

POLIS comment on the Implementing Legislation of the General Safety Regulations for Intelligent Speed Assistance (ISA) Systems

1. Speeding kills, **especially in urban areas**. Effectively addressing speeding is indispensable to make European cities safer for all, to accelerate the modal shift towards sustainable urban mobility, and to unlock the potential of our streets for economic activity and social life.
2. Intelligent Speed Assistance systems (ISA) can make an important contribution. POLIS is committed to making sure ISA is a success, and **welcomes** the timely development and submission for comment of this Draft Delegated Act.
3. POLIS is fully aware that the present development and the future deployment of these regulations carries challenges, and not only for cities and regions. We want to **work together** with the Commission and all other relevant stakeholders – including, naturally, representatives of the automotive industry and of vulnerable road users – to improve this draft delegated act.

I. Effectively Addressing Speeding

4. Traffic deaths and serious injuries are avoidable, and thus **unacceptable**. They have underlying **structural causes**, and these causes must be addressed through decisive and sustained action, at all levels of the Union – local, regional, national, and European.
5. The European Union has set ambitious targets for Road Safety. The numbers show, however, that over the past decade **progress has stalled**, and has been very **unequal**, benefitting motorized vehicle occupants much more than the vulnerable road users.
6. Substantive progress in Road Safety requires special attention to **urban areas**, where streets and roads are used by people walking and cycling, and cars and trucks are the key source of danger.
7. A growing number of European local and regional authorities are embracing **Vision Zero**, and the substantive progress that some have already achieved (e.g., Helsinki,

Oslo, Ghent, Gothenburg) clearly shows that effectively addressing **speeding** is a key step to decrease both the number of crashes and their impact, especially to all those who are **outside** cars and trucks.

8. To effectively address speeding, **we must understand, acknowledge, and base our approach in the following points:**
 - 8.1 Speed limits have legal force – drivers going over those limits are **breaking the law**, first and foremost because they are generating **public danger**.
 - 8.2 This is especially the case in urban areas, where **speed limits are set for the safety of all road users**, especially people walking and cycling, who have to share the roadway at all times with motorized vehicles that can (and do) kill them.
 - 8.3 Speeding in an urban area generates a much higher risk for people walking and cycling than for the driver breaking the law, because the driver is protected by a **one-ton steel armour**.
 - 8.4 Preventing speeding in urban areas is first and foremost a question of ensuring **collective safety**, more than only protecting drivers from themselves (and that, by the way, is also important).
 - 8.5 Speed limits set the **maximum** allowed speed, not a “recommended” speed, and moving at the maximum speed already involves the highest acceptable amount of collective risk.
 - 8.6 Experience clearly shows that it **is not enough to rely on, or to appeal to**, a rational and responsible behaviour of drivers. Experience clearly shows that other factors are at work, which often ‘override’ prudence, and we must look for ways to actively “nudge” behaviour.
 - 8.7 We must address the underlying structural factors that encourage and sustain speeding, namely (a) **motorized vehicles that enable drivers to easily break the speed limits**, (b) a road infrastructure, designed and built over the past decades, that enables the vehicles to move at speeds which are unsafe for other road users, and (c) the behaviour of other drivers using the road at the same time, whose speeding creates a psychological pressure for convergence in behaviour.
 - 8.8 Many drivers aren’t necessarily ‘intent’ on breaking the law – what happens is they naturally tend to move at the **speeds (wrongly) perceived as safe**, which are enabled by vehicles and infrastructure.

