

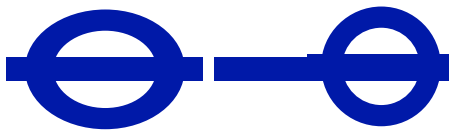
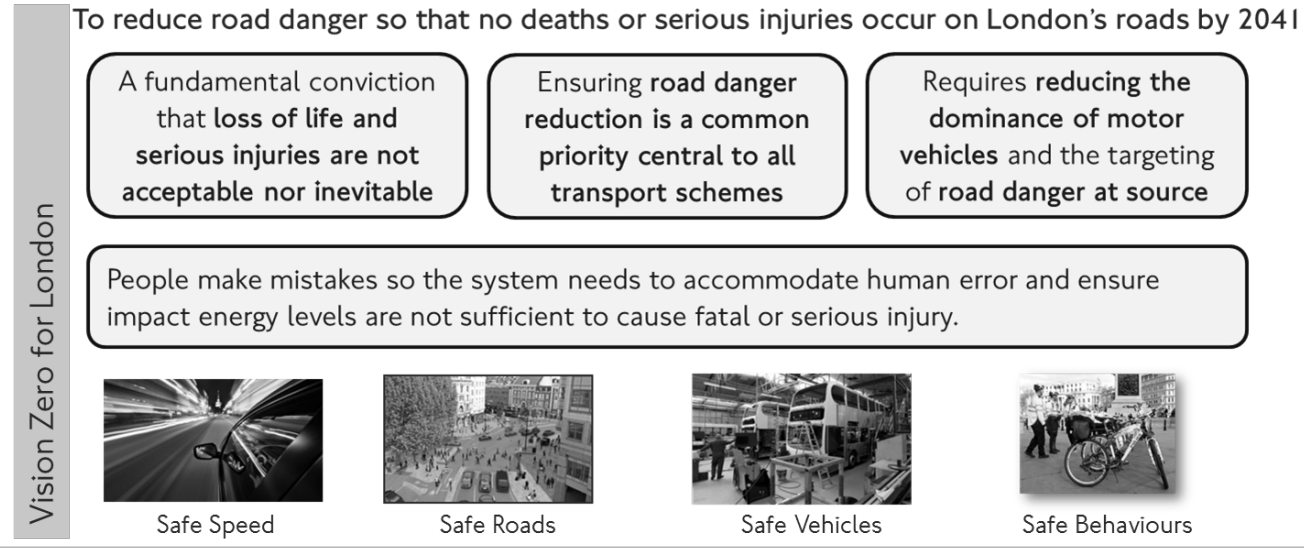
Reducing HGV road danger

