



CLOCS: London's Experience

Peter Binham
TfL International Consulting
Peterbinham@tfl.gov.uk



EVERY JOURNEY MATTERS

Agenda

1. Freight in London overview
2. CLOCS
 - I. Why it was established
 - II. Vehicle Safety
 - III. Standardised/Professionalised construction logistics
 - IV. Operating standards
3. Results and lessons learnt
4. Questions



Freight is important to London

Freight supports almost all aspects of life in London. It enables businesses to access the goods they need, workplaces to function and new development to be constructed

1. Half of the value of household expenditure in London (£79 billion in 2013) relies on freight
2. However, action is needed to address the key challenges associated with freight

Safety

Vision Zero, including a new Direct Vision standard and improved operating standards (FORS, CLOCS)

No-one to be killed or seriously injured on London's roads by 2041

Environment

Air quality is being addressed by ULEZ and the new ULEZ

Carbon Zero by 2050

Less Vehicles


Plan to improve how efficiently freight uses road space while meeting the needs of its customers

Reduce freight traffic in the Central London AM peak by 10% by 2026 and total London traffic by 10-15% by 2041



Freight economics

1. The number of people working in the UK logistics industry is 2.54 million. In London this sector employs 21 0,000 people
2. The average profit margin of the top 1 00 hauliers was 4%
3. Average HGV fleet size is 4.3 vehicles per operator

 Road transport industry		2012	2013	2014	2015	2016	Most recent year-on-year change
19	Reported profit margin of top 100 road hauliers	1%	3%	3%	4%	4%	→
20	Number of goods vehicle operator licences	80,894	77,732	75,595	77,002		↑



Scale of the issue



Why are HGV lorries so dangerous and how can the industry make London's streets safer for cyclists?

Lorry drivers have no more excuses when it comes to cycling blind spots

News > London

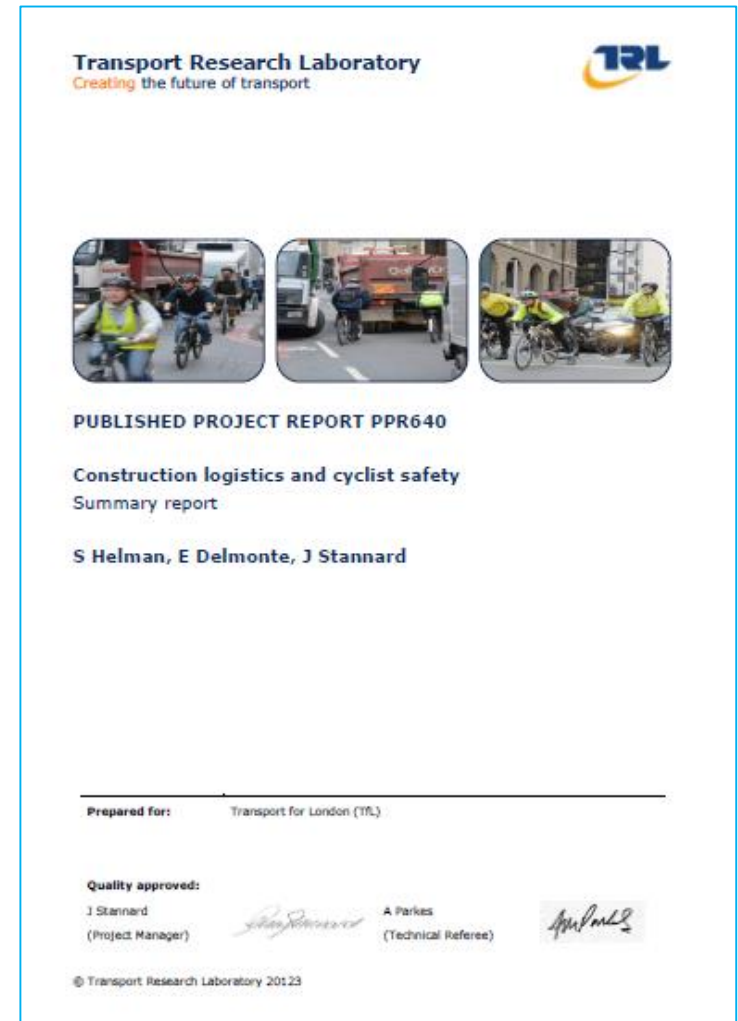
Sixth London cyclist dies in 13 days in lorry crash in Camberwell



