



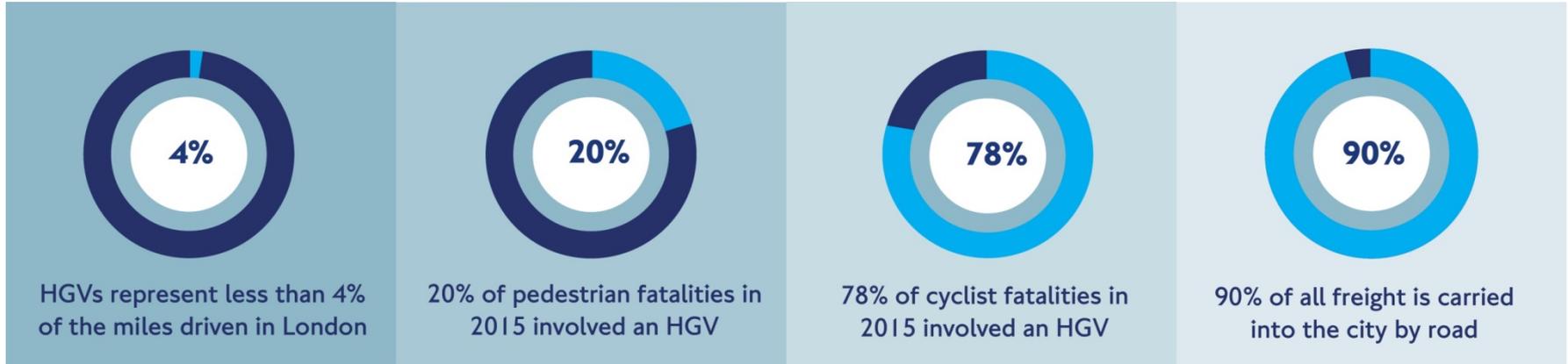
30 NOVEMBER 2016

Safer Trucks

Improving vulnerable road user safety through better vehicle design, training and purchasing decisions



Background



- A disproportionate number of vulnerable road user fatalities involve an HGV
- The relative risk of a collision involving a vulnerable road user and an HGV is increasing



Mitigating road risk

Safer operations

- Encouraging, supporting and recognising safe and compliant fleets

Safer people

- Improving driver and manager knowledge, skills and performance

Safer vehicles

- Stimulating innovative HGV design and providing evidence for change

Safer supply chains

- Using buying power and planning to manage road risk in supply chains



Evolution of truck design



Safer Trucks programme

Workstream

1

Improving the safety of existing vehicles through an approved testing methodology for retro-fit or dealer-fit HGV safety technology



Workstream

2

Evidence for next generation urban truck. Market research and technical research on operational off-road site conditions and benefits of direct vision



Workstream

3

Field of view standard and business case to support regulatory change through review of General Safety Regulation

