

Comments to GTB&OICA aiming/levelling proposal (ECE/TRANS/WP.29/GRE/2015/5)

Proposal to improve GRE/2015/5 (GRE-73-18) Poland

73 GRE 14-17 April 2014

Mistakes of GTB&OICA proposal

„Humans rarely meet the standards of rationality, even when they think that they are reasonable”

„We don't solve the right problem, we solve the easy problem”

„The chance to avoid a costly mistake is sometimes worth the effort”

„Rational person would rather be hated than be loved, as long as his preferences remain consistent”

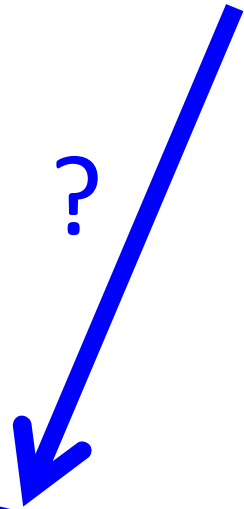
Daniel Kahneman, „*Thinking, Fast and Slow*”, Farrar, Straus and Giroux, 2011

Nobel prize 2002: „*For having integrated insights from psychological research into economic science, especially concerning human judgment and decision-making under uncertainty*”

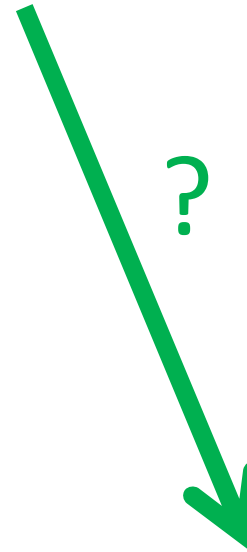
BASE FOR CHANGE OF LEGAL REQUIREMENTS



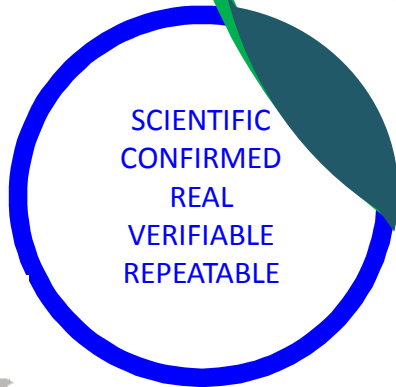
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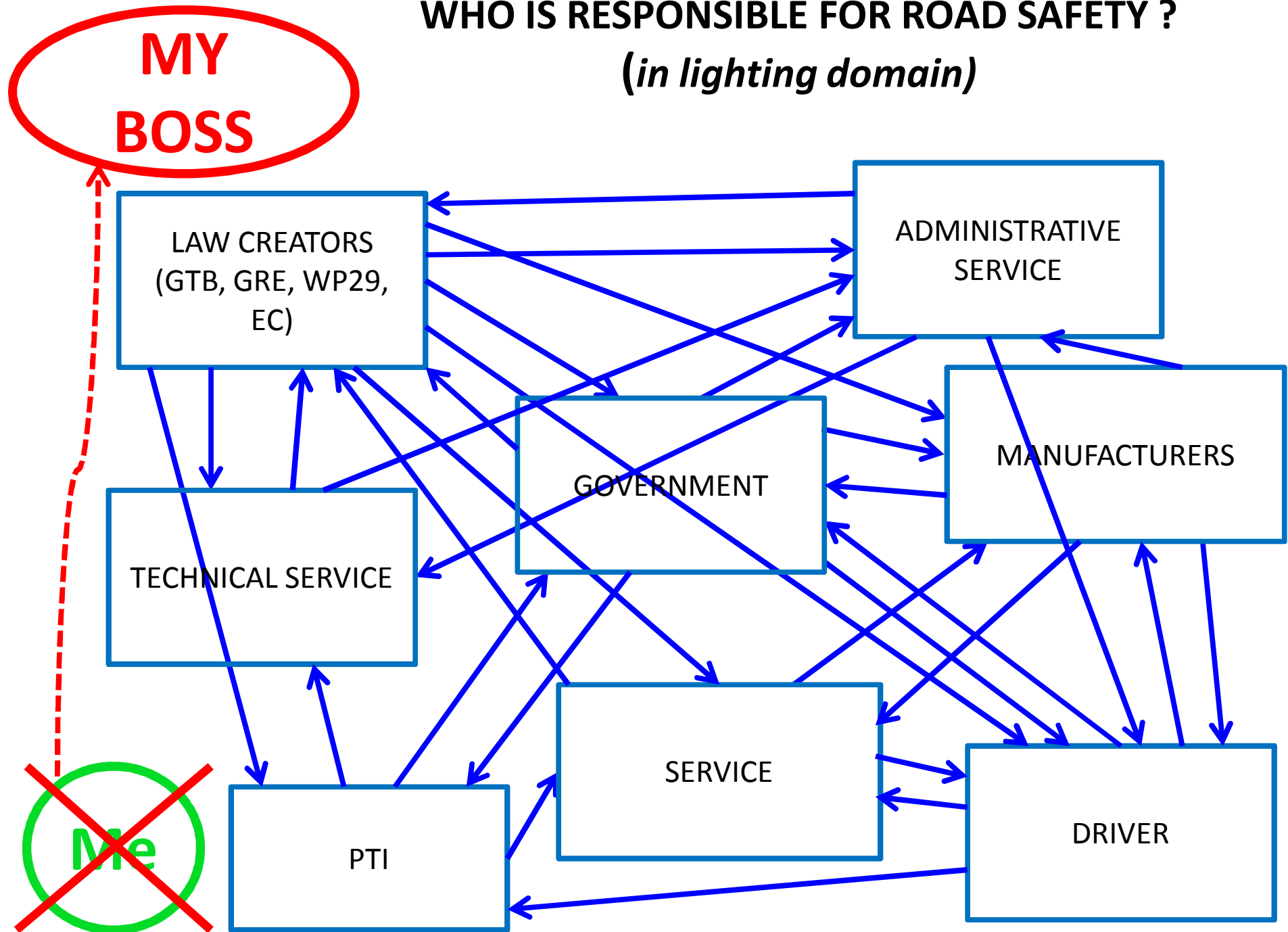
BASE FOR REAL HUMAN DECISIONS IN MOST SITUATIONS



RATIONALITY IS IN MINORITY

„Humans rarely meet the standards of
rationality, even when they think
that they are reasonable”

WHO IS RESPONSIBLE FOR ROAD SAFETY ? *(in lighting domain)*





**WHO IS
RESPONSIBLE
FOR NIGHT-TIME
ACCIDENT?**

„The chance to avoid a costly mistake is sometimes worth the effort”



Source: Internet



Source: Internet



Source: Internet



Source: Internet

„The chance to avoid a costly mistake is
sometimes worth the effort”









„We don't solve the right problem,
we solve the easy problem”

Mistakes of GTB&OICA proposal

- Proposal „solve” only car and „car similar” vehicles. Do not touch heavy vehicles, left „old solution” for them
- 50% load is similar to 2000lm artificial fixed criterion. 50% load can be significantly differently distributed between seats and trunk. There are different load/pitch characteristics for different vehicles
- Right side borderline of aiming/levelling tolerance is based on CIE TC4-45 preparatory work for headlight assessment standard. TC4-45 used good and very good contemporary headlamps which are much better than type approval minimum requirements (Reg. No 112). The number of headlamps is too small and not representative from statistical „rules of the art” point of view

Mistakes of GTB&OICA proposal

The argue that most of **cars are used by one or two persons** only and such cars take part in most accidents is inappropriate because:

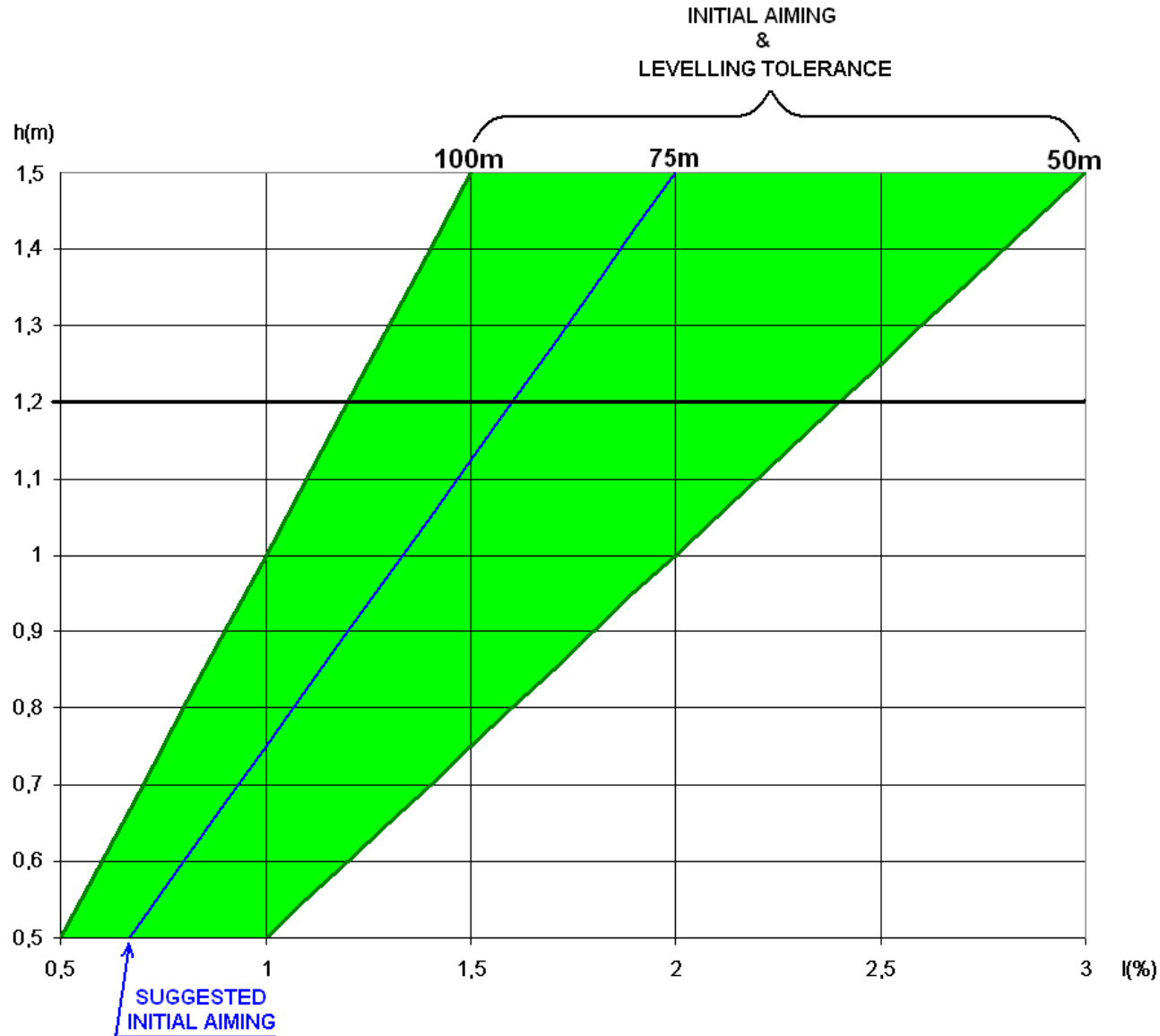
- Possible usage of cars can change in the future (e.g. famous CO₂ reduction)
- It can be different in other countries (than Germany and France)
- GTB&OICA proposal is neglecting statistically small but important for safety the periodical traffic during nights in weekends or holidays by many full loaded vehicles
- Accidents are statistically exceptional phenomenon. And it is controlled by rules of **small numbers** different than big numbers average
- Glaring and be glared there are two complete different situation. Cars with full load or load placed only in trunk has passing beams too high and cause glare to other road users but provides good road illumination