- 8.9 Acknowledging this does not question the moral and legal responsibility each driver has to respect the speed limits – it does, on the contrary, **extend that responsibility** to those in charge of manufacturing vehicles, and to those in charge of designing, building and managing the streets and roads where those vehicles end up rolling.
9. These structural factors generate repeated behaviour (speeding) all over the network, and sustain motorized traffic danger all over Europe. They have to be tackled with **decisive action**.
10. Acknowledging this, a growing number of cities and regions are improving their street networks. Conducting this effort across Europe, in order to meet the Union's 2020-2030 road safety targets, will require **massive public investment** over the coming decade.
11. This effort of local and regional authorities must be accompanied by other measures, and an **effective** Intelligent Speed Assistance (ISA) is a critical element – especially because many in the automotive industry keep manufacturing vehicles that can easily go over the highest speed limits, and insist on keeping motor power and acceleration from 0 to 100 kph as a key selling point in their marketing strategies.
12. We must not hide behind the responsibility of the drivers – we must find ways to **effectively assist** them in keeping their speed within legal limits. That is why ISA, if developed **correctly**, can help improve road safety. It must nudge behaviour in a proven effective way – which involves, necessarily, **changing the behaviour of the car**.

II. Cities want Safety

13. POLIS is the leading network of European cities and regions committed to Transport Innovation. Specifically, to innovations that can enable Europe's urban mobility systems to become more **safe, sustainable, and equitable**.
14. Road Safety is one of the key pillars of our mission – obviously, because saving lives is important, but also because Road Safety is indispensable for advancing **Sustainable Urban Mobility** (motorized traffic danger discourages people from cycling and using public transport), **Transport Justice** (motorized traffic danger affects disproportionately some parts of the population, especially those who cannot afford to drive, because of age, disability or low-income, to) and **Innovation in Transport** (a dangerous carriageway stops or at least significantly delays the deployment and growth of useful new mobility services).



15. POLIS has always been in favour, and actively promoted, the GSR revision to include ISA, including launching in 2018 an **ISA Manifesto**, which was initiated together with the City of Helmond and EIP NMS, and that raised awareness and support among POLIS members and other stakeholders about importance of ISA. Some POLIS members already have a relevant experience with ISA, and their **practical know-how** informed the present comment.
16. POLIS is strongly committed to making sure ISA is a success – but a real, effective ISA, that stands up to its name, where the “A” stands for **assistance**, not just warning.
17. May we respectfully argue that the **input from local authorities** on this matter should be considered highly **relevant**:
 - 17.1 We are responsible for the design, construction and maintenance of extensive road and street **networks**, and their respective surface markings and vertical traffic signs.
 - 17.2 We are also responsible for the management of those networks, which includes assessing the risk and **setting the speed limits**.
 - 17.3 Many of our members are already planning for, setting up, and managing, the **digital infrastructure** to support intelligent traffic management systems.
 - 17.4 In short, local and regional authorities will provide or facilitate the provision of the infrastructure, both physical and digital, to ‘feed’ ISA, on a **very significant extension** of Europe’s road and street networks.
 - 17.5 Furthermore, local and regional authorities are a specific layer of European governance, led by elected officials with specific political legitimacy, with a **direct responsibility and duty to protect the life and safety of their citizens**, most of which are vulnerable road users, people with a right to walk and cycle safely in the roads and streets of the cities and towns where they live, their natural habitat.
18. Speeding is a major factor in traffic deaths and serious injuries – including in cities. **Reducing and effectively enforcing speed limits is a key step for European cities.**
19. Cities know that ISA can make an **important contribution** towards this challenge. We want to look for ways that help it become an effective dissuader of speeding in our streets. But that requires having a system that **truly assists**.