Workstream

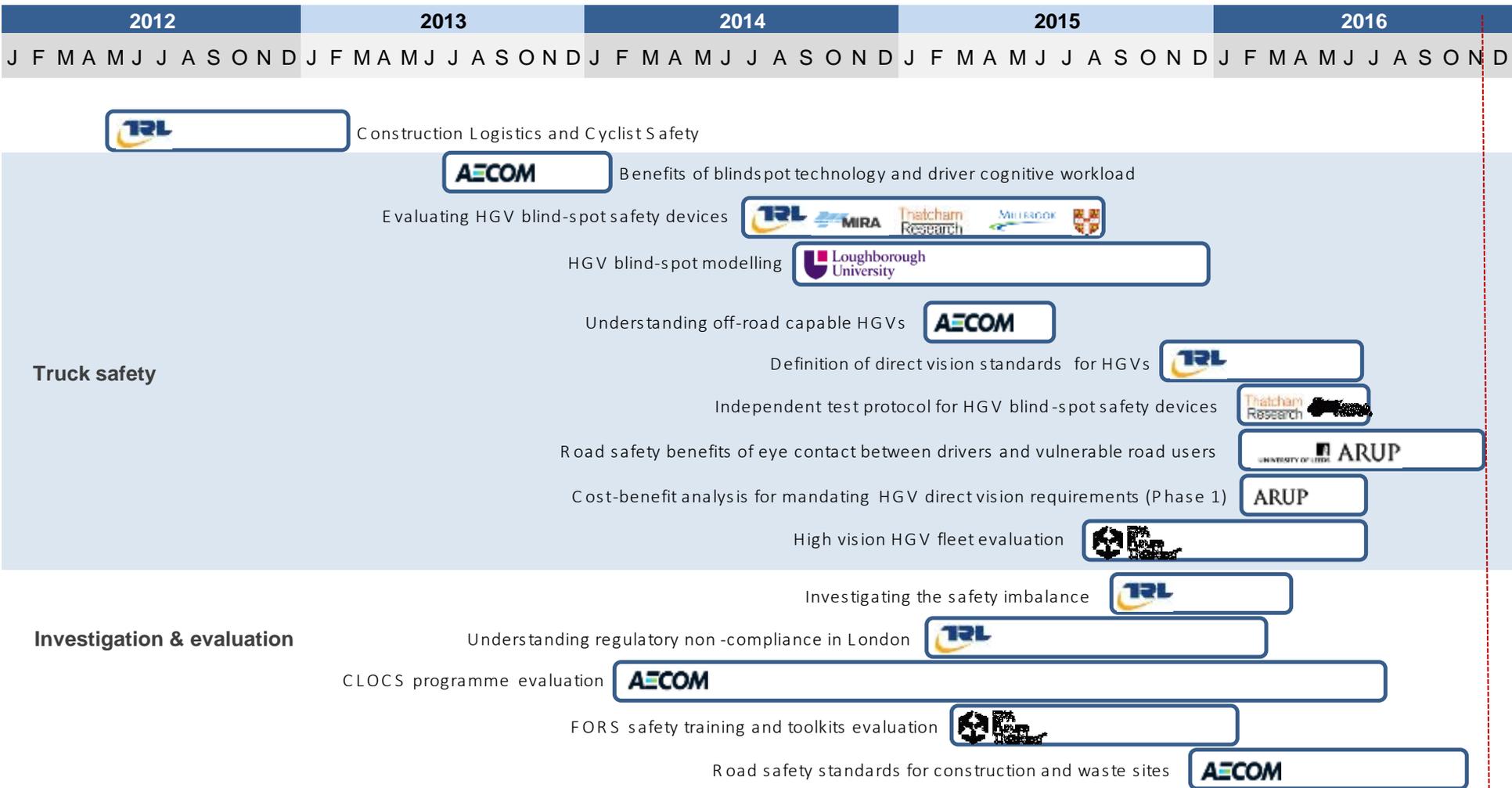
4

Encouraging uptake of 'safer trucks' through effective communications and programme evaluation



Comprehensive evidence base

Today



Existing fleet: retrofit blind-spot technology



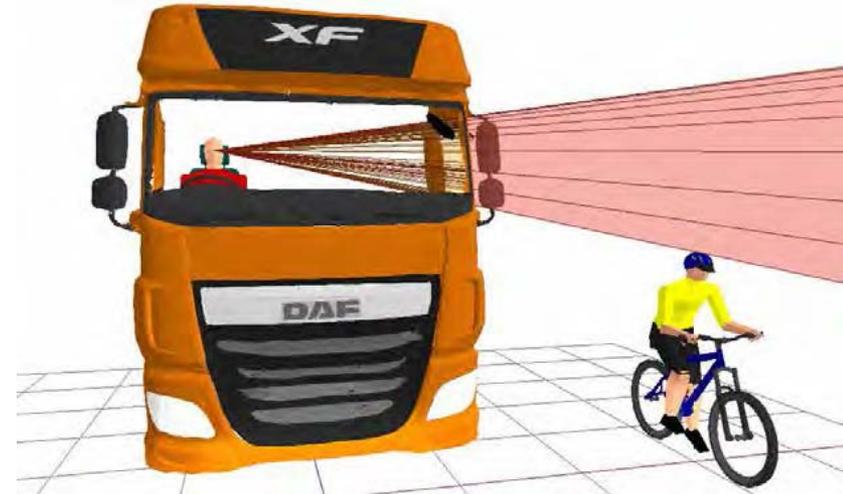
Use of devices and systems thoroughly tested and user reviewed which are fit for purpose and meet safety objectives