The evidence for change

Key findings

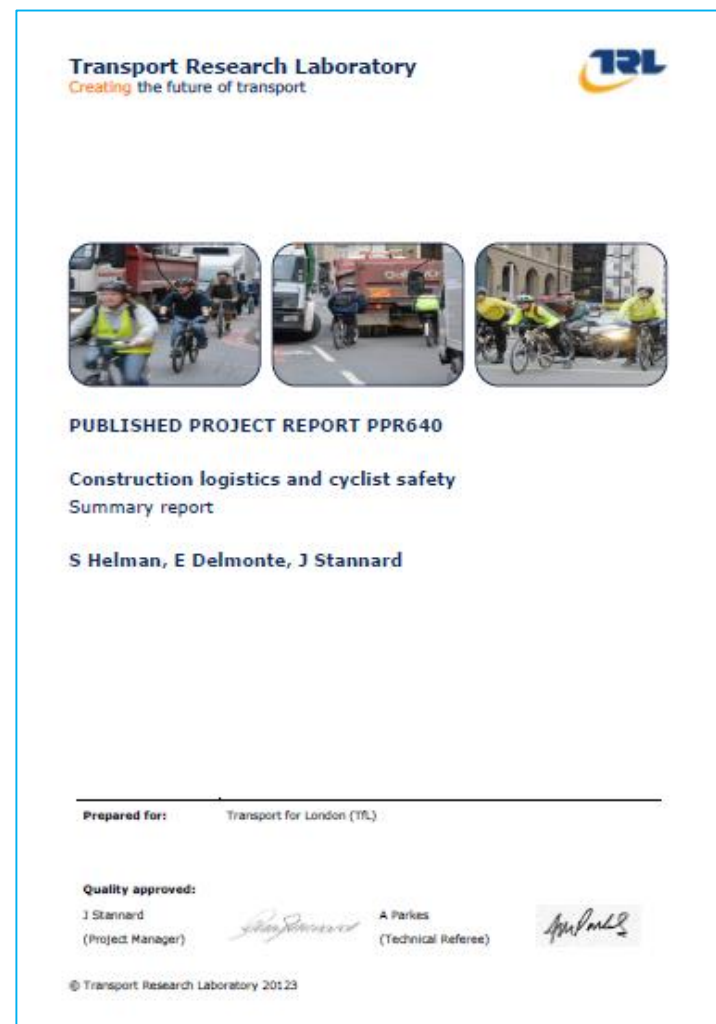
- Work related road safety is not considered as important as on-site health and safety
- Lack of awareness and ownership of road risk
- Blind spots on construction vehicles can be 50% greater than other HGVs
- Construction vehicles disproportionately represented
- Collision data lacking



The evidence for change

Key recommendations

- A nationally recognised standard on work related road risk
- Vehicle manufacturers should work to improve vehicle design
- Blind-spots need to be better understood
- The issues should be addressed by stakeholders from across the industry



Our approach: The right people around the table

- **High level representation** - TfL Commissioner wrote to senior representatives to communicate the findings of CLOCS research
- **Action plan** - developers, principal contractors, fleet operators and vehicle manufacturers asked to respond to report recommendations
- **Gain buy-in** - Commitment cemented at inaugural CLOCS event
- **Collaborative approach** – programme detail developed with industry



Taking the lead: Industry led response



A structured programme: CLOCS Workstreams



Improving vehicle safety through manufacture and design



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



Encouraging best practice in the construction logistics industry



11 Encouraging best practice in the construction logistics industry



The CLOCS Standard

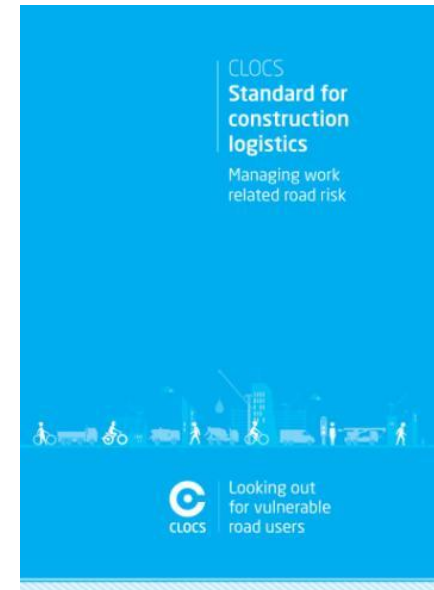
- Developed by the CLOCS industry working group
- Pulled together 11 different standards into one

Executive Summary

Mission – Ensuring the safest construction vehicle journeys

Primary goals – Zero collisions, fewer emissions, fewer journeys, fewer complaints, less reputational risk

Key stakeholders – actions/duties for all



1) Construction Logistics Planning

2) Operator Standard:

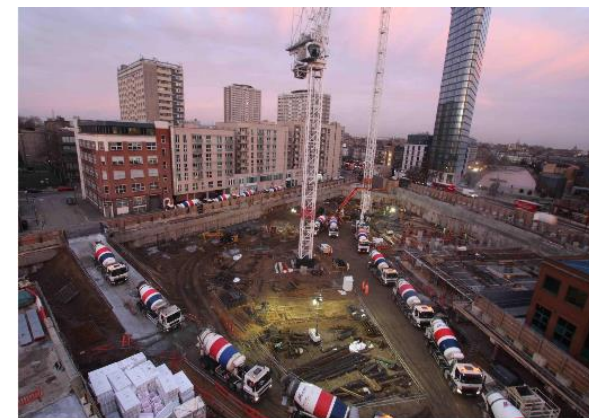
- Vehicles
- Driver
- Management
- Operation

3) Monitoring and enforcement



Construction Logistics Plan (CLP)

- Impacts of proposed development are analysed
- Covers all movements of goods, waste and servicing to and from site
- Reduce environmental impact, road risk and congestion by making commitments to planned measures
- Important management tool for planners, developers and construction contractors
- Some Local Planning Authorities require a CLP to satisfy planning approval
- Standardise an approach to construction logistics



Standardise commitment to planned measures

Committed - indicates a measure that will be implemented as part of the CLP

Proposed – indicates a measure that is feasible and should be studied further to determine its practicality

Considered – indicates a measure that is not currently relevant but may be in the future.