Hannah White, Freight & Fleet
Programme Manager
November 2017

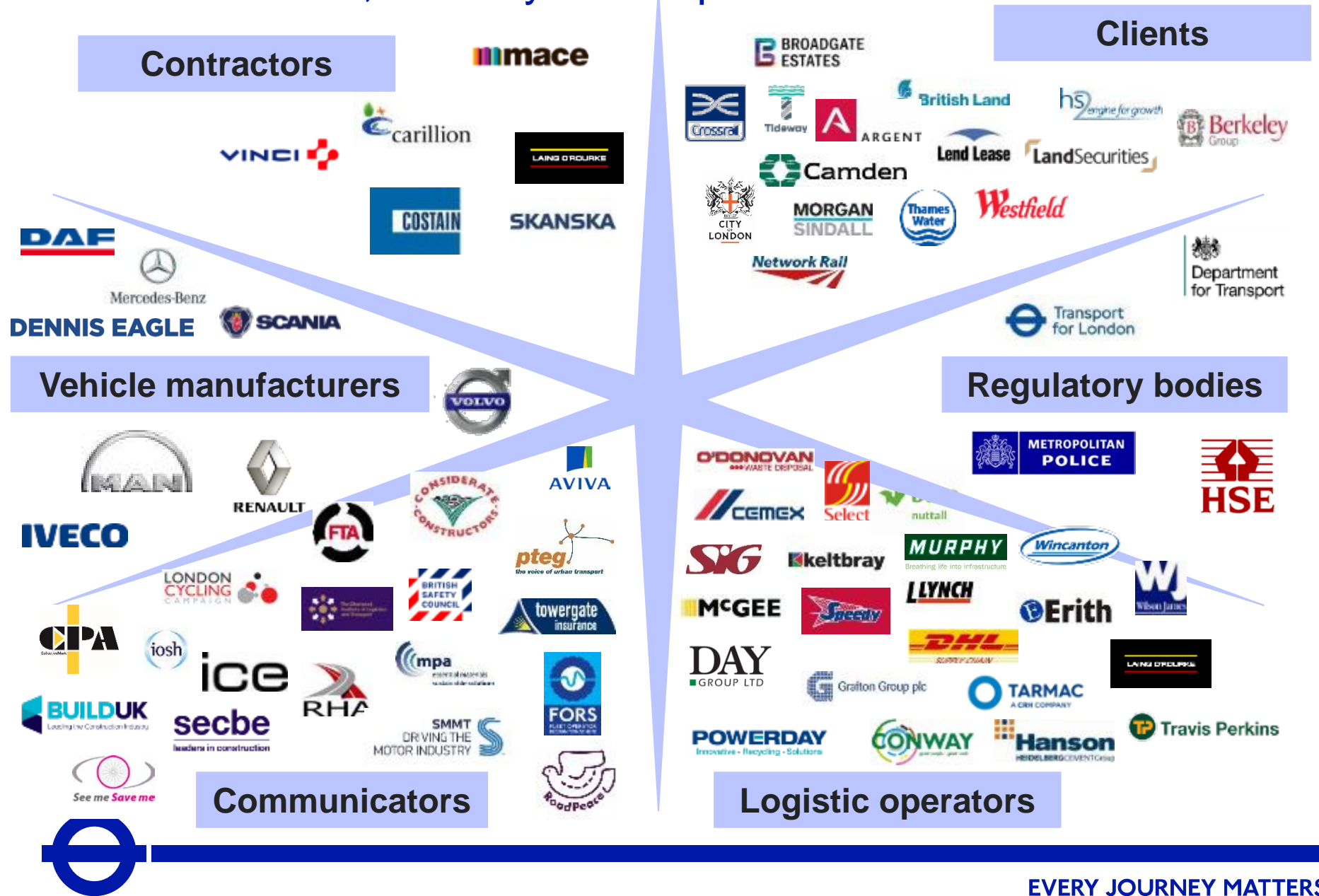
Reducing road danger and protecting vulnerable road users



A comprehensive approach to truck safety

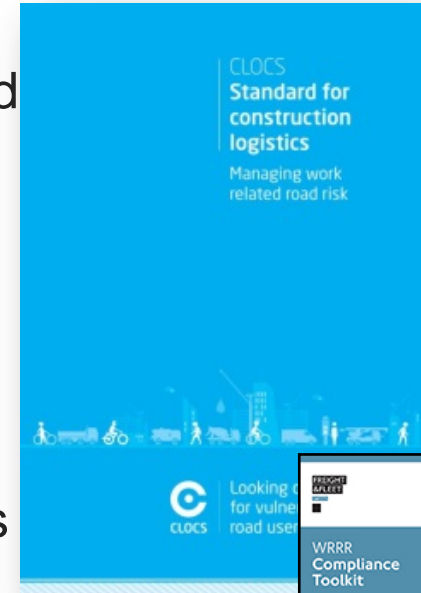


TfL facilitated, industry-led response



Common standards

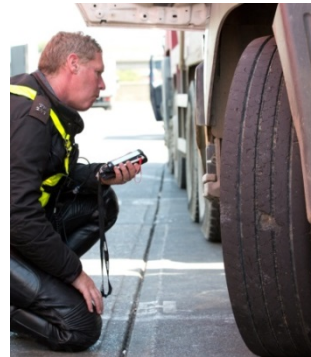
- Common **national** standard for managing work related road risk in supply chains
- Led by TfL and Construction Logistics & Community Safety – CLOCS champions and other clients
- Brings together different codes of practice from across the industry
- 16 requirements for clients & operators ALL focused on reducing a collision
- Implemented by:
 - Local authorities through planning obligations
 - Clients through procurement



