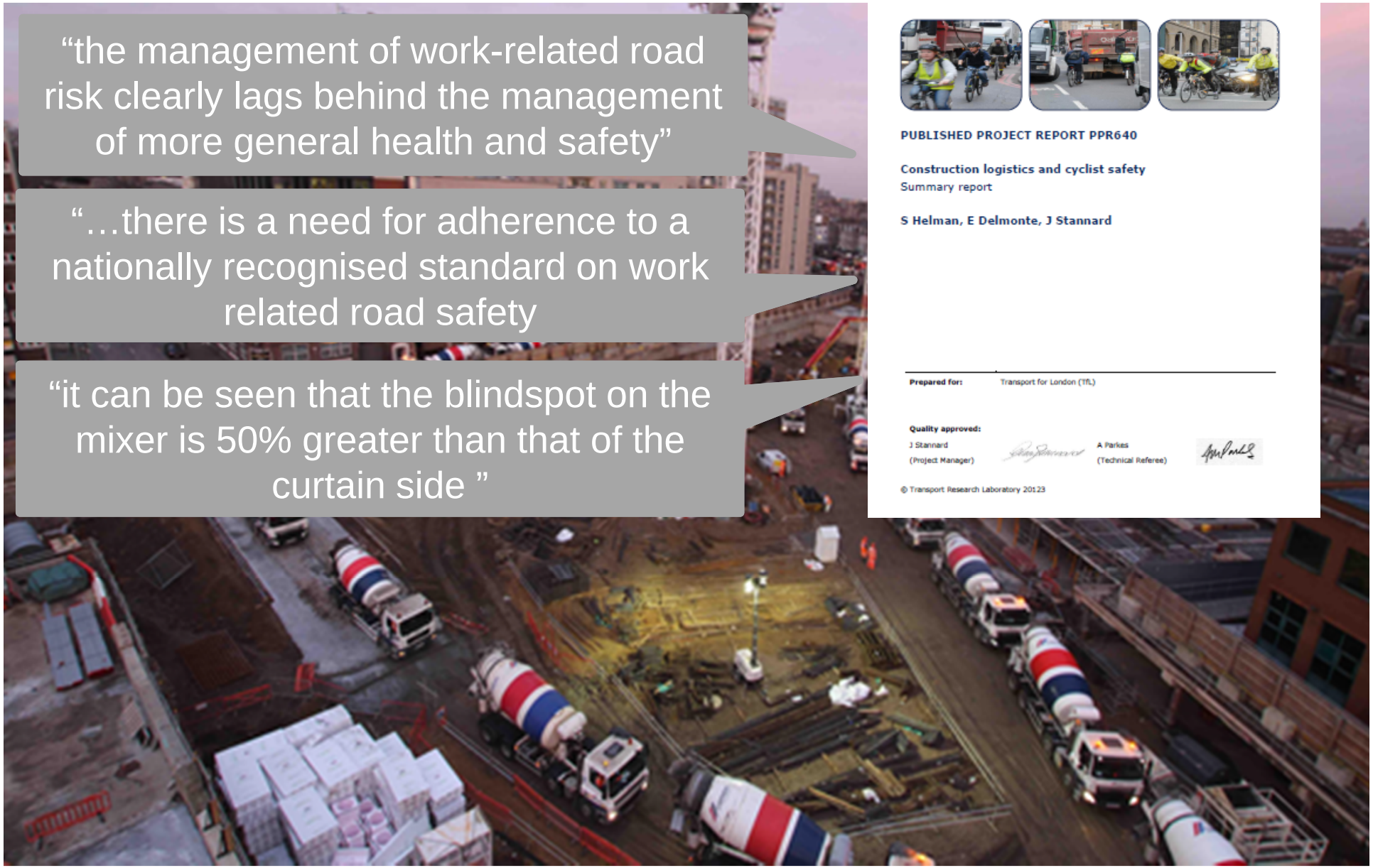
HGVs make up just **4%** of road kms in London but: involved in:

- **70%** of cyclist fatalities
- **20%** of pedestrian fatalities
- London worse than rest of UK
- Poor vision – the **'Blindspot'** is cited as common causal factor
- **Larger, construction-related vehicles** further over represented