- 2011 – 5 technology providers at market
- 2016 – 50+ technology providers at market
- No fully independent testing of such systems is currently required
- Objective, repeatable and robust testing protocol for use by aftermarket product suppliers (and vehicle manufacturers)
- Verified online review forum for clients and operators for HGV safety equipment with potential for use for other products



Research: Understanding direct vision

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

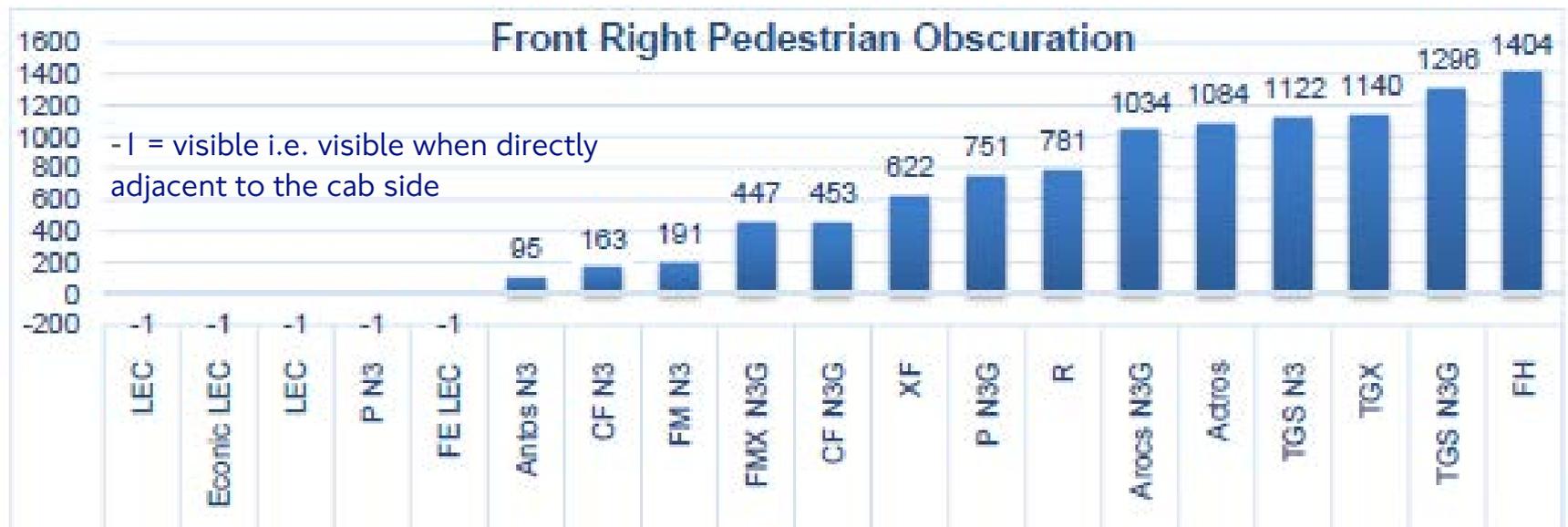
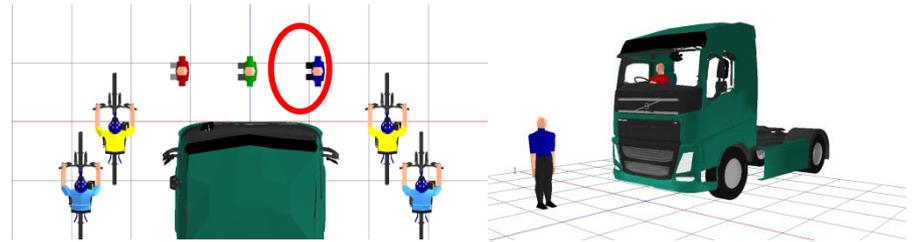