III. On Economic ‘Burdens’

20. Cars and trucks can be manufactured and sold because there is an infrastructure to use them. **Cities and regions bear a very considerable part of the costs** of building, maintaining and managing that infrastructure.
21. ISA operability will require an important upgrading effort on the part of European cities and regions. We are aware of this, and many members are already investing, or planning to invest, in infrastructure upgrades to enable future traffic management, in a **context of growing automation**.
22. That this is a Human Rights issue should be enough to mobilize all efforts. But since a supposed “economic burden” is often used as an argument to delay progress, it is worth to mention that:
- a) Road Safety is fundamental to the **free movement of people and goods** in Europe – if traffic isn’t safe all across the Union, it will hardly be free;
 - b) In a context of **growing automation**, good ISA requirements will directly contribute to make the European automotive industry more **competitive**;
 - c) Setting lower and less demanding ISA standards, will maintain the status quo, and go on transferring the **external costs** of traffic deaths and serious injuries to **Member States** (and victims, and their families);
 - d) The status quo of motorized danger is clearly harming not only a faster shift to Sustainable Urban Mobility, but also the deployment and economic survival of **new mobility services**, which could, if supported, make private investment align with, and support, progress towards European goals for Sustainable Transport.
23. In short, setting low ISA requirements on the basis of alleged “economic burden” for those installing these systems in new vehicles makes no economic sense for the Union. It will lead to an ineffective ISA, which will be useless, **wasting investments that will also be required of the public sector**, and keeping the high economic burden of road deaths and serious injuries fully (i.e., over and beyond ‘disproportionately’) on the **shoulders of victims, families, and Member States**. It will also delay a much-needed upgrade in vehicles for which technology is also available, which will seriously jeopardise the competitiveness of the **European** automotive industry.

IV. Comments on the Draft

24. On the **recitals**:

- (6) – We support technological neutrality and performance-based requirements, but only if the performance level requirements are kept high.
- (8) – We disagree with the use of the expression “...*minimize driver annoyance*...”, in this recital and other points further along. We understand the functional concern with the possibility of a **sensory overload** that encourages the user to seek to terminate the emission of sound at the source (e.g. by turning off something). But why is “driver annoyance” a concern for the regulator, and why should it be minimized? This expression sustains a car-centric framing of the issue and is **counterproductive**. City residents are “annoyed” by speeding because it kills people, why shouldn’t drivers’ annoyance be “maximized” when speeding? The **functional concern is pertinent** and should be expressed otherwise. “Minimizing driver annoyance” is not mentioned in the GSR, and should have no place in this regulation.
- (9) – We support the **combination of systems** as the safest and most reliable approach, and strongly recommend that this combination be made **mandatory**. Combining systems is the best way to ensure a fail-safe ISA. We fully agree with the statement “...*it is however clear that systems employing a combination of a camera system + Global Navigation Satellite System (GNSS) + up-to-date highdefinition digital maps are considered those with the preferred technologies with the greatest real-world performance and reliability, and such systems should be benefitted*”. If this is clear, it should have **direct and explicit implications in the regulation**, and we fail to find them. Furthermore, it is unclear to us how in practice “*should be benefitted*” will be realized. Will these systems be subsidized? Or is it just an appeal to the manufacturers?

25. **Article 2, Definitions**:

- (14) – Public authorities have the right to use speed limit road marking, and this use is important because of its enhanced visibility in areas of higher risk, e.g. school zones, 30 kph areas, public transport hubs. We disagree with the exclusion of these markings from the scope of ISA. There is no legal mandate for that. The same conditions apply to the visibility of the traffic signs, i.e., if not visible it will not count as a fail for visual detection.

Comments on the Annex, Part 2:

26. **General Requirements (1):**

- (1.1) We **strongly disagree** with the optional nature of the speed control function. **SCF must be considered as an integral and indispensable part of ISA. Visual and acoustic warning are not assistance, they are just warnings. ISA must go beyond warning, in must produce a change in the vehicle's speed, to effectively foster a change in the driver's behaviour.** Making SCF just an option opens a cheap way out for auto manufacturers to defraud the legitimate expectations that European citizens and local authorities have regarding the effectiveness of GSR. It would also waste a logical quick win in the incremental development towards CCAM.
- (1.1.2) We strongly disagree with the acceptability of ISA STU with no SCF, for the reasons stated above. This will open a cheap way out of an effective ISA, through simple add-ons that have no effect of the performance of the vehicle. Mandatory SCF will not necessarily preclude nor discourage the use of ISA STU (consider, for example, Electric Vehicles).
- (1.3) We recommend adding "...operated on a public road **or street** located...". Streets are a specific element, have distinct characteristics from roads, and deserve a specific mention.

