

Automatic Speed Management of Vehicles

The results of the Expert Panel

Dear specialist,

Thank You very much for Your participation on Expert Panel conducted with Delphi method. In all we got 78 responses. 35 respondents were from Finland, 16 from Sweden, 10 from Norway, 7 from Denmark and 10 from other European countries. 86 % of the respondents were men, 75 % of the respondents were over 40 years old and had over 10 years working experience in telematic or traffic safety area. 49 % of the respondents were researchers / consultants who are experts in this area, 27 % were experts who work at road administrations. Experts of this area in ministry of transportation, police, other authorities, car industry and device manufacturers were represented in 5 % share each. Because the Finnish opinions were over represented comparing to the opinions from other countries, we checked if they biased the results. No significant differences between the opinions of Finnish and other respondents were observed.

As You remember, the aim of the survey was to define the future of automatic speed management of vehicles. We considered both Intelligent Speed Adaptation (ISA) and Automatic Speed Enforcement (ASE).

Terminology

Intelligent Speed Adaptation

In the survey, we grouped the systems according to the type of feedback the system gives to the driver:

- **Informing system**
The system informs driver of the current speed limit or gives a speed recommendation. The driver makes the speed choice.
- **Warning system**
The system warns the driver when she/he is exceeding the speed limit. The warning can be a voice-signal, peep-sound, a light, a text, etc.
- **Recording system**
The driver's speed behaviour is recorded. The recorded information can be used by the driver himself, by his employer, by parents, by police, etc.
- **Compulsory system**
Exceeding the speed limit is prevented by the system. For example there is a block in gas pedal. There is a possibility for exceptions for a short time.

The Automatic Speed Enforcement

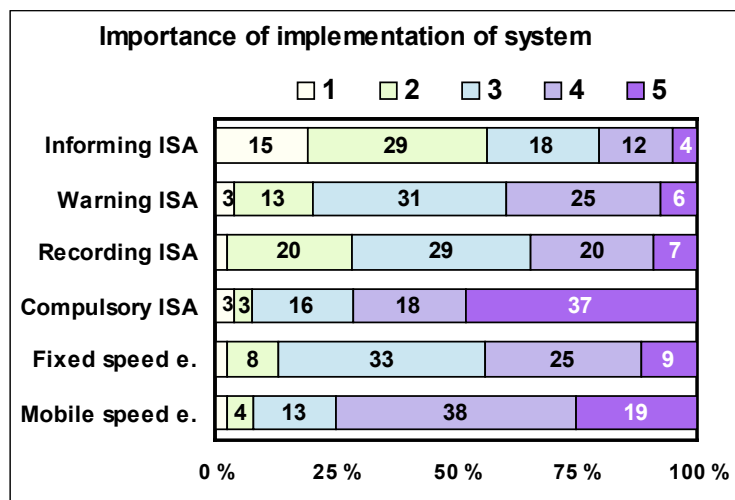
If the vehicle is speeding, a camera takes a picture of the driver of the speeding car and of the registration plate. The driver (or the owner of the car) gets a fine. The automatic speed enforcement camera can be:

- Always in the same fixed place - Fixed speed enforcement,
- Two cameras connected to each other. The system measures the time between two spots and calculates the average travel speed.
- In a moving vehicle - Mobile Speed Enforcement

1. GENERAL QUESTIONS

How important do you think the implementation of these systems would be concerning traffic safety.

Please, indicate the score on a scale of 1 to 5 (1= not so important ... 5 = very important, 6 = no opinion)



2. PROBABILITY OF ISA-SYSTEMS

How common do you think the system will be in your home country?