In document GRE-72-07 it was announced proposal to improve of GTB proposal:

- Aiming/ levelling tollerances
- Loading conditions

BASIC POLISH PROPOSAL

(GRE-66-17) ECE/TRANS/WP.29/GRE/2012/21

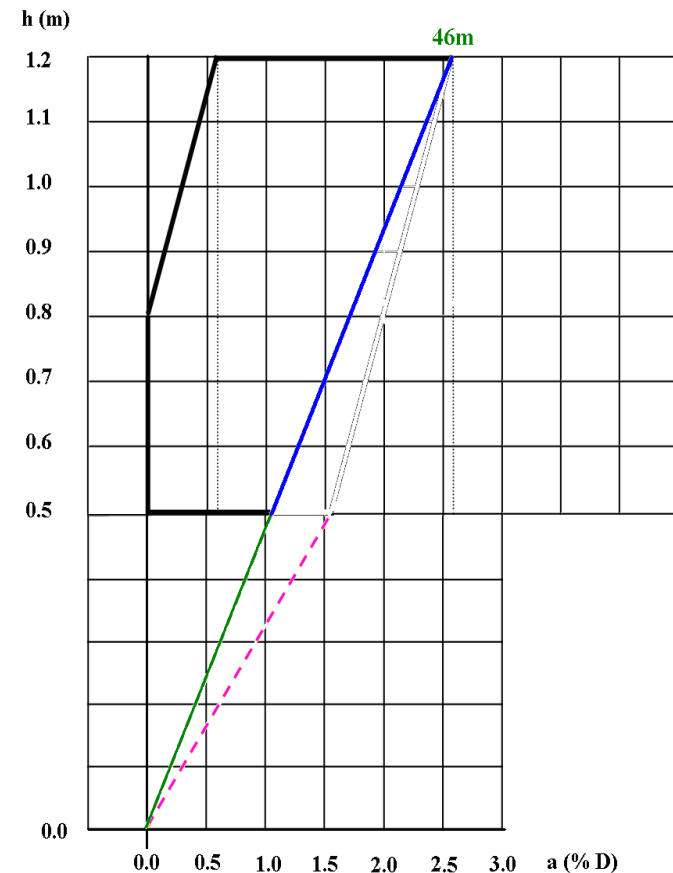


„Rational person would rather be hated than be loved, as long as his preferences remain consistent”

