
DVS DIFFERENTIATION TASK FORCE PROGRESS

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OBJECTIVE & RATIONALE

- The options available for the direct vision regulation are:
 - **One size fits all:**
 - Urban focus: Set requirement at high visible volume, benefit in urban areas, disbenefit for long haul
 - Long haul focus: Set requirement at lower visible volume, reduced benefit in urban areas, disbenefit in long haul can be mostly avoided
 - **Differentiated approach:**
 - Aims to optimise approach by providing as high a benefit in urban areas as possible while still avoiding most of any disbenefit in other areas
- Aim of the Direct Vision task force:
 - To develop a proposal for differentiation of truck types into different categories of vision needs, based on the definitions in EU CO2 regulation as a starting point

PROGRESS & AGREEMENTS

- Only neutral naming of direct vision levels shall be used (not urban, rural, inter-urban, demanding, relaxed etc). It is assumed that category B will still drive an improvement over current vehicles
 - Category A: vehicles that are more likely enter urban areas
 - Category B: vehicles that seldomly enter urban areas
- Note wording not exclusive or binary. Acceptance that the classification is imperfect and examples of inappropriate use of vehicles of category B can always be found
- Vehicles agreed in principle for category B, subject to confirmation of evidence:
 - Long haul tractor units for articulated vehicles (Vecto 4-LH & 5-LH)
 - All wheel drive vehicles (Vecto 6, 7, 8, 13, 14, 17)
 - 6*4; 8*2; 8*4 rigids used in specialist and long haul operations (Vecto 11-EMS, 12, 15-EMS, 16-EMS)
- Debate still open on tractor units for regional distribution (Vecto 4-RD & 5-RD)
 - Accepted that overall numbers are small but may be more significant in urban areas
- Agreed to consider N3G separately (not yet started)
- Identified that definition of sleeper cab in CO2 regulation meets most concerns
 - *“a type of cab that has a compartment behind the driver’s seat intended to be used for sleeping “*
 - Some parties prefer to strengthen e.g. equipped for sleeping, or min bed size but others are concerned not to be too design prescriptive and to remain consistent between regulations



CHALLENGES FROM GROUP MEMBERS

- The principle of differentiation is broadly supported and no substantially different proposal has emerged
- There is concern about the robustness of the evidence justifying the segregation and how big a factor the acknowledged ‘imperfection’ in definitions will be in practice
 - Do relevant collisions really only occur in dense cities?
 - Are vehicles proposed for category B really seldomly involved in relevant collisions?
 - How much scope is there for vehicles to be misclassified as category B or to provide perverse incentives to change the specification category A vehicles to meet category B definitions?

CATALOGUE OF DATA 'WISHLIST'

| Issue | Information required |
|---|---|
| Exposure data (vehicle use heat maps) | Re-presentation of existing patterns of use of vehicles in cities in Sweden with identical colour scales for the heat map |
| Exposure data (vehicle use heat maps) | Consideration of more granular presentation of data for 6*4; 8*2; 8*4 vehicles in construction/long haul /N3G for comparison with Strava data on cyclist use by road type |
| Justification for including certain categories of vehicles in level B direct vision | Collision data comparable to UK and Germany to highlight extent of involvement of different vehicle types in relevant collisions |
| Justification for long haul variants of rigid 6*4; 8*2; 8*4 being in level B | Data on sales of relevant vehicles as an indicator of potential scale of risk (e.g. very low numbers will be a low risk even if used more than expected in urban areas) |
| Risk of misclassification of construction vehicles (6*4; 8*2; 8*4) | How many construction vehicles (e.g. tipper/mixer body) have sleeper cabs and a power >[370]kw |

| Issue | Information required |
|--|---|
| Evidence that vehicle types proposed for category B will encounter turning and moving off conflicts with cyclists with low frequency | Extension of 'heat map' analyses to other EU cities and other manufacturers. In particular to places with different transport systems to UK and SE such as central or southern EU |
| | Adaptation of heat map analysis to be more quantifiable and more readily understandable to those not familiar with each city. Perhaps by using tabular numerical data to show usage against a definition of road class. |
| | At a wider scale a breakdown of vehicle km by road category (inside and outside cities) by vecto category |
| | Matching data for cyclists exposure for the same cities at the same time to highlight areas where exposure of both is high |
| Feasibility of regional distribution achieving category A | Assessment of any design or operational constraints that might limit the ability of a regional distribution tractor to meet category A |

CONSTRAINTS ON DATA AVAILABLE TO MEET THE WISHLIST

■ Collision data

- Repeated requests for data has led to very few response
- National statistical data can typically only identify collisions that might be relevant (e.g. turning HGV hits cyclist at nearside) but not specifically whether direct vision will be a viable solution (e.g. cyclist not behind drivers eyepoint at key moment). Location possible (e.g. urban/rural) but little vehicle specification information
- In-depth data required to assess 'actually relevant' and vehicle specification approaching Vecto level and not all sources will be fully capable
- More data to be welcomed but the available collision data is probably not adequate for a definitive answer

■ Technical Feasibility

- Requires detailed evaluation of relevant models/specs

■ Exposure data can be a proxy for safety but is not perfect and requires interpretation

- Best measure would be frequency of conflicts (e.g. cyclist meeting HGV at junction) – NOT AVAILABLE
- Time or vehicle km by location (heat maps) should relate to risk. Industry are investigating providing more (different manufacturers/locations) but are limited in detail and coverage by data protection/client contracts
- Vehicle sales data has some relevance but is furthest from a true measure of risk. Industry can produce but must harmonise definitions and provide to neutral 3rd party to aggregate and anonymise to comply with competition law

Time: Some elements are easier than others but significant data analyses will all take time

HOW GOOD IS GOOD ENOUGH?