The system will be in --% of the cars in year	Informing system		Warning system		Recording system		Compulsory system	
	2006	2016	2006	2016	2006	2016	2006	2016
0%	5.1	3.8	2.6	1.3	20.5	9.0	34.6	14.1
below 1%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1 - 4%	23.1	30.8	3.8	3.8	37.2	10.3	34.6	14.1
5 - 9%	35.9	33.3	5.1	3.8	26.9	20.5	14.1	12.8
10 - 19%	19.2	20.5	19.2	21.8	6.4	32.1	11.5	23.1
20 - 29%	9.0	6.4	25.6	29.5	5.1	10.3	2.6	19.2
30 - 39%	2.6	1.3	14.1	11.5	1.3	6.4	0.0	2.6
40 - 49%	1.3	0.0	3.8	7.7	0.0	1.3	0.0	5.1
50 - 59%	0.0	1.3	5.1	5.1	0.0	5.1	0.0	3.8
60 - 69%	0.0	0.0	6.4	2.6	0.0	2.6	0.0	0.0
70 - 79%	0.0	0.0	5.1	5.1	0.0	0.0	0.0	0.0
80 - 89%	1.3	0.0	2.6	2.6	0.0	0.0	0.0	0.0
90 - 99%	0.0	0.0	1.3	1.3	0.0	0.0	0.0	0.0
100%	0.0	0.0	2.6	1.3	0.0	0.0	0.0	1.3
Missing	2.6	2.6	2.6	2.6	2.6	2.6	2.6	3.8
Total	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %

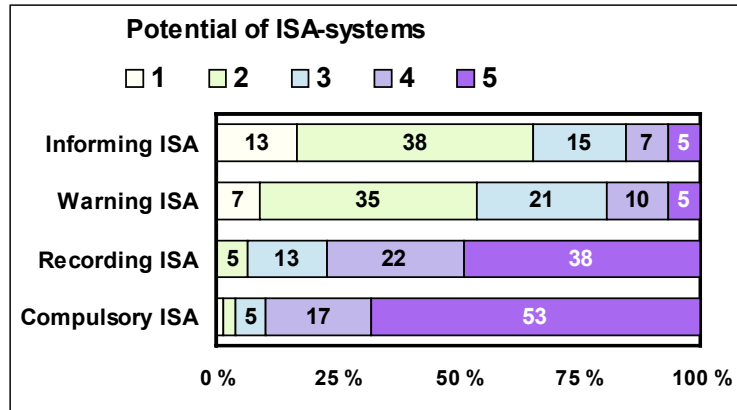
(from original data)

Mean	8.7	31.0	7.2	29.5	4.2	14.2	3.1	14.6
St.dev.	11.2	24.8	7.8	22.6	5.8	14.5	4.4	16.5

3. VOLUNTARY / MANDATORY

The universality of the ISA-systems depends on legislation. What is your opinion of the potential of ISA-systems if such systems are voluntary or mandatory?

(1. Will be common, when the device is on the market ... 5. Will be common, only if it is made mandatory by law)



4. TRAFFIC SAFETY EFFECT

If the -- system were in use in every vehicle it would reduce -- by	Informing system		Warning system		Recording system		Compulsory system	
	personal injury accs.	fatal acci-dents	pers.	fatal	pers.	fatal	pers.	fatal
0%	9.0	7.7	1.3	3.8	3.8	3.8	1.3	1.3
below 1%	5.1	9.0	6.4	2.6	5.1	6.4	1.3	
1 - 4%	14.1	16.7	6.4	12.8	5.1	3.8	1.3	
5 - 9%	39.7	26.9	29.5	17.9	21.8	23.1	5.1	6.4
10 - 19%	21.8	26.9	38.5	35.9	41.0	26.9	28.2	17.9
20 - 29%	3.8	5.1	11.5	15.4	11.5	21.8	29.5	33.3
30 - 39%	1.3	1.3	1.3	5.1	3.8	2.6	21.8	16.7
40 - 49%	1.3	1.3				3.8	2.6	6.4
50 - 59%		1.3	1.3	2.6	3.8	1.3	3.8	11.5
60 - 69%						2.6	1.3	2.6
70 - 79%								
80 - 89%							1.3	1.3
90 - 99%								
100%								
Missing	3.8	3.8	3.8	3.8	3.8	3.8	2.6	2.6
Total	100%	100%	100%	100%	100%	100%	100%	100%