Safer clients / sites



Safer operators



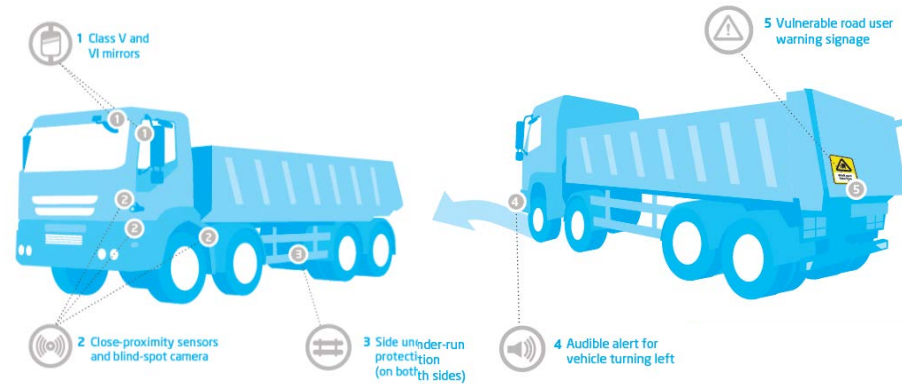
Safer drivers



It's invaluable - it teaches you patience, you learn how to be calm on the road
HGV Driver, London

Totally changed how I drive. I even drive my car differently now, more conscious of speed and don't see the point in taking chances
HGV driver, Midlands

Safer vehicles



The Blindspot



'Aftermarket' technology



There is a 'tipping point' which is quickly being approached; there are only so many pieces of equipment drivers can manage before it becomes overwhelming

Future Thinking, Driver Distraction

- 2011 – 5 providers at market
- 2017 – 60+ providers at market
- No independent testing of systems required
- TfL creating an independent, objective test protocol
-And an online 'tripadvisor' type review forum for operators

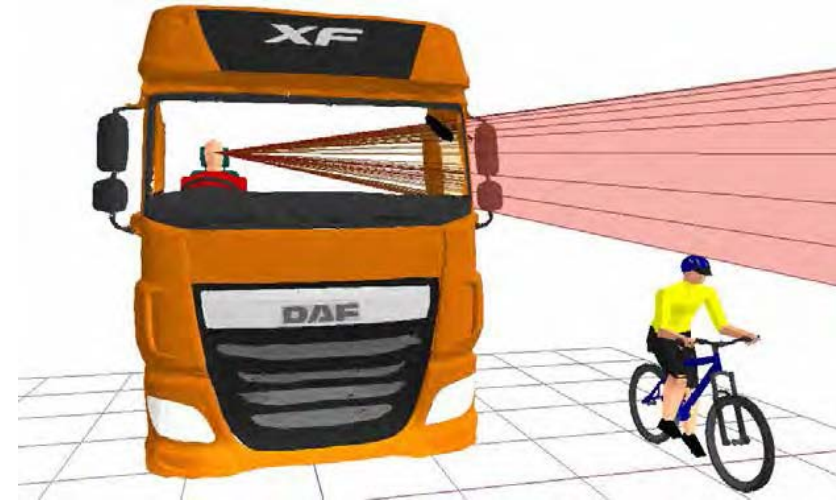
'We buy brand new vehicles then we put them into the workshop and drill holes in them to retrofit safety equipment'