27. **ISA Control (2.2):**

- (2.2.1) This point does not set any pre-condition for the turning-off of ISA by the driver, it just says "it shall be possible". The GSR, however, clearly points to a **narrower understanding of such a pre-condition**, in its recital (11): *"it should be possible to switch off [ISA], for instance, when a driver experiences false warnings or inappropriate feedback as a result of inclement weather conditions, temporarily conflicting road markings in construction zones, or misleading, defective or missing road signs."*
- (2.3.1) This sentence does not seem clear: *"In the case of the failure (...) status check"*. We recommend a simpler, more understandable redaction.

28. **Speed limit determination real-world driving reliability (2.4.2.4.2):**

- (a) The correct speed limit should be determined for $\geq 99\%$ of explicit traffic sign passing events, and $\geq 95\%$ of implicit traffic sign passing events;
- (b) The distance-based performance requirements should be determined for $\geq 99\%$ of distance driven.

29. **SLWF Requirements (2.5):**

- (2.5.2) In order to have a successful implementation of ISA, user acceptance is key. Otherwise, users will switch off the system, and we can end up with all cars in the EU equipped with ISA, but not using this system. With this concern in mind, we must stress that **we have very serious doubts** about the true effectiveness of the acoustic warning system, because (1) it is certainly **not enough** to change the behaviour of drivers, (2) there is a high risk that it will lead to sensory overload and make the driver **switch off** the system, and (3) it can lead to **confusion** with other acoustic warnings. Experience shows that other solutions are more effective means for reducing speeding – and choosing acoustic warning as “the” solution for everything is not wise nor prudent – especially when other solutions are available and proven as more effective. Thus, we respectfully, but strongly, disagree with what the current draft proposes.
- (2.5.2) On this point, we also strongly disagree with the current proposal: *“At times when the driving speed of the vehicle is actively controlled by a vehicle system where the driver is not expected to be touching the accelerator control (e.g. cruise control) (...) the system shall reduce the driving speed to the perceived speed limit automatically or a visual and a cascaded acoustic warning shall be used.”* If the driver is not expected to be touching the accelerator control, how can visual and acoustic warnings ever be considered enough, and SCF just an option? This is an extreme and dangerous proposition. We cannot understand this apparent bias against SCF. We find it totally unacceptable.

30. **Visual Warning and Cascaded Acoustic or Haptic Warning (2.5.2.1):**

- (2.5.2.1.1) We find no useful reason to set an end for the visual warning – quite the contrary, we find it very important to keep the visual warning on at all times where the vehicle is not respecting the speed limit.

- (2.5.2.1.4) Nothing ensures the visual warning will be effective. On the contrary – the higher the speed is, the smaller the driver’s field of vision and availability for paying attention to other stimulus. The visual warning must be always complemented by other means, and **there is no reason to accept, much less to mandate through regulation, a delay between the visual warning and other warnings, and the SCF**. They should be deployed as fast as possible. The conditions set forth in this point fail to acknowledge this, and to consider the scale of urban environments. If a vehicle enters a 30 kph zone at 130% (or more) over that speed limit, why do we have to wait for 3 seconds for the warning to be effective, when in that period of time the vehicle will go over a distance of at least 22 meters? And, mind you, this is just for the warning – we would have to add the distance that it takes the driver to acknowledge and act upon this. This can easily mean 50 meters or more. What if it’s a school zone? What if it’s an approach to a pedestrian crossing? The warnings must go off simultaneously, and no more than 1,5 seconds after the vehicle enters the area with the new speed limit.
- (2.5.2.1.5) and (2.5.2.1.6) and (2.5.2.1.7) As already mentioned above, we find this concern with minimizing “driver annoyance” unacceptable as a regulatory concern, and a mark of a car-centric approach that fails to consider the collective risk and has been proven ineffective. Why are such strict time limits set for these warnings? These limits should be tied to the situations mentioned in (2.5.2.1.8), points (a), (b), (d), (e).
- (2.5.2.1.8) The situation set in (f) is **not logical, and especially dangerous** – a driver is rolling above the speed limit, and not reducing the speed – but if he enters an area with an even lower speed limit, then the warning goes off, to come back later, after “x” seconds pass? This is not safe – the warnings and the SCF should **go on, and even become more accentuated**. This situation is of special concern to urban areas, where progressive speed limit reductions are used in the approach to very vulnerable areas, e.g. school zones, pedestrian crossings in suburban roads, etc.