- The task force recognises that more evidence is better. However:
 - Time pressure also exists to complete the direct vision work
 - The best evidence possible will still not perfectly answer all the questions
 - The best proposal for differentiation possible will still be imperfect in the real world for as long as it remains legal to use all approved vehicles on all roads. Vehicle usage cannot be controlled at type approval
 - Contracting Parties will make the decisions and will be responsible for justifying that to their stakeholders
- The task force asks for a decision from VRU proxi and CPs on the question how good is good enough?
 - How much of the data 'wishlist' is necessary for a pragmatic decision to set differential limit values according to a gross classification of vehicles in line with their main expected use?
- The task force recommends that:
 - All stakeholders accept this decision and do not revisit requests for evidence or add new items to the 'wishlist' in relation to settled questions
 - Any new issues not yet discussed in detail (e.g. N3G) should not expect a higher burden of proof but may justify additional evidence if new, different questions arise.

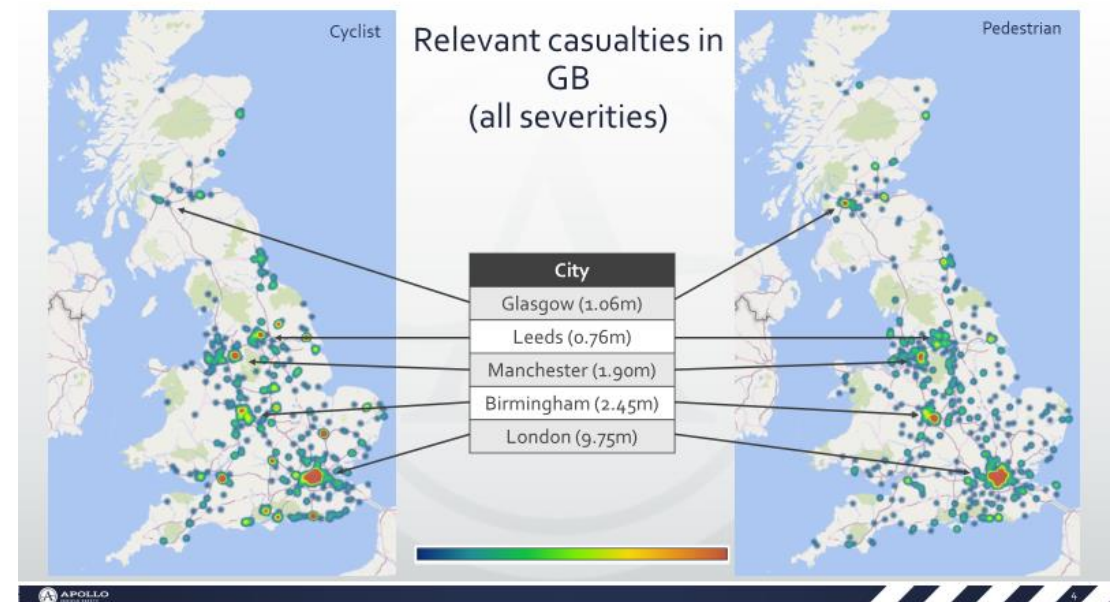


SUPPORTING DETAIL IF NEEDED



CHALLENGES: COLLISION LOCATION

- 59% of GB pedestrian or cyclist fatalities from collisions with an HGV moving off or turning¹ occur within the borders of just 5 major cities representing 25% of the population
- 1% on Motorway/High speed A road (Long Haul routes)
- In GB a focus on urban (or even only dense cities) should capture the majority of benefits but some cases in lower density areas or on long haul routes could still occur
- No equivalent data for any other CP
- Is this enough?



¹. These cases will only be relevant to direct vision where at a suitable driver reaction time before the collision, the VRU is not significantly behind the drivers eye position. A proportion of turning/cyclist collisions will not meet this definition.

CHALLENGES: VEHICLE TYPE JUSTIFICATION

Collision data

- GB: 13% of cyclist and 26% of pedestrian fatalities with an HGV moving off or turning involve an articulated vehicle 40t+ on an urban road
 - No information on whether Long haul or regional distribution
- GB: 39% of cyclist and 23% of pedestrian fatalities with an HGV moving off or turning involve a 4 axle rigid vehicle 40t+ on an urban road
 - No information on the proportion long haul or specialist vs construction or on proportion N3G
- DE: Daimler study identified c50 KSI cases involving articulated vehicles (proportion of total not valid – unrepresentative sample)

Conclusion

- Articulated vehicles are involved a significant minority of collisions
- Potential for significant variation in different countries
- No collision information on some categories or subcategories
- No collision data from CPs other than UK, DE
- Is this enough?

Exposure to risk

All vehicles



e.g. Use of tractors
in London relatively
much less than all
vehicles but not
zero

Tractors only

CHALLENGES: VEHICLE MISCLASSIFICATION RISKS

- Could construction vehicles (cat A) be misclassified as specialist long haul vehicles (cat B)?
 - How many construction vehicles have sleeper cabs?
 - Do any construction vehicles have power >[370]kw
- Could rigid vehicles used in urban or regional distribution (Cat A) be misclassified as long haul vehicles (cat B)
 - How many rigid vehicles used in distribution have sleeper cabs and engine power >265kw
- Is there scope for direct vision regulation to provide a perverse incentive to increase power to classify a vehicle as cat B instead of cat A?
 - How many vehicles in relevant cat A vecto groups have power outputs close to limit values?
 - How difficult/costly would it be for manufacturers or operators to specify the required increase in power to change category?