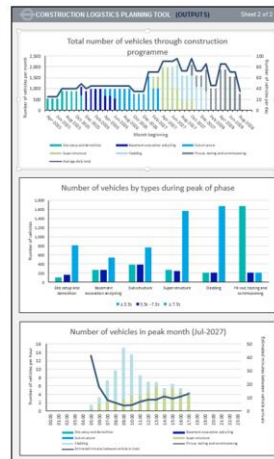
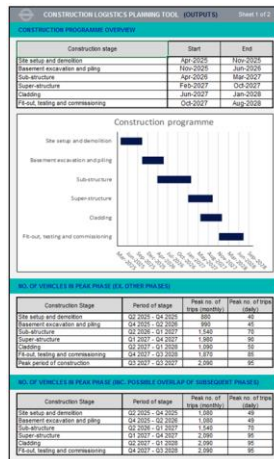


High impact site

Planned Measures Checklist	Committed	Proposed	Considered
Measures influencing construction vehicles and deliveries			
Safety and environmental standards and programmes	X		
Adherence to designated routes	X		
Delivery scheduling	X		
Re-timing for out of peak deliveries		X	
Re-timing for out of hours deliveries		X	
Use of holding areas and vehicle call off areas		X	
Use of logistics and consolidation centres		X	
Measures to encourage sustainable freight			
Freight by Water*		X	
Freight by Rail*		X	
Material procurement measures			
DfMA and off-site manufacture		X	
Re-use of material on site		X	
Smart procurement		X	
Other measures			
Collaboration with other sites in the area	X		
Implement a staff travel plan	X		



Data



Phases



Requirement

	Level of Impact		
Considerations	Low	Medium	High
Approximate construction cost	< £2m	> £2m	> £23m
Community Considerations	Low	Medium	High
Size	All developments falling outside of 'High' and 'Medium' definitions	10+ residential units or creation/change of use of 1,000+ m ² floorspace	100+ residential units or creation/change of use of 10,000+ m ² floorspace

	Level of Impact		
Planning stage	Low	Medium	High
Planning approval	No CLP required	Outline CLP	Outline CLP
Pre-construction	No CLP required	Detailed CLP	Detailed CLP



Operating Standards

- Meeting the requirements of FORS Silver



What is FORS

- FORS is a unique industry led accreditation scheme aimed at transforming road fleet activity
- Developed by TfL in 2007
- Now an international scheme, run by the FORS Community Partnership
- Open to any commercial vehicle/operator
- Helps operators to ensure and demonstrate lawfulness and best practice



FORS is designed to improve:

- Safety, Efficiency, Environmental Protection & Compliance



Requirements include:

- ➔ Policy, procedures and risk assessments
- ➔ Additional safety equipment
- ➔ Vulnerable Road User Driver Training
- ➔ Security and Terrorism awareness training
- ➔ Environmental driver training
- ➔ Competent and trained management
- ➔ Driver licence checks
- ➔ Eye sight checks



MANAGEMENT	VEHICLES	DRIVERS	OPERATIONS
<div>⬇</div> Responsibilities & authority	<div>⬇</div> Road worthiness	<div>⬇</div> Training and assessment	<div>⬇</div> Routing and scheduling
<div>⬇</div> Competent Person	<div>⬇</div> Insurance	<div>⬇</div> Driving at work	<div>⬇</div> Transport control
<div>⬇</div> Communication	<div>⬇</div> Fleet performance	<div>⬇</div> Fitness and health	<div>⬇</div> Fines and charges



Training and Development

Summary

- A range of high quality training specifically to address the challenges of operating commercial vehicles:
 - Drivers on-bike training
 - Drivers classroom
 - Drivers E-learning
 - Manager workshops



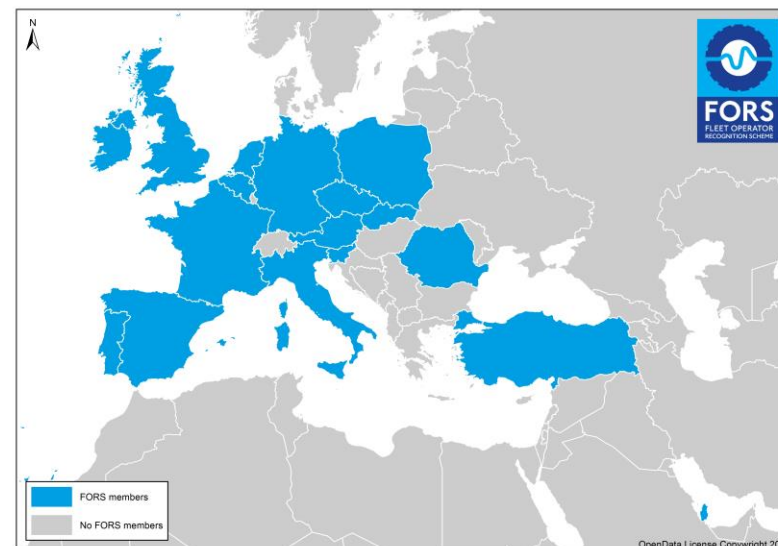
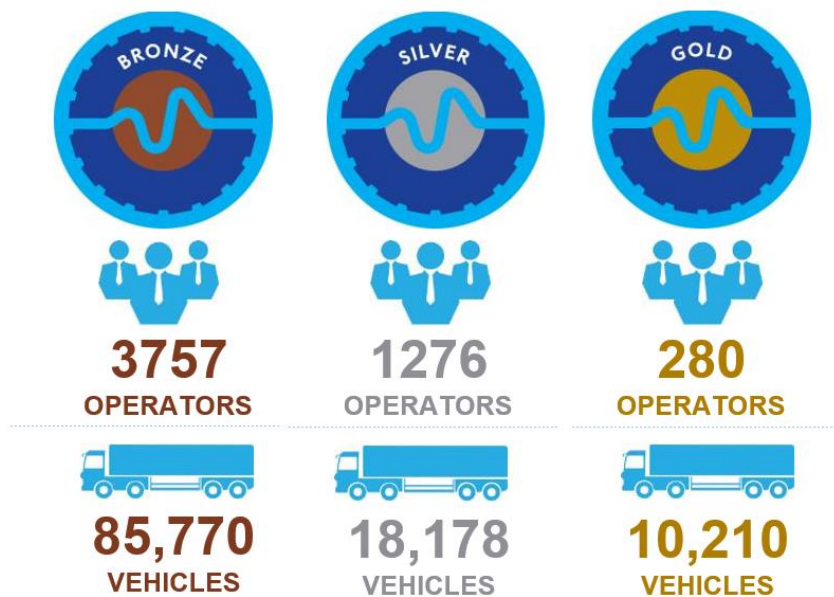
Overview