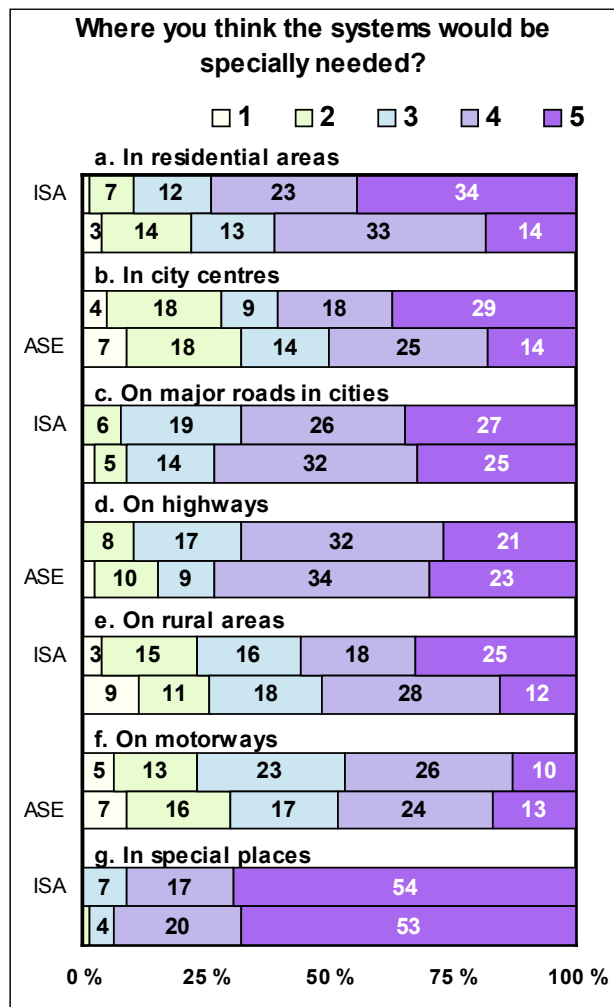
(from original data)

Mean	6.9	8.0	10.2	12.3	12.7	14.8	22.9	27.1
St.dev.	6.8	8.6	7.8	10.2	10.6	12.9	13.4	15.9

5. APPLICATIONS (PLACES)

Where do you think the systems would be specially needed?

Please, indicate the score on a scale of 1 to 5 (1 = not so important ... 5 = very important, 6 = no opinion), ISA=Intelligent Speed Adaptation, ASE=Automatic Speed Enforcement