Direct vision – what a driver can see through the windows rather than using mirrors or cameras



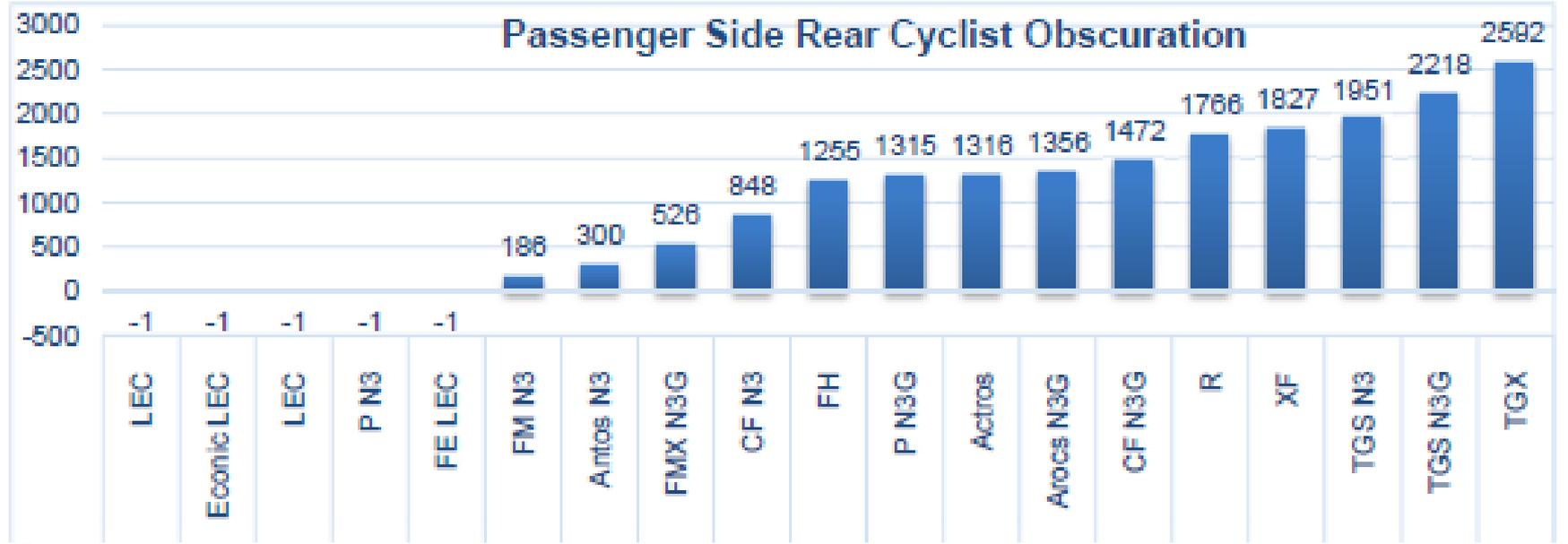
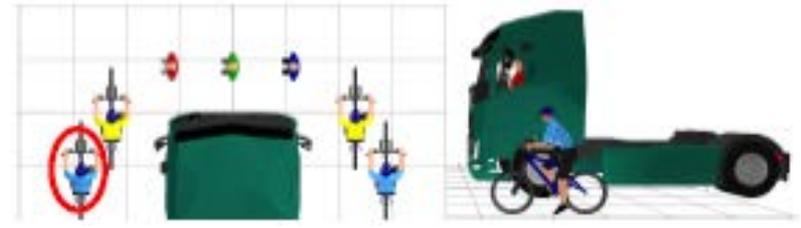
Variation in direct vision - front