- Creates empathy between drivers and VRUs
- Licence quality training for delivery
- Recognise quality training through 'approved status'
- Includes classroom, e-learning and on bike

Achievements

- 634,000 e-learning modules completed
- 140,000 drivers on bikes
- Addressed failures of DCPC
- Register to record training has been undertaken





FORS operators:

FORS accredited operators (gold/silver/bronze) are:

- 76% less likely to involved in Licence/insurance offences
- 64% less likely to involved in Most Serious Infringements (MSI) offences
- 50% less likely to involved in drivers hours offences

Operators who join FORS (gold/silver/bronze) see on average a:

- 41% reduction in injury collisions
- 25% reduction in total collisions

FORS Gold/Silver accredited operators see on average a:

- 30% reduction in total collisions
- 14% improvement in MPG
- 55% reduction in PCNs (Penalty Charge Notices i.e. Parking tickets)
- 12% reduction in Nitrogen Oxide
- 10% reduction in Hydrocarbons
- 11% reduction in Particulate Matter



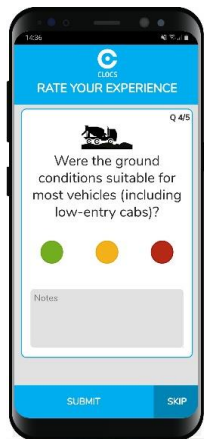
Monitoring, reporting and enforcing CLOCS

CLOCS site reviews:

- Self-assess by company
- Professional Independent Audit



CLOCS Vox:



Gate check: HGVs

 Construction
Logistics and
Community Safety

All vehicles over 3.5t GVW* arriving on this site must conform to the **CLOCS Standard**. *excl. exemptions






1. Vehicle operator check

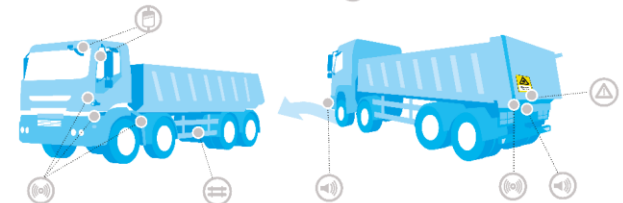
Vehicle operator must meet the requirements described in **FORS Silver** (Fleet Operator Recognition Scheme) and provide the evidence specified by contractor.



2. Vehicle check

Any vehicle over 3.5t GVW shall have the following safety kit fitted:

- | | |
|---|---|
|  Class V and VI mirrors |  Side under-run protection (both sides) |
|  Working camera and close proximity sensor system with in-cab audible alarm (and rear camera for +7.5t rigid vehicles) |  Externally audible alert for vehicle turning left and reversing |
| |  Vulnerable road user warning signage |



3. Driver check

Must have a valid driving licence for the vehicle being driven.

Must have successfully completed required approved training to minimise collisions, emissions and security/terrorist threats (demonstrated by trainers' certificate/card or driver listed on fors-online.org.uk/cms/fors-trained-drivers).

4. Route check

Driver must declare the **last mile route** taken to site.

Driver must declare if they are involved in **any collisions on the journey** to site.