Cyclist casualties from collisions with HGVs – London v GB regions 2006-2015

Evidence for change



"the management of work-related road risk clearly lags behind the management of more general health and safety"

"…there is a need for adherence to a nationally recognised standard on work related road safety

"it can be seen that the blindspot on the mixer is 50% greater than that of the curtain side "

Transport Research Laboratory
Creating the future of transport

PUBLISHED PROJECT REPORT PPR640

Construction logistics and cyclist safety
Summary report

S Helman, E Delmonte, J Stannard

Prepared for: Transport for London (TfL)

Quality approved:
J Stannard (Project Manager)
A Parkes (Technical Referee)

Industry-led response

Who is in a position to influence change?

Structured programme & clear objectives

Construction Logistics and Community Safety (CLOCS) Programme

Workstream 1:

Encouraging best practice in construction logistics through **common standards**

Workstream 2:

Addressing the **safety imbalance** between on site and work related road safety

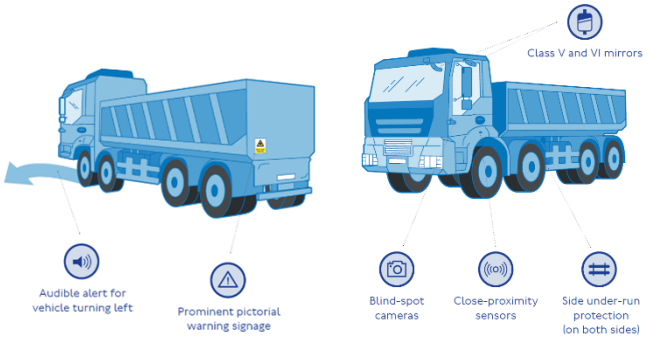
Workstream 3:

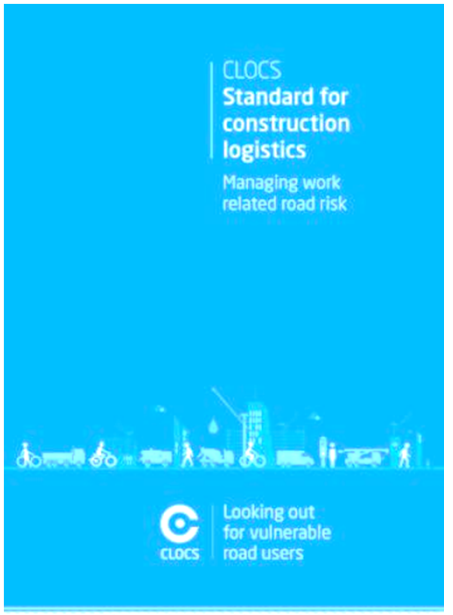
Improving **vehicle safety** through manufacture and design