Up to 1.4 metre difference in blind-spot



Variation in direct vision - nearside

Up to 2.5 metre difference in blind-spot



Research: Benefits of direct vision and eye contact

Commissioned to understand the benefit of direct over indirect vision in three phases:

- Literature review
- Surveys with drivers, cyclists and pedestrians
- Controlled laboratory experiments

First time this issue has been looked at in this way

“It’s human nature to recognise a persons face and react to it. Its more effective than cameras and mirrors”

Transport Manager



Research: Benefits of direct vision and eye contact

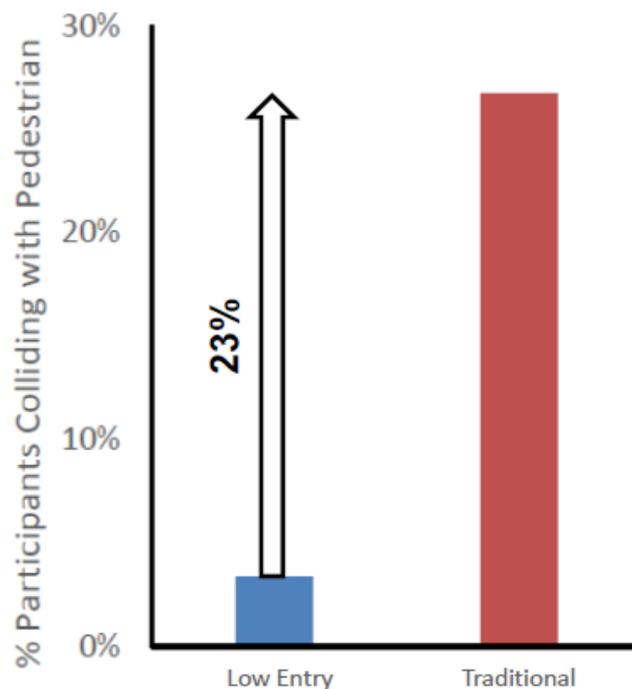
Lab experiments showed...

Indirect vision responses were on average **0.7s slower** compared to Direct viewing responses. This results in:

Speed	Extra Travel
15 mph	4.7m
10 mph	3.1m
5 mph	1.5m

Lab experiments showed...

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



Direct Vision Standards - Mayoral Commitments

Mayoral manifesto

- **Promote safer, cleaner lorries** – working with the boroughs and using City Hall procurement to set new safety standards moving towards City Hall and TfL contracts specifying ‘direct-vision’ lorries
- **Make cycling and walking safer**, with more segregated cycle routes, action on dangerous junctions, and safer lorries