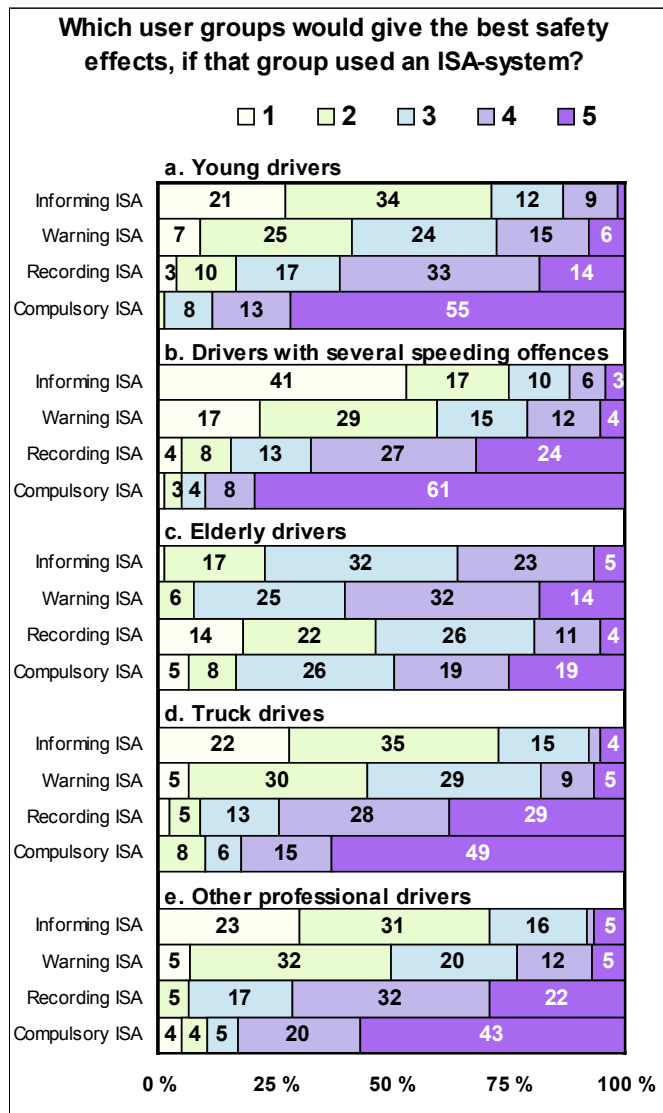
Name some other important place.

Intelligent speed adaptation	Automatic Speed Enforcement
<p>Intersections, crossroads</p> <p>Wherever pedestrians are moving around, by night, in slippery conditions, in poor visibility</p> <p>bridges, intersections, slippery road sections</p> <p>every location with speed adaptation problems</p> <p>around pedestrian crossings</p> <p>at night when there is no enforcement</p> <p>Dangerous intersections</p> <p>express roads</p> <p>On highways in junctions, with lowered speed limit</p> <p>slippery roads, fog</p> <p>See next</p> <p>nearby fire stations and hospitals</p> <p>high way ramps with know dangerous nature</p> <p>By bad weather</p> <p>On the approaches to dangerous junctions</p> <p>What about winter conditions / slippery road</p> <p>Places subject to difficult weather conditions</p>	<p>Wherever pedestrians are moving around</p> <p>In places where several accidents happens (in a year/month.)</p> <p>intersections</p> <p>every location with speed adaptation problems</p> <p>Bus Lanes</p> <p>High accident rate places</p> <p>Crossings for pedestrians and cyclists, rural intersections (only when cars are approaching on the crossing road)</p> <p>nearby fire stations and hospitals</p> <p>cross-border traffic (real-time enforcement for international traffic)</p> <p>By bad weather</p> <p>What about winter conditions / slippery road</p> <p>Road construction sites</p>
<p>2nd round</p> <p>Every location with speed adaptation problems</p> <p>Special times: e.g. at night to reduce noise disturbance</p> <p>ISA is important for the whole transport system</p> <p>Wherever pedestrians are moving around, by night, in slippery conditions, in poor visibility</p> <p>In bad road sections with surprising, poor geometry like curves etc.</p> <p>See next</p> <p>At dangerous or complicated junctions. Around pedestrian crossings</p> <p>On highways in junctions, with lowered speed limit</p> <p>Close to places there are lot of pedestrians. Also along highways during the trip, in Finland specially because of changes of speed limits in winter-/summertime.</p>	<p>High accident rate places</p> <p>Special times: e.g. at night to reduce noise disturbance</p> <p>Anywhere with speeding problems</p> <p>Intersections At locations with speed adaptation problems</p> <p>Road construction sites</p> <p>Accident Black Spots</p> <p>In bad road sections with surprising, poor geometry like curves etc.</p> <p>Dangerous intersections (where accidents happens)</p> <p>Every location with speed adaptation problems</p> <p>Road construction sites</p> <p>In suburban areas, specially close to schools and nurseries.</p> <p>Should be used as a black spot measure, i.e. where the number of recorded accidents have been higher than average and speeding seems to be the problem. Also it should be used in relation to road works as these sites can be difficult to administer in an Intelligent speed adaptation situation.</p>

6. ISA USERS

Which user groups would give the best safety effects, if that group used an ISA-system?