Common standards for managing work related road safety

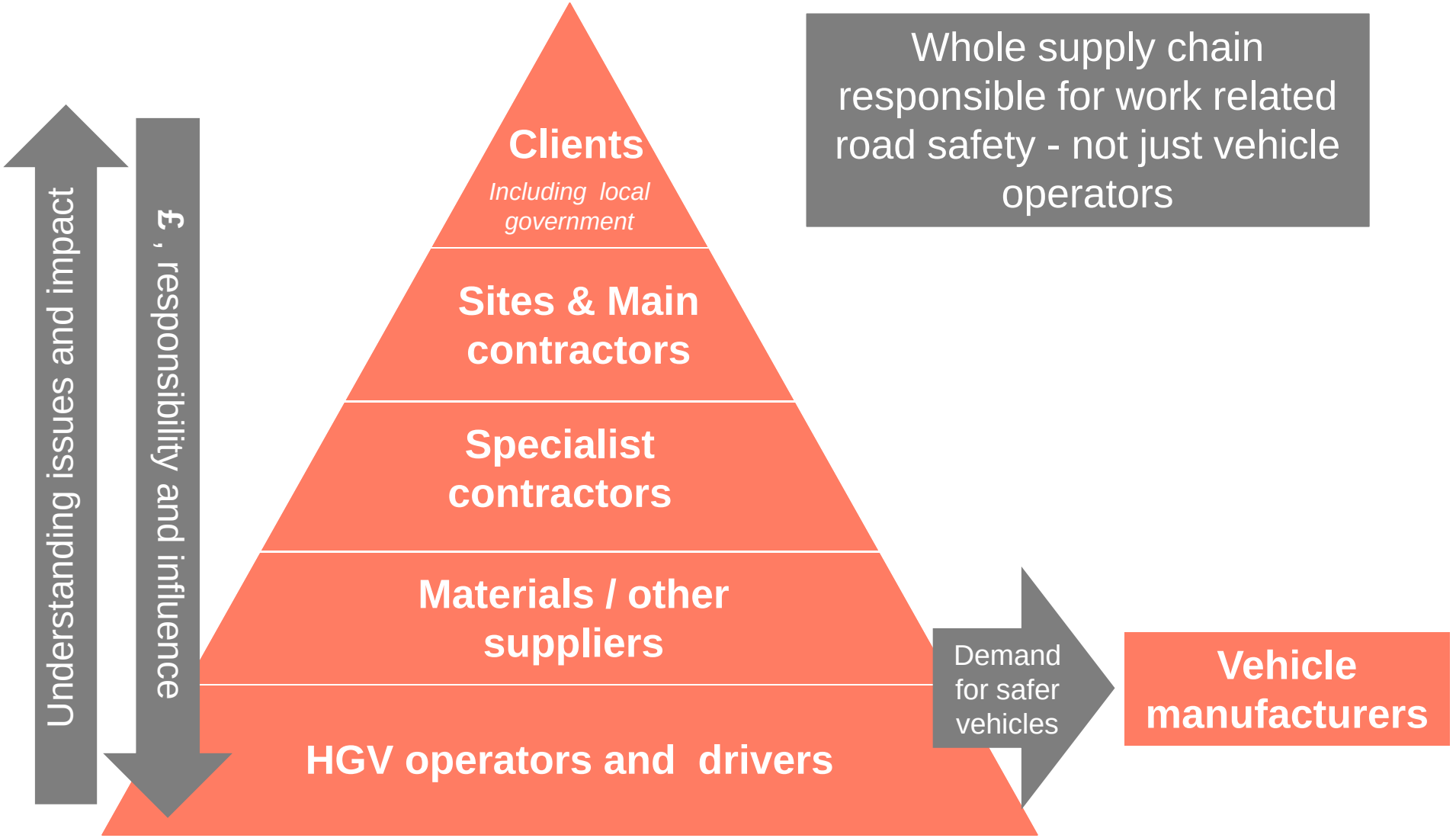
"85% of industry want one common standard"

- Developed by industry working group
- **11** standards, policies and codes of practice into **1** common standard
- Enables ownership and management of work related road safety
- 16 requirements with solutions to reduce risk of collisions for:
  - Responsible **clients**
  - Safer **operations**
  - Safer **drivers**
  - Safer **vehicles**





Use of buying power



Whole supply chain responsible for work related road safety - not just vehicle operators

Evolution of truck design

1970 1980 1990 2000 2010

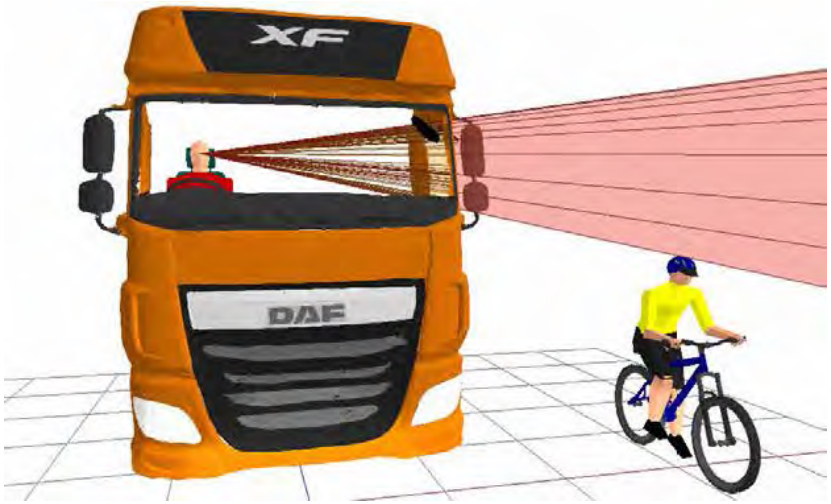
Retrofit ‘Blindspot’ technology

Devices and systems need to be tested and user reviewed to ensure fit for purpose and meet safety objectives