Refusal of access to site

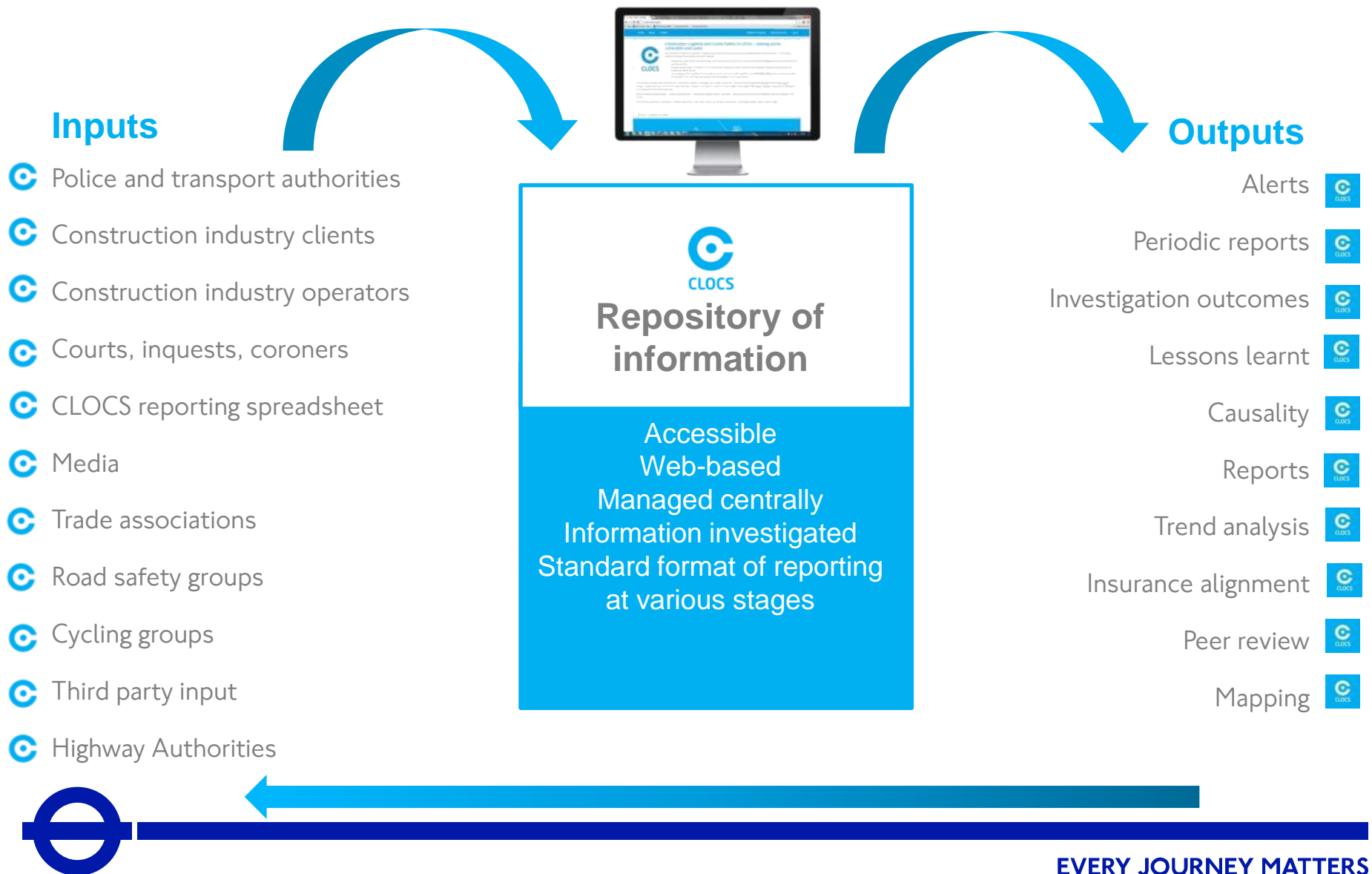
In the event of non-conformance, the vehicle may be refused entry and a non-conformance report completed.

Updated: 2019

clocs.org.uk



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



Construction Logistics Qualification

The training is designed for developers, contractors, supply chain operators, Borough planners and transport consultants

3 one day courses aimed to standardise and professionalise

Construction Logistics Planning:

- Foundation
- Practitioner
- Advanced

Evidence competency through attaining
CLP Practitioner Status

Practitioner Status recognised for 5 years

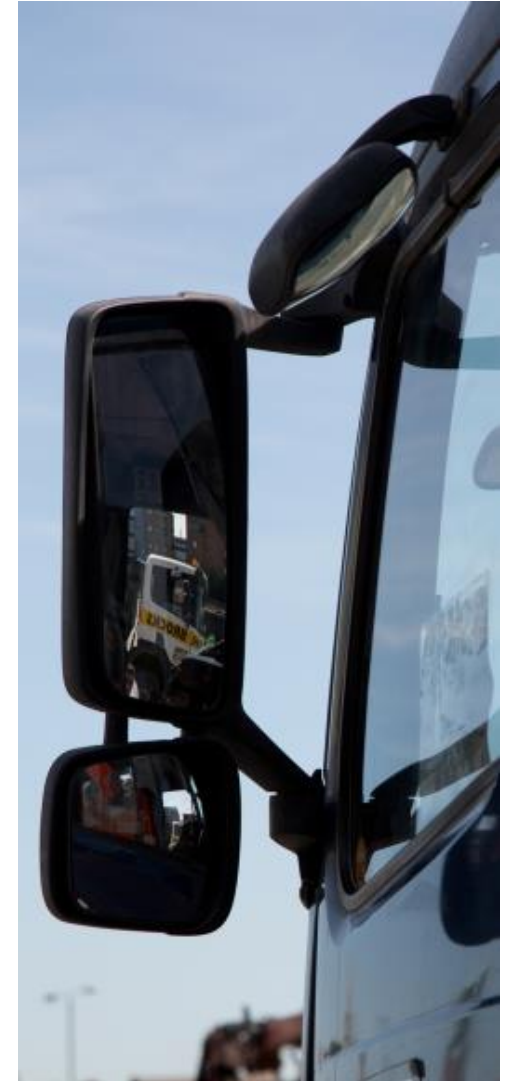
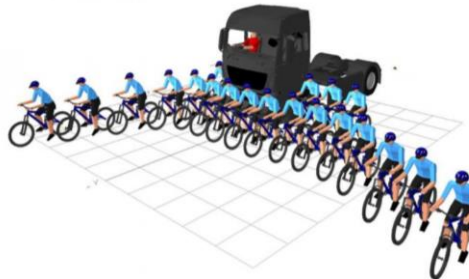