Please, indicate the score on a scale of 1 to 5, according to how important you think they are concerning improved traffic safety with different ISA-systems



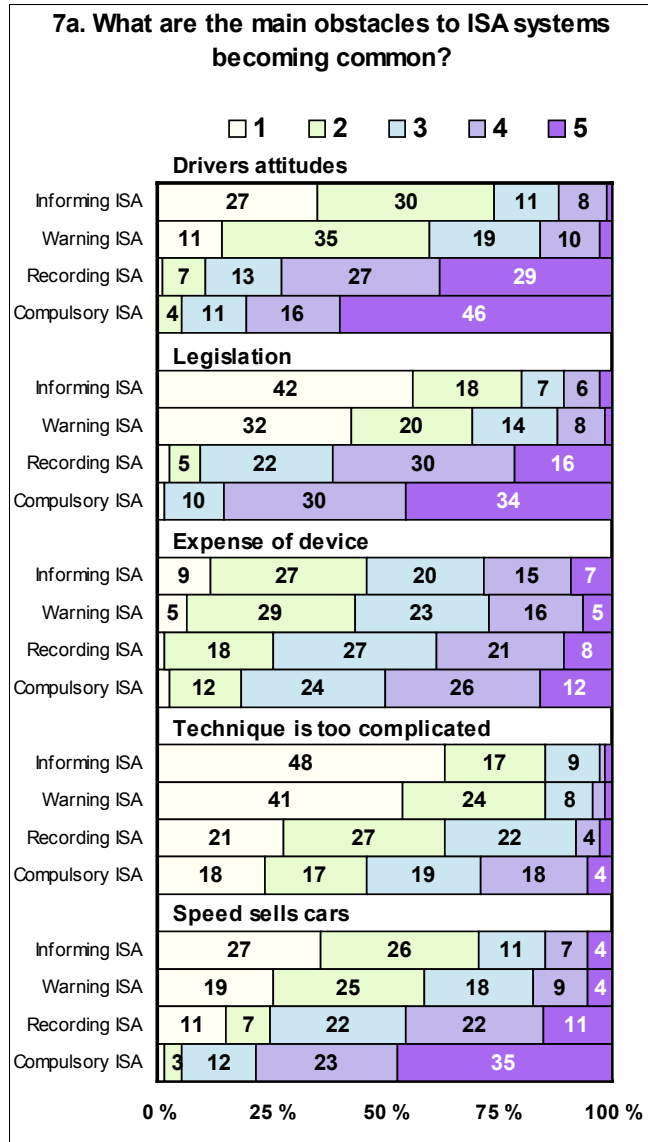
Name some other important user group.

Informing ISA	Warning ISA	Recording ISA	Compulsory ISA
			Motor bike riders Motorbikes
This is not safety relevant for any group	Safety conscious drivers who do not want to speed	All, less for safety conscious perhaps	Mid-aged men, young females
Public transport (busses also tram)	Public transport		
Rental car drivers	insurance companies Rental car drivers	Taxi drivers fleet-owners Ambulance, police, fire truck drivers	Taxi drivers commercial light-trucks Citybus drivers
Driving schools	towing a trailer Driving schools Taxi drivers, bus drivers	Driving schools Taxi drivers, bus drivers	schoolbus drivers towing a trailer Driving schools Taxi drivers, bus drivers
Tourists	Tourists People who don't drive very often	Motorbike drivers	Tourists
2nd round			
Rental car drivers. Tourists	Taxi drivers, bus drivers. Rental car drivers	Fleet-owners. Taxi drivers, bus drivers Leased cars	Commercial light-trucks. Motorbikes company cars. cars with publicity for companies, to ensure good image
This has really no safety major implications except for very law-abiding drivers.	Drivers unfamiliar with area/roads		Motorcyclists (assuming that compulsory ISA can be adequately specified)
Tourists, rental car drivers	Tourists, rental car drivers	Fleet owners	Commercial light-trucks Towing a trailer Tourists
People not driving frequently - e.g. "summer drivers", the wife will drive along the trip to summer cottage but never in city.	People not driving frequently - e.g. "summer drivers", the wife will drive along the trip to summer cottage but never in city.	In general groups whose work is related to driving/moving around.	In point of view of traffic safety, this would be ideal solution - in reality it probably is a dream.
			busses