- 2011: **5** technology providers at market
- 2018: **50+** technology providers at market
- No fully independent testing or understanding of many systems
- Retrofit solutions and ‘indirect vision’ **– what about the root cause?**

Understanding direct vision

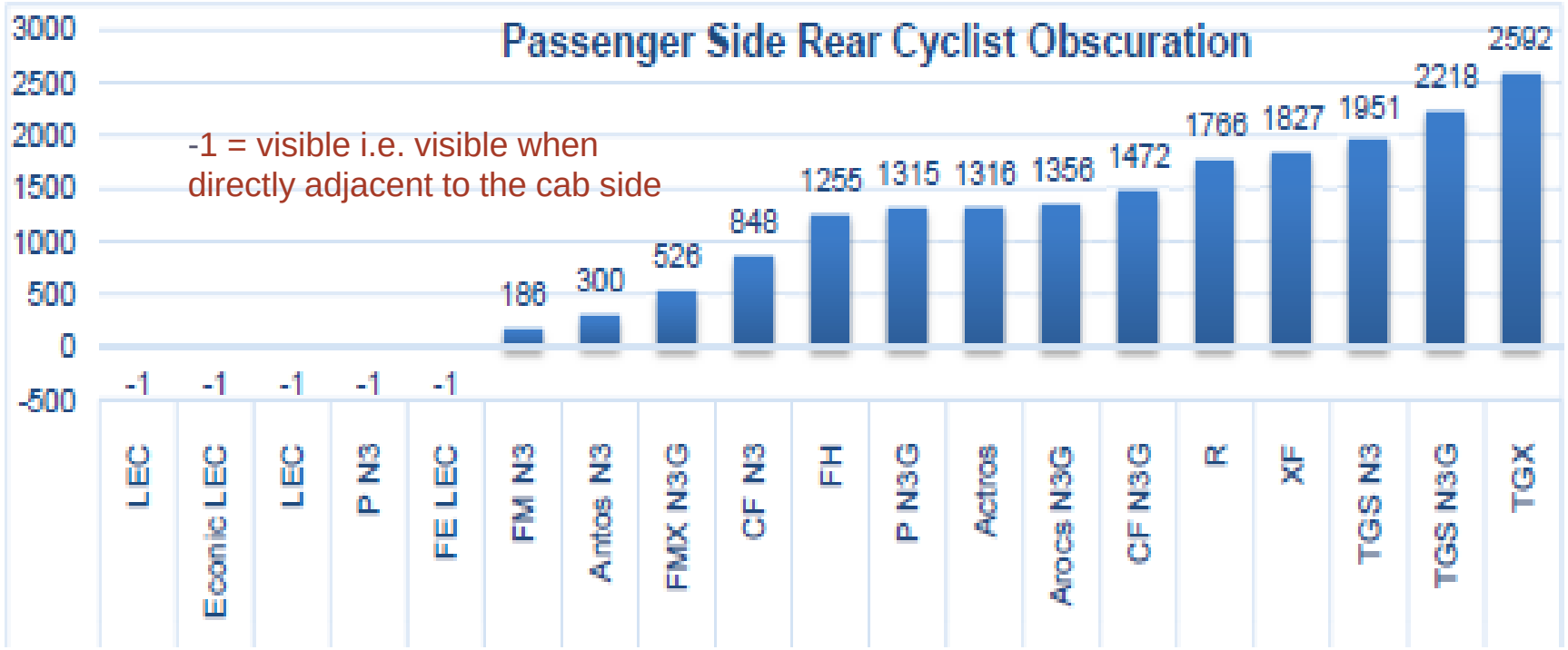
Indirect vision – What the driver can see through mirrors or cameras



Direct vision – what a driver can see through the windows rather than using mirrors or cameras