Major construction operator



Understanding direct vision

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



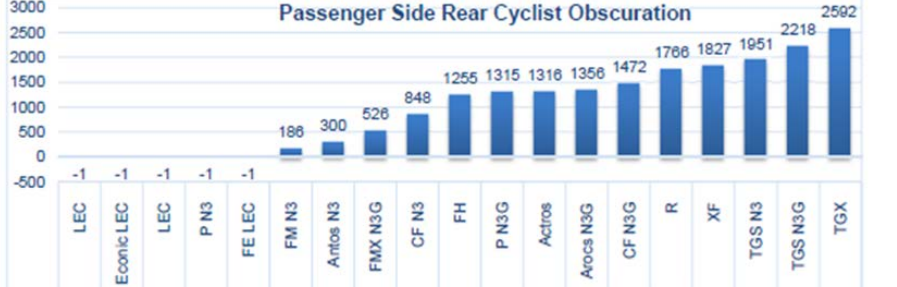
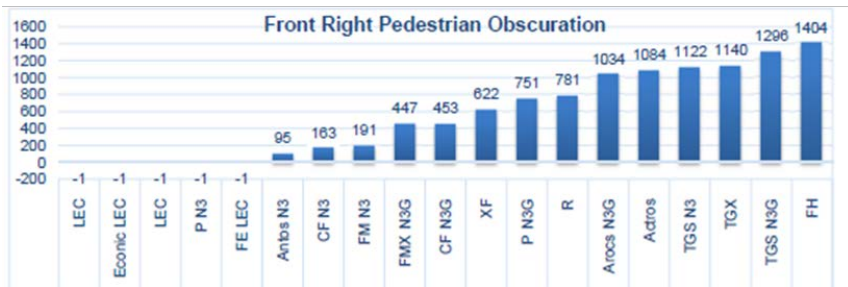
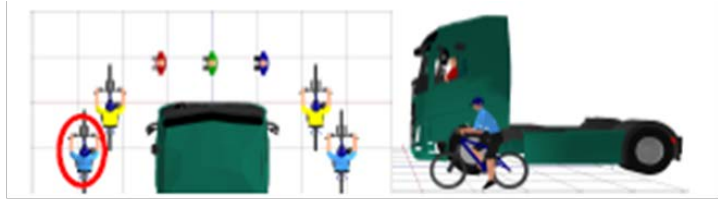
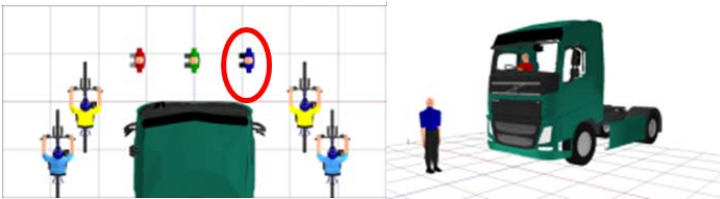
Direct vision – what a driver can see through the windows rather than using mirrors or cameras



Variation in direct vision

Up to 1.4 metre difference in blind-spot

Up to 2.5 metre difference in blind-spot



-1 = visible i.e. visible when directly adjacent to the cab side



The case for Direct Vision

Wanted to understand direct over indirect vision

- Literature review
- Laboratory experiments
- Surveys with road users

Lab experiments showed...

Drivers react more quickly using direct vision

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

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

Transport Manager



The case for Direct Vision

Surveys with pedestrians, cyclists and HGV drivers showed...



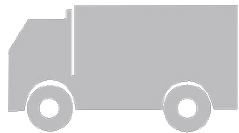
- Do not trust HGV drivers can see them through their mirrors or VDUs]



- Lower cab height and larger windows are safer
 - **Eye-contact** with HGV drivers makes them feel safer when passing a vehicle
-

- Mirrors provide sufficient view - **but difficult to recognise a cyclist**

- Disagree that they are too high up to locate road users



- Most drivers try to make **eye-contact** with road users and believe this reduces likelihood of collision



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’



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

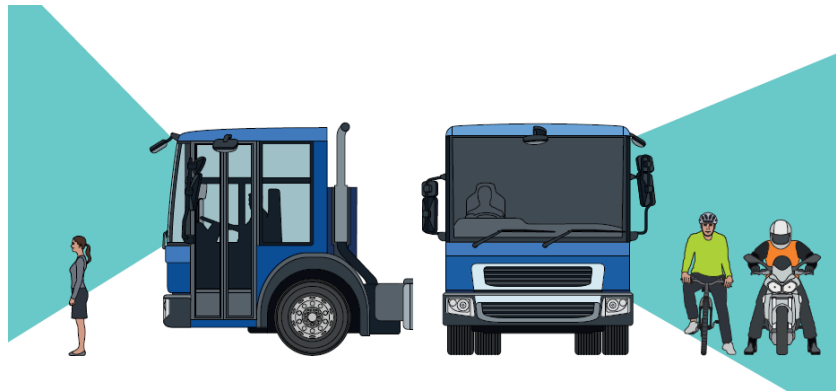
‘I’d say just give it a go, it’s opened my eyes. I didn’t see how it could be improved before’



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



Direct Vision Standards



0	☆☆☆☆☆	Low
1	★☆☆☆☆	
2	★★☆☆☆	
3	★★★☆☆	Good
4	★★★★☆	
5	★★★★★	High

First direct vision standard for HGVs to rate vehicles on levels of direct vision

Designed to:

- Inform purchasing decisions
- Guide manufacturers to design safer cabs
- Use in procurement
- Use to ban or restrict unsafe vehicles
- Lobby for inclusion within changes to European regulation



London's Direct Vision Standard Scheme

In 2016 the Mayor of London announced his intentions to consult on proposals to use a Direct Vision Standard to ban the most unsafe HGVs from London by 2020

The DVS scheme is being developed through:

1. Listening to consultation feedback
2. Independent impact assessments
3. Understanding direct vision performance

What we've learnt:

- Direct vision from majority of current HGV designs is very poor
- Direct vision can't avoid all collision scenarios
- There is a strong desire to bring **all safety initiatives together**
- Greater safety benefits exist if we set the ambition **wider than Direct Vision alone**
- Following Vision Zero principles we should take a '**safe system**' approach to reduce road danger
- We should continue to lobby for more radical HGV design changes in European regulations

"the benefit of **technology**, such as cameras and sensors, should be recognised"

"the good work of existing schemes such as **CLOCS** must be recognised and built on"



HGV Permit Scheme and Safe System Proposal

HGV Permit scheme

- All HGVs over 12 tonnes would require a permit to enter 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'
- The safety permit scheme would evolve over time, taking into account advances in technology.

What could a HGV safe system look like?

- Build on existing industry-recognised safety standards and what's proven to work best
- A 'safe system' could include **direct vision** as well as
 - Effective technologies and other indirect vision devices
 - audible or visual warnings around the vehicle
 - physical protection to deflect vulnerable road users
 - driver safety training



Have your say from November!
www.tfl.gov.uk/consultations



Where are we now?

- All principle truck manufacturers engaged
- London's Mayor to consult on proposals imminently for all HGVs to meet Direct Vision or other safety measures to enter London from 2020
- The European Commission has included Direct Vision as a measure for consideration for the first time in proposals for the General Safety Regulation governing truck design across Europe
- USA research institute looking at developing a direct vision standard for their trucks, with Canada and Japan also watching the work with interest.



Influencing change

Meeting needs of the industry and society
in the absence of regulation

25,000

trucks fitted with enhanced
safety features, an
estimated investment of

55,000

Drivers
undertaken
training



>500

CLOCS Champions
committed to
implementing the
CLOCS Standard

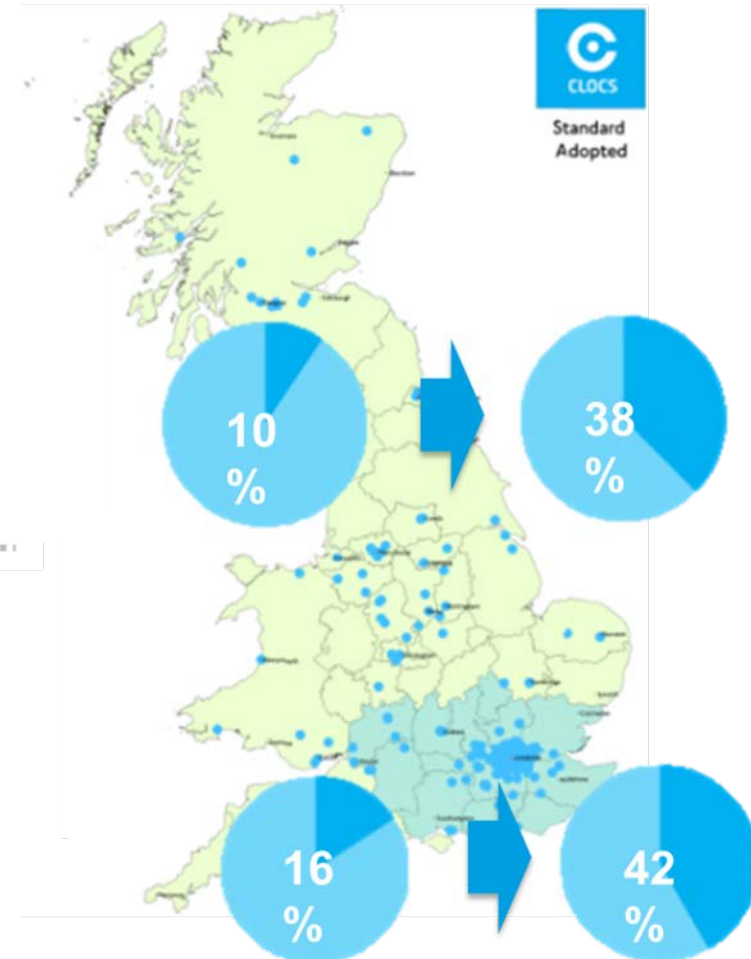


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Client, developer
and principal
contractor
champions
signed up



Awareness of CLOCS 2014-2016



Thank you!