7. SYSTEM PROMOTION AND OBSTACLES

7a. What are the main obstacles to ISA systems becoming common?

Please, indicate the score on a scale of 1 to 5 (1 = no relevance ... 5 = important obstacles, 6 = no opinion).



7a: Name some other important obstacle.

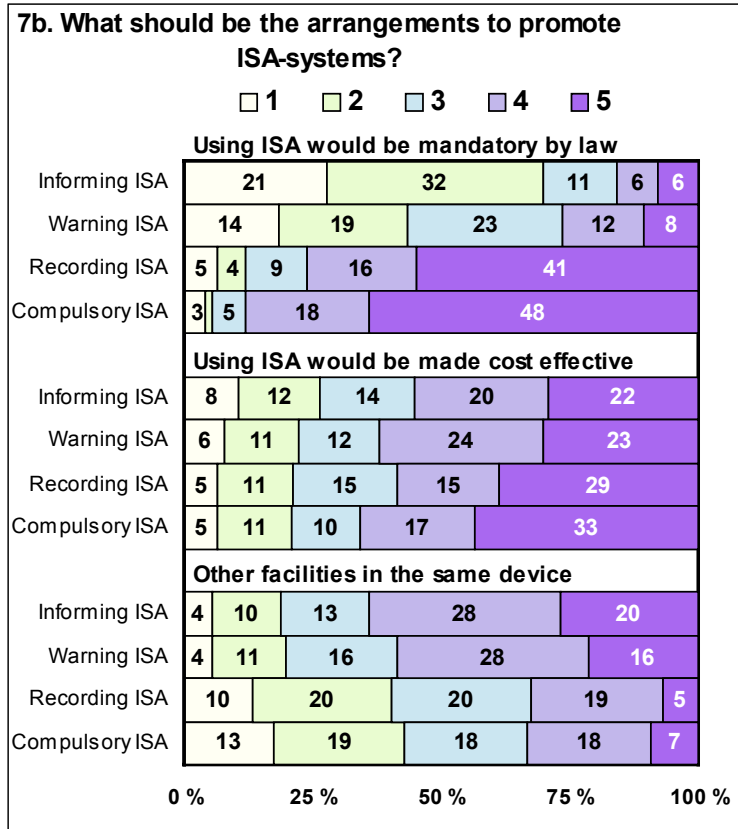
Informing ISA	Warning ISA	Recording ISA	Compulsory ISA
	Annoyance - drivers would disconnect it or cover over the speaker	Privacy issues	Need for international harmonisation of legislation, Car producers' lobbying against The opposition of the car industry Car industry is #1. National politicians are #2.
		ISA technique will have to be the same in all European countries (all systems with beacons along the roadside or GPS) so that people have an ISA system that works even if they pass borders.	ISA technique will have to be the same in all European countries (all systems with beacons along the roadside or GPS) so that people have an ISA system that works even if they pass borders.
		For traffic safety the best starting tool is some kind of "black chip" recorder, I think. With a very limited recording time (1...5 min) it is cheap, Insurance companies have an interest to pay it (with discounts) and it is not against "the human"	
FOR ALL: There are too many elderly cars around. And nobody would like to pay for this equipment even in new cars.			
human machine interface	digital maps, speed limits, road-vehicle communication	privacy legislation	speed attitude/perception of the driver
The slow renewal of the vehicle fleet	The slow renewal of the vehicle fleet lack of information about the working of the ISA-system towards car drivers it is seen as something negative more demonstrations needed	The slow renewal of the vehicle fleet	The international harmonisation of vehicle legislation
responsibility of accurate and up-to-date information of speed limit (responsibility of supplier of the speed limit data)		responsibility of accurate and up-to-date information of speed limit (responsibility of supplier of the speed limit data)	responsibility of accurate and up-to-date information of speed limit (responsibility of supplier of the speed limit data)
Drivers possibility to easily eliminate systems	Drivers possibility to easily eliminate systems	Small chances if not compulsory for everybody Drivers possibility to easily eliminate systems	Drivers possibility to easily eliminate systems Political opinions