Variation in Direct Vision - nearside

Up to 2.5 metre difference in blind-spot



The case for Direct Vision

ARUP

UNIVERSITY OF LEEDS

Research undertaken exploring the road safety benefits of direct vision

Slower response time

Indirect vision has a 0.7s slower response time

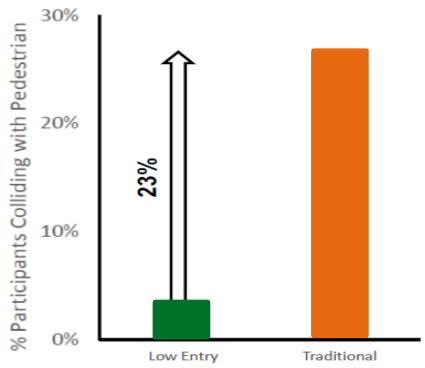
Risk increases with speed as more distance travelled

Extra distance in urban environment especially high risk

Speed	Distance
15 mph	4.7m
10 mph	3.1m
5 mph	1.5m

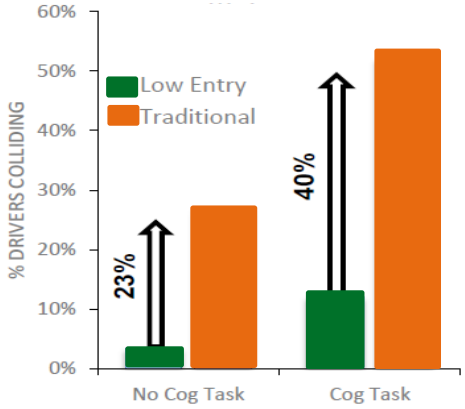
Bigger collision risk

Indirect vision resulted in increased incidence of simulated pedestrian collisions by 23%



Limits to technology benefits

Drivers processing a cognitive task increased simulated collision by 40%



Changing perceptions

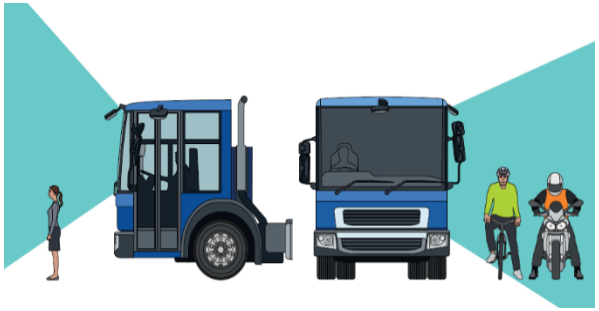
‘I feel much more confident driving in the higher vision cab. I don’t want to go back to a standard tipper’

“I’d say just give it a go, it’s opened my eyes. I didn’t see how it could be improved before”

‘As a lorry driver, it pains me to say this, but its actually pretty good’

‘You just need to sit in one of the old cabs then get in the new one to realise how important this change is’

Direct Vision Standard (DVS)



Measure

- The world's first and only HGV Direct Vision Standard
- It's an **objective measurement** of the visible 'volume of space'

Rating

- This measurement is converted to a 'star rating' from zero (worst) to five (best)
- Loughborough University have worked with the principal manufacturers

Application

- Informs operator purchasing decisions - most suitable vehicle for the city Manufacturers can use it to improve future designs
- Future European regulations governing HGV designs – an **International DVS**
- Accelerated adoption of safer HGVs in London
    - DVS and HGV Safety Permit Scheme
    - Use in contracts by clients

Proposal for London: HGV Safety Permit

An HGV Safety Permit – London-wide, operating 24/7

- Current HGV fleet has poor direct vision
- Safety Permit aims to improve the overall safety of existing HGVs
- From 2020, largest HGVs require a permit to enter Greater London