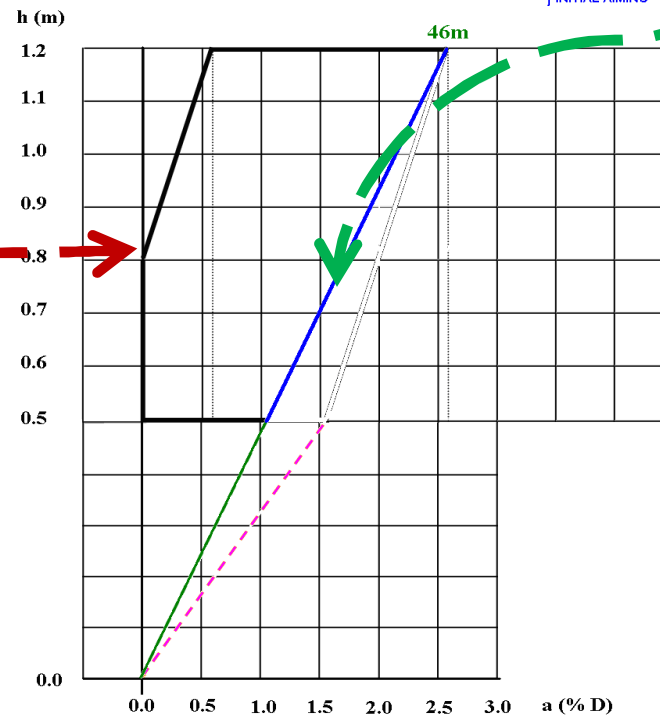
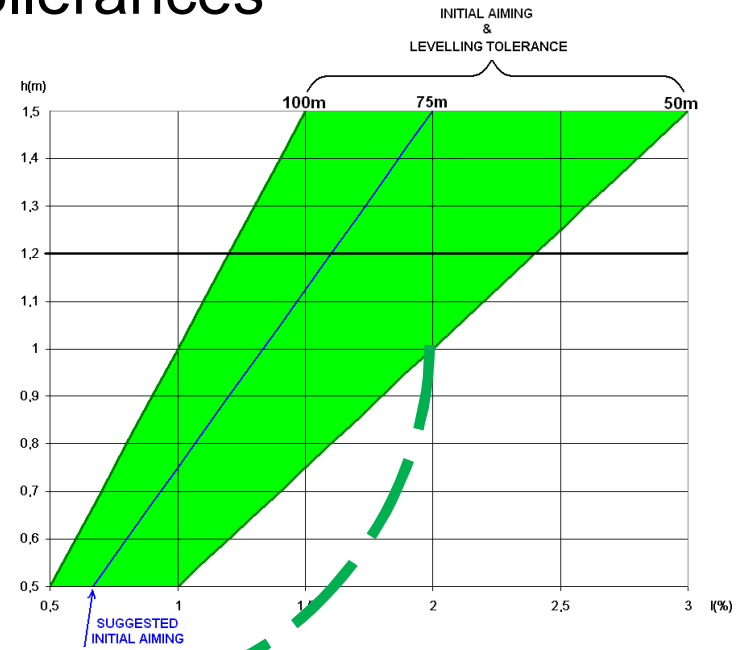
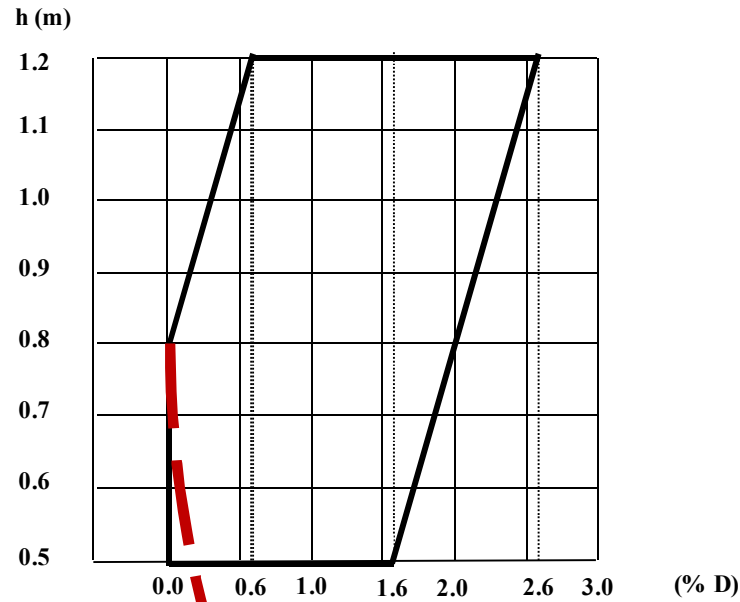
Proposed change:

- Adjusting the right side borderline of aiming/levelling tolerance to line described by **road illumination distance** independently on mounting height - straight line crossing 0,0 point of height/aim co-ordinate system.