The Chartered
Institute of Logistics
and Transport

Accredited Short Course



- Engagement with vehicle manufacturers to influence design of new vehicles
- Encourage fitment of fit for purpose safety equipment to existing vehicles
- Commissioning research to greater understand blind-spots and direct vision
- Lobbying to change European regulation to enable safer designs



Research to exploring the road safety benefits of direct vision

Slower response time

Indirect vision has a 0.7s slower response time

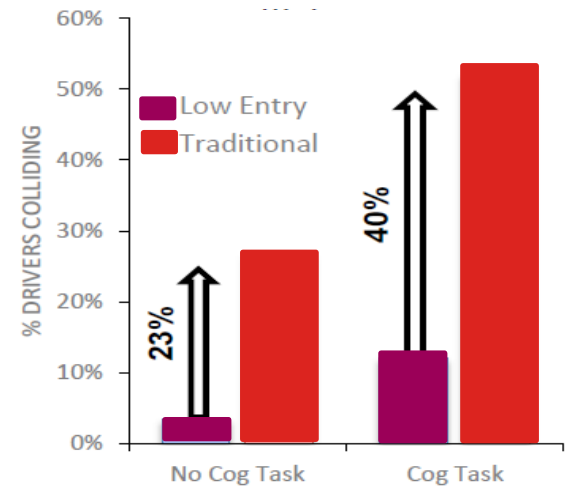
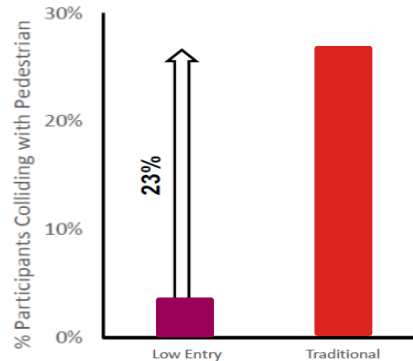
Risk increases with speed as more distance travelled

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%



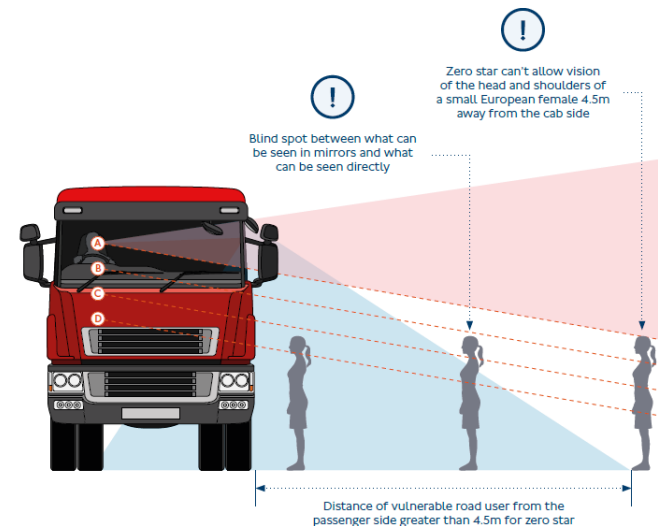
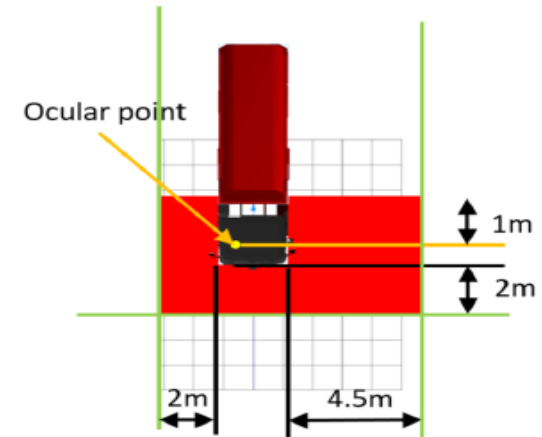
DVS measurement

Measure

- 3D volume of space that can be seen directly by the driver from the cab
- The greater the volume, the closer the person can be seen to the vehicle and the more of them that can be seen

Assessment zone

- 3D zone accounts for all of the space in which someone could be seen
- The more of the assessment zone that can be seen, the higher the volume result



HGV safety permit

ORIGINAL TIMESCALE

October 2020

0-star banned unless
safe system met

UPDATED TIMESCALE

October 2020

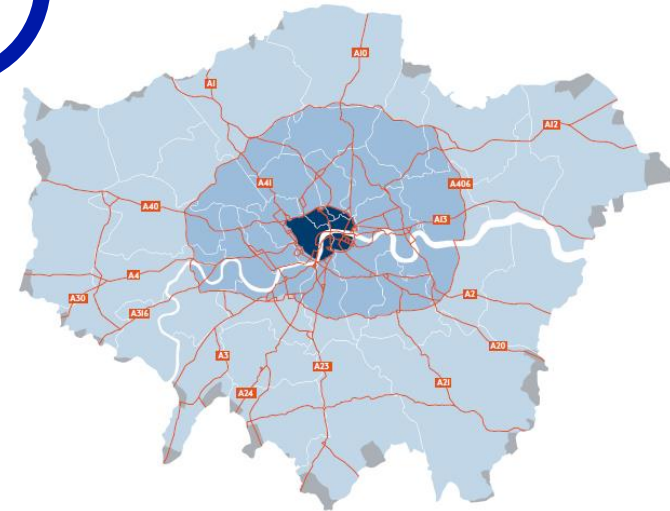
TRO commences without
enforcement; permit not yet
required