2020: all **zero** star HGVs banned
Unless they prove a **'Safe System'**

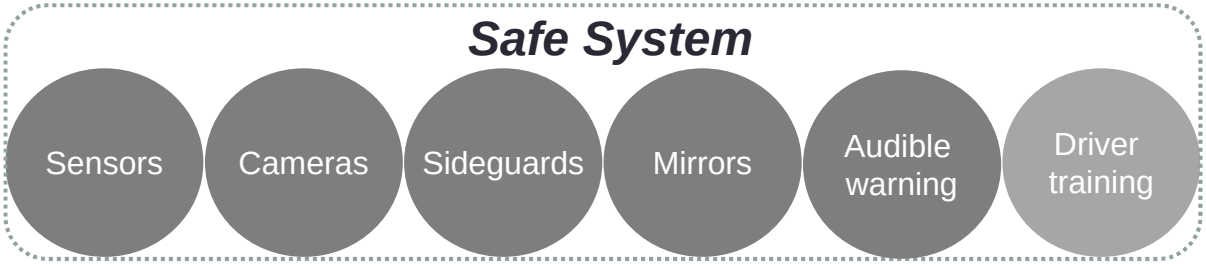
2024: all **zero - two** star HGVs banned
Unless they prove a 'progressive Safe System'

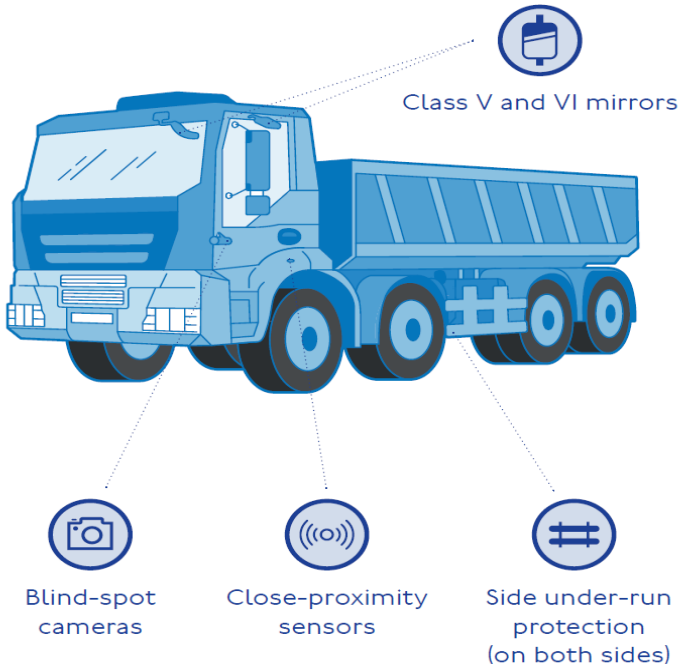
> 12t GVW

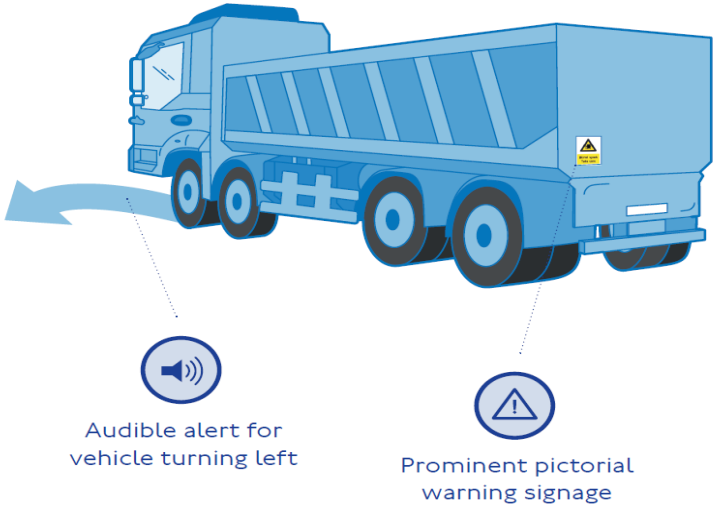
24/7

Final proposals being consulted on in January 2019

Safe System Proposal







Final proposals being consulted on in January 2019

Consistency is key

Shorter term – Standards and Buying Power

- Existing best practice schemes operating across the UK
  - Construction Logistics and Community Safety (CLOCS)
  - Fleet Operator Recognition Scheme (FORS)
- HGV safety standard permit scheme aligns with these schemes

Longer term - Regulations

- Lobbying European Commission to include DVS in General Safety Regulation (661/2009) – inclusion confirmed May 2017
- 17 European cities joined London in lobbying call
- EU-wide regulatory consistency supported by manufacturers
- Detail of regulation to be scoped at United Nations Economic Commission for Europe (UNECE) level