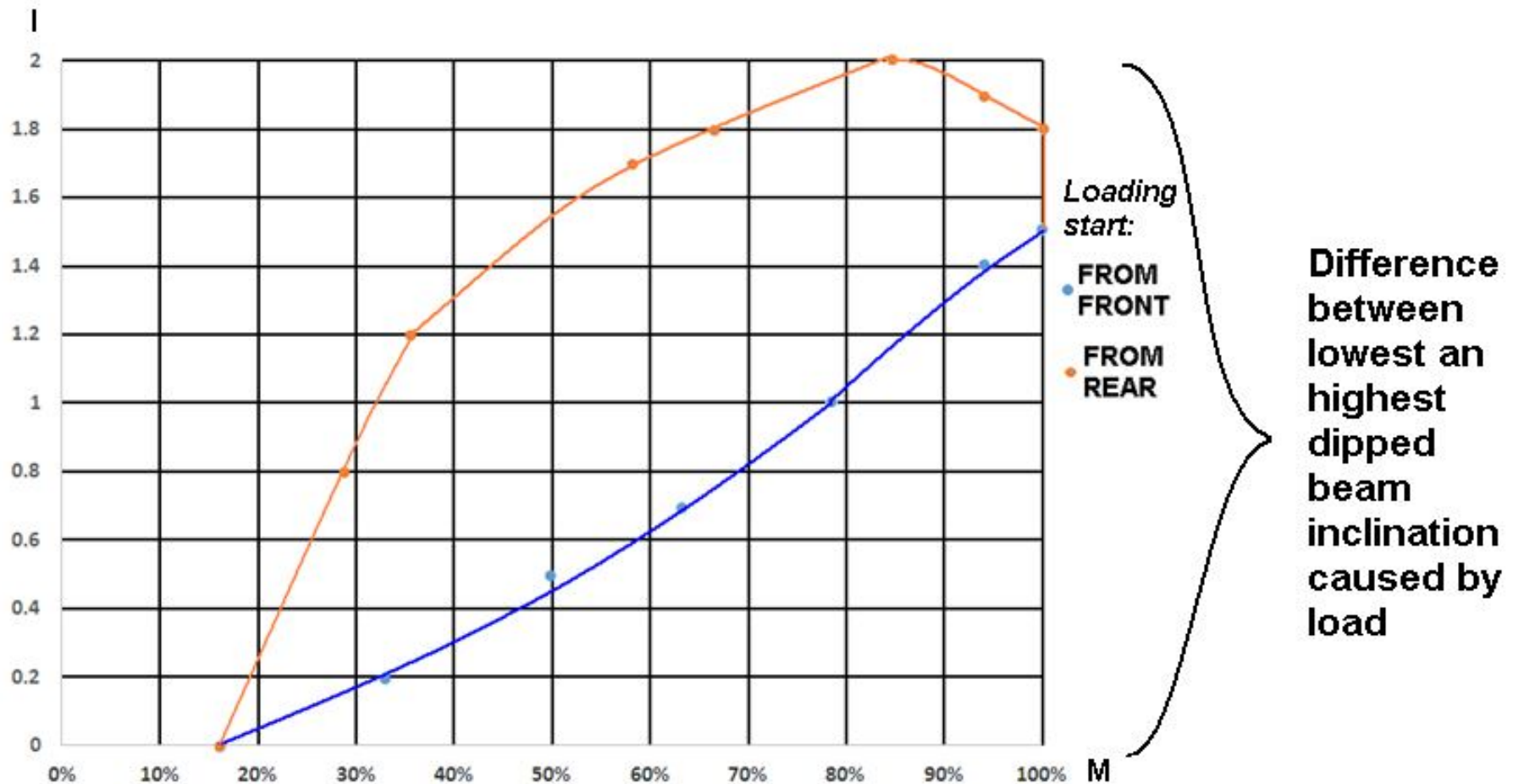
Present GTB&OICA proposal correspond to range between 31m and 46m and is ambiguous. Poland suggest it should be at least 50m but we are open for other opinion.



Aiming/ levelling tollerances



**Instead
GTB&OICA 50% LOADING THRESHOLD
take into account
REAL VEHICLE PITCH CHANGE WITH LOADING**



Proposed changes in GTB&OICA proposal:

•Replace the artificial and ambiguous 50% load criterion by **difference between maximum and minimum pitch** caused by load change in **whole range of possible load distributions**. It is universal criterion for all kind of vehicles not only for cars

Threshold :

- 1) Vehicles meeting range of tolerances do not need any levelling device.
- 2) Vehicles which are inside doubled tolerance range can use manual or automating levelling.
- 3) Vehicles exceeding doubled tolerances range shall use automatic levelling only.

**THANK YOU FOR YOUR
ATTENTION**