March 2021

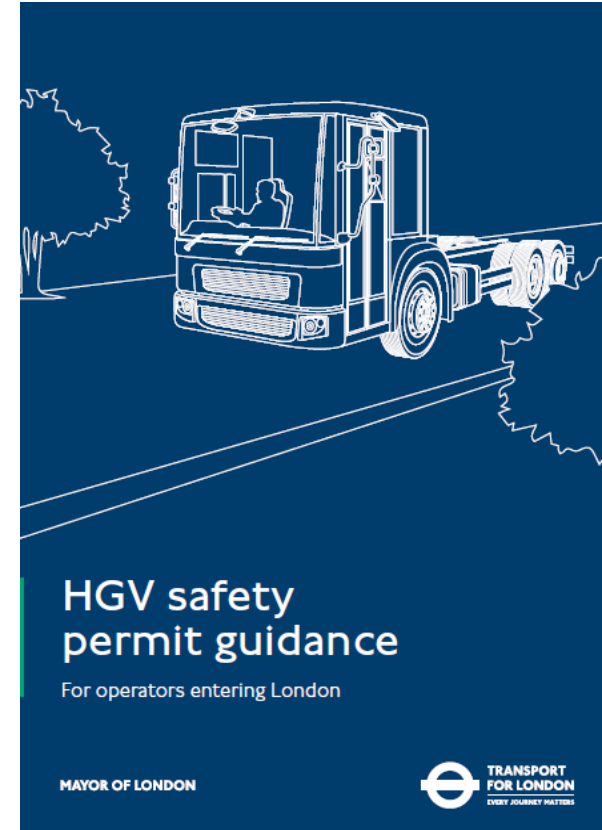
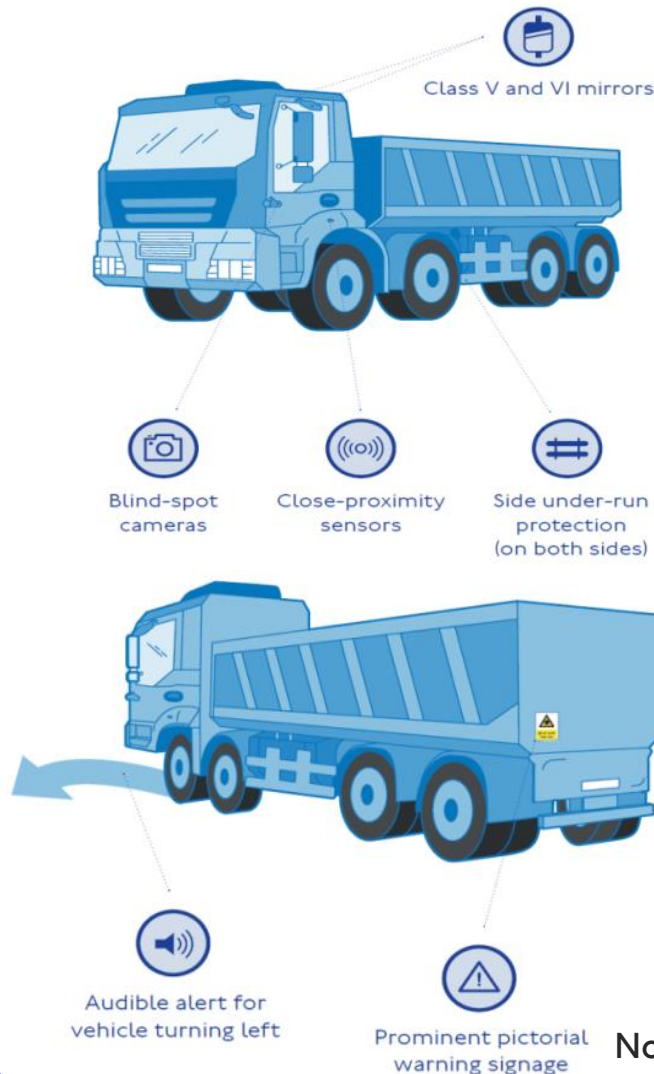
0-star banned unless
safe system met; enforcement
commences



Delay of enforcement to
allow for industry to re-
start and accommodate
for disrupted supply
chains



Safe system requirements



Note: Fitting a safe system will not change your vehicle's star rating



Results and lessons learnt:



"As Construction Minister, I am happy to endorse the CLOCS Standard as a way of delivering a better and safer industry and protecting the public from harm. Similarly, I am happy for the Department for Business, Energy and Industrial Strategy to be named as a supporting organisation."