European Parliament

UNECE

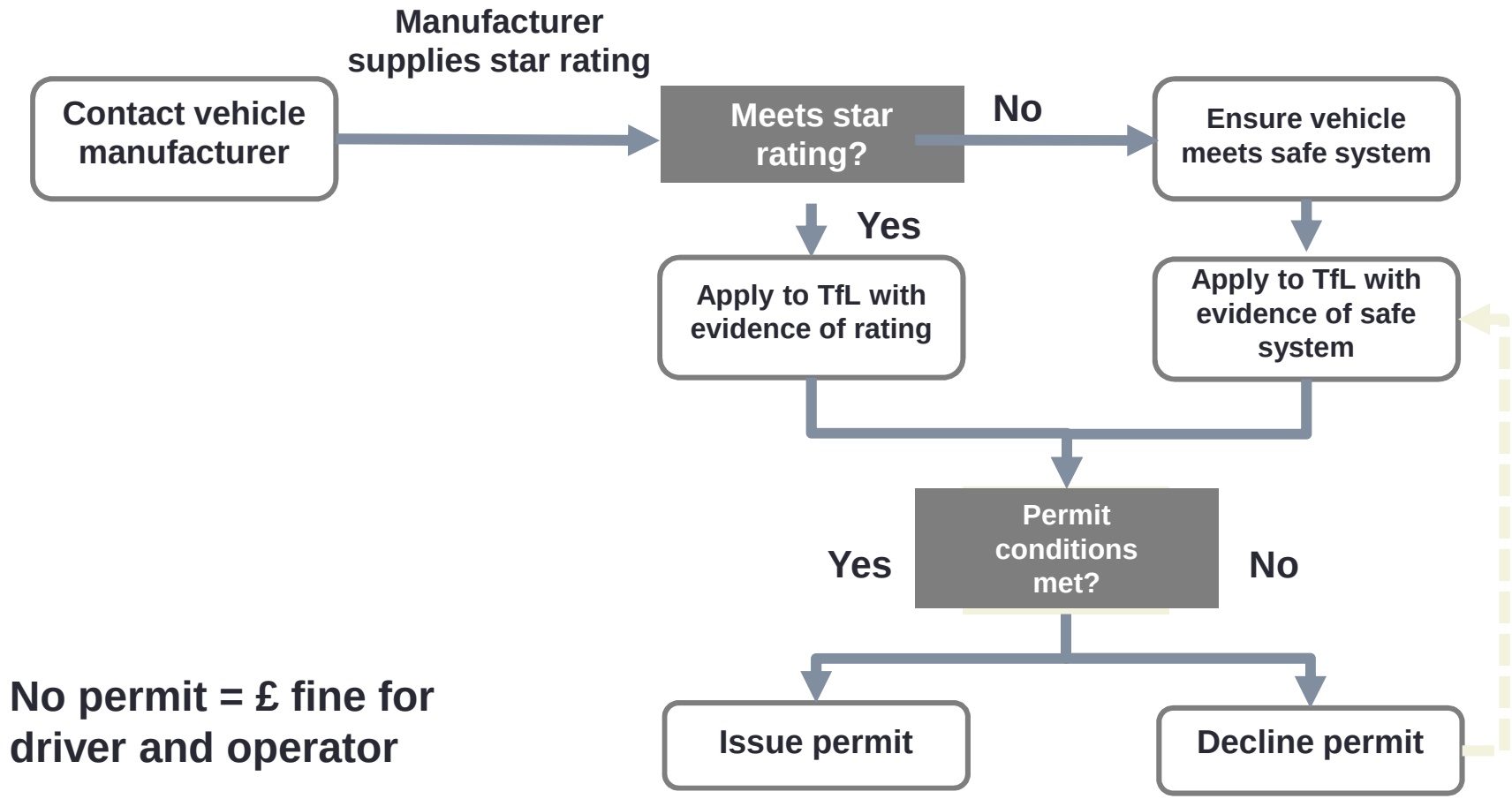
Further information

www.clocs.org.uk

www.fors.org.uk

www.tfl.gov.uk/direct-vision-hgvs

Obtaining a permit



No permit = £ fine for driver and operator

Final proposals being consulted on in January 2019