31. SCF Requirements (2.6):

- (2.6.1.3) We **agree** with the SCF bringing the speed **below the speed limit** – as mentioned above, speed limits are not recommended speed. But we find it unacceptable to state in a regulation, let alone a European Regulation (!) that *“in order to minimize driver annoyance, the vehicle manufacturer shall endeavour to stay as close to the perceived speed limit as possible.”* Furthermore, we find this requirement unnecessary, considering the narrow margin (of 5 km/h) already set .

- (2.6.2) If the vehicle is actively controlled by a system where the driver is not expected to be touching the accelerator control, the **SCF must remain active** – switching to SLWF instead is not acceptable.

32. **SLIF: real-world reliability test (3.3):**

- (3.3.1, c) The test drive must include roads and streets that integrate bike lanes (especially where road traffic signs are separated from the roadway by the bike lanes), school zones, and other zones of high risk for vulnerable road users (considered as such on the basis of, e.g., high numbers of crashes involving pedestrians and cyclists, or low iRAP star rating).

V. Supporting large scale deployment of ISA, faster

33. Although it may seem outside the scope of this delegated act, it would be good to consider some tie-in for the **retrofitting** of existing vehicles, in addition to mandating ISA in new vehicles. Otherwise full deployment will take too long.
34. Every day, public authorities – especially local and regional authorities- **‘inject’ thousands of vehicles** into the road and street networks, e.g., buses, garbage collection trucks, and many cars. Many other private entities operating large fleets do the same, from Mail to deliveries, from taxis to ride-hailing companies.
35. These entities have a direct interest – both legal, reputational, and economical – in making sure their vehicles operate within the legal speed limits. Retrofitting their vehicles with ISA systems would be a **major step forward** for Road Safety in Europe, and would pave the way for acceptance of the vehicles produced to comply with the requirements of this delegated act – even if, **for retrofitting purposes alone**, SCF would not be a part of the ISA system.
36. Some local and regional authorities have practical experience with retrofitting some of their vehicles with ISA systems – these experiences have shown promising results. To support large scale deployment and quick uptake of ISA, cities and regions (e.g., Helmond, and other POLIS members) are willing to test and **pilot after-market solutions**, and to cooperate with industry, research and the EC.
37. Finally, we must never forget that the success of ISA also depends on the upgrading of the physical and digital infrastructures of street and road networks. It is very important to invest in capacity building of local and mobility officials, to introduce them to the

opportunities and needs brought about by ISA. POLIS is willing to participate in this important effort.

We again **congratulate the Commission for the timely development and submission for comment of this Draft Delegated Act**. It shows true commitment to delivering on the GSR's advances, namely on ISA.

For the reasons stated above, we believe some **fundamental adjustments** need to be made to an already well-structured and advanced draft. These adjustments are made in good faith, based on science and extensive practical experience, with the safety of our citizens and the public good in mind, and with consideration of the strategic importance ISA has for the competitiveness, and the future, of the European automotive industry.

We are fully aware of the multi-stakeholder nature of this process, and of the impact these regulations will have on vehicle manufacture – we hope that this awareness will be mutual, and that other stakeholders also understand the **disproportionate burden** that cities and regions already carry, and the investments we will have to make to upgrade our physical and digital infrastructures.

Moving forward, we are committed to a constructive dialogue on this draft delegated act, and we stand ready to support an effective ISA.

Brussels, July 24th, 2020



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