A City for all Londoners

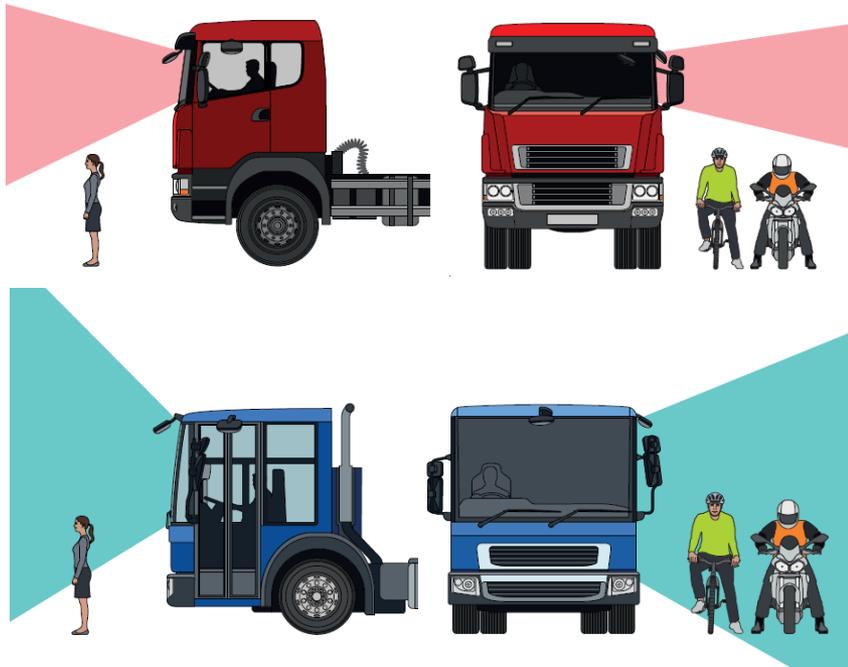


“I will adopt a ‘Vision Zero’ approach to road safety, which puts the elimination of road danger at the very heart of the transport system... working with industry to make lorries safer”



Research: Direct Vision Standards

Vehicles meeting the higher vision standards will have a much reduced blind-spot allowing better visibility of vulnerable road users



First direct vision standards for HGVs to:

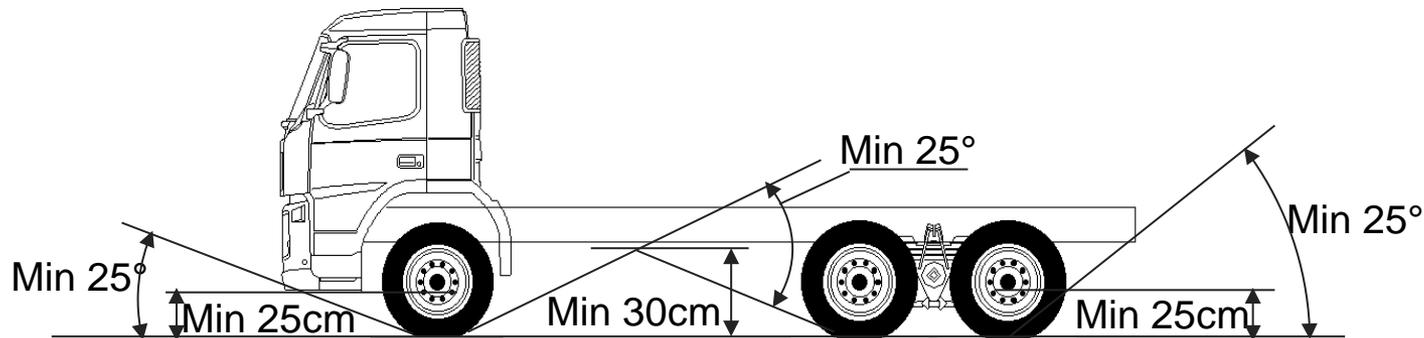
- Categorise HGVs based on their direct vision capability
- Inform operator purchasing decisions
- Guide manufacturers to design cabs to meet progressive standards
- Use in procurement clauses
- Lobby for inclusion within changes to regulation

Consultation in the new year



Research: Operational conditions and site standards

- To understand operational conditions and barriers to on-road vehicle use
- Develop a site rating and standards system linked to operational capability of vehicles
- Encourage the use of lower vehicles, suitable for urban operations



Research: Evaluation – live trials

‘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”



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

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



Progress to date

- All 8 UK vehicle manufacturers engaged and producing workable, practical solutions
- Identification of the on-/off-road issue – unnecessary over-specification of vehicles
- Increased evidence base and understanding
- Mayoral mandate for action

20,000

trucks fitted with enhanced safety features, an estimated investment of

£5,000,000



industry investment in high vision trucks

>250 high vision trucks on the roads



Thank you

Hannah White
Freight & Fleet Programme Manager
Transport for London