Nadhim Zahawi MP

Department for Business, Energy and Industrial Strategy



THE CIVITAS INITIATIVE
IS CO-FINANCED BY THE
EUROPEAN UNION



People Development Award 2019

37%
less complaints
when implementing
CLOCS

47%
REDUCTION
IN CASUALTY RATE
WHEN IMPLEMENTING
CLOCS

"London's approach to develop a construction logistics plan with the industry is key to their success"

Robert Missen

Head of Unit of Innovations at the European Commission



"The private sector can make a huge contribution, especially when working closely with public authorities. In our cities, especially in London we face a continuing challenge to keep our pedestrians and cyclists safe. So it is with great delight that this year my Premier Award goes to the team behind the CLOCS programme – a fine example of successful cooperation"

HRH Prince Michael of Kent



1. Industry wants one standard

“ 85% of industry want one common standard ”



Posted on: November 4, 2015

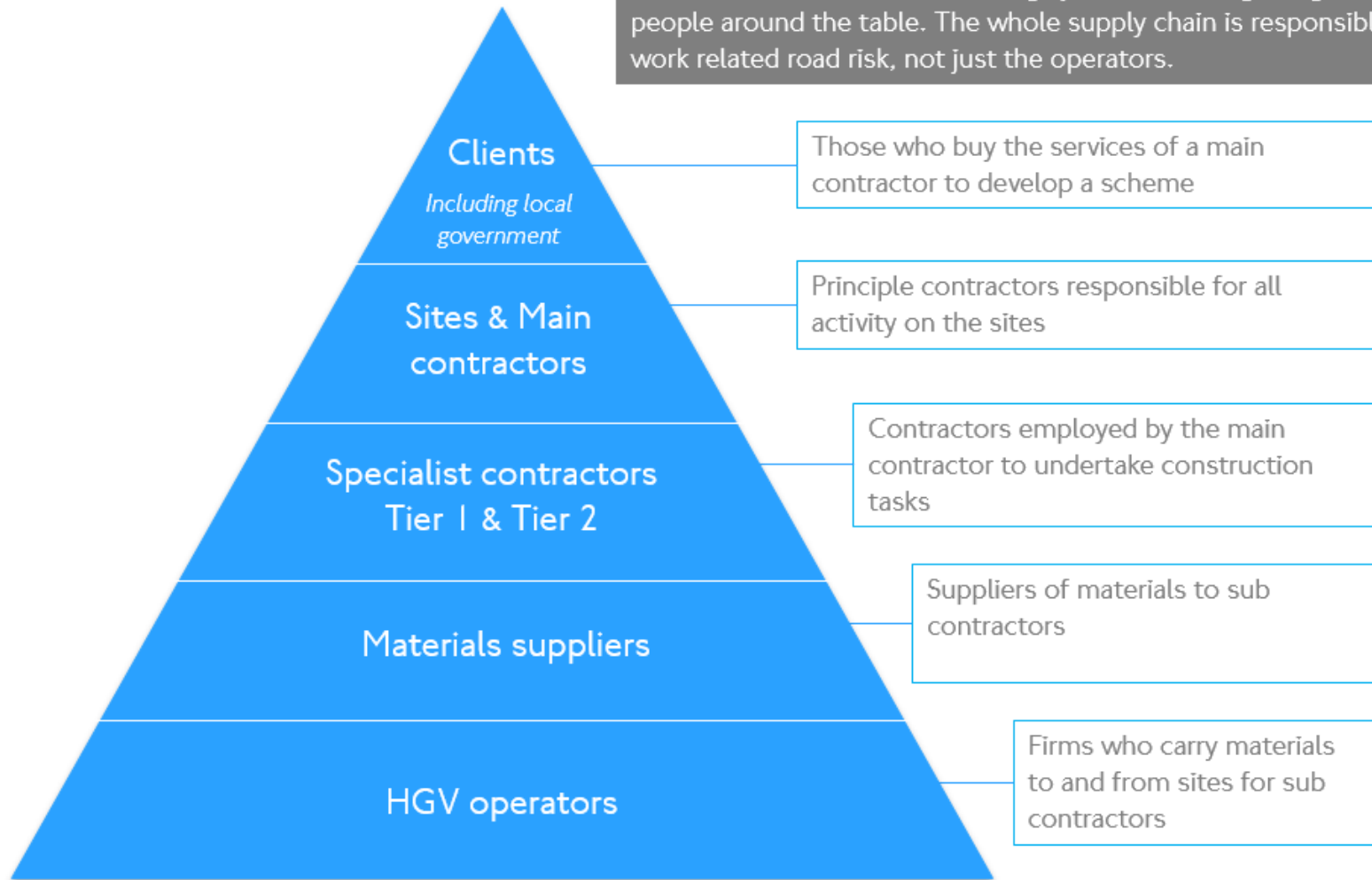
A survey conducted at last week's Freight in The City event in London revealed that 85% of freight operators support a national compliance programme for commercial fleets.

The study was carried out by the event organisers and revealed that freight operators believe that there should be a single UK-wide compliance standard.



2. Engage with the whole supply chain

The success of CLOCS can be largely attributed to getting the right people around the table. The whole supply chain is responsible for work related road risk, not just the operators.



3. Power of Procurement

Client procurement

Using contracts and procurement to leverage change down the supply chain

- Employing the safest contractors and operators
- Treating work related road risk in the same way as on-site health & safety



DON'T BREAK THE CHAIN



4. Lead by example

**Work Related
Road Risk**



TfL must employ, and must be seen to employ, the safest fleet operators in London

To mitigate the risk of a vulnerable road user being killed or seriously injured by one of our suppliers, in February 2012, we introduced Work Related Road Risk (WRRR) clauses into our new **and** existing contracts



Questions

Peter Binham
TfL International Consulting

Peterbinham@tfl.gov.uk



EVERY JOURNEY MATTERS