7a: continued

Informing ISA	Warning ISA	Recording ISA	Compulsory ISA
2nd round			
The slow renewal of the vehicle fleet	Better HMI is needed. Passengers must not be disturbed by signals.	Privacy issues	Political opinions
		Only if compulsory for everybody	Car manufacturers
Slow renewal rate for the car population	Slow renewal rate for the car population	Slow renewal rate for the car population Fear for Big-brother syndrome	Slow renewal rate for the car population Need for international harmonisation of legislation. Car producers' lobbying against Political opinions "Standardisation" of ISA function, data, HMI etc. Cross cultural/vehicle differences.
The old cars run still so many years.	Same as in informing ISA (see above)	Privacy	Car factories. Difficulties to harmonise the rules/directives on international level
The slow renewal of the vehicle fleet Responsibility of accurate and up-to-date information of speed limit (Responsibility of supplier of the speed limit data)	The slow renewal of the vehicle fleet Responsibility of accurate and up-to-date information of speed limit (Responsibility of supplier of the speed limit data)	Privacy legislation The slow renewal of the vehicle fleet	Car industry is #1. National politicians are #2. ISA technique will have to be the same in all European countries (all systems with beacons along the roadside or GPS) so that people have an ISA system that works even if they pass borders. Speed attitude/perception of the driver Responsibility of accurate and up-to-date information of speed limit (Responsibility of supplier of the speed limit data)
Common demand of system is missing -drivers do not know about the possibility.	Common demand of system is missing -drivers do not know about the possibility.	Common attitude might be against - big brother is following us. Political opinions	Attitudes - people are individuals and do not want the system take the decision out of their hands Political opinions If you by Legislation mean the political willingness, then I misunderstood. I must say that in Denmark there are no signs of political willingness for introducing ISA right now.

7b. What should be the arrangements to promote ISA-systems?

Please, indicate the score on a scale of 1 to 5 (1 = no relevance ... 5 = very important, 6 = no opinion).



7b. Name some other arrangement to promote the systems.

Informing ISA	Warning ISA	Recording ISA	Compulsory ISA
		Demand from municipalities buying transport services (quality assurance). Road administration car fleet should be equipped	Legislation on top speed limiters on cars. Insurance fees should or tax be lowered for ISA equipped cars. Road administration car fleet should be equipped
bonuses in insurances		bonuses in insurances against no speed violances	Information about the safety impacts Fleet usage
	insurance company. Traffic safety plans in companies	Insurance company. Traffic safety plans in companies. driving diary	Insurance company. Traffic safety plans in companies Trying the system in real traffic is most important, i.e. to include both decision makers and ordinary people communicate benefits for noise pollution 20-30% of people is annoyed or seriously annoyed by traffic noise. communicate other environmental benefits
		ISA included in a large communication platform, also black box system, collision avoiding system, etc. See insurance above	ISA included in a large communication platform, also black box system, collision avoiding system, etc.
facilitate industry	seek early adapters	insurance companies, fleet owners	speed violation as zero-tolerance Demands from buyers of transportation services International cooperation between technological advanced vehicle manufacturer
comfort of driving (compare driving without accurate info of speed limit with gambling about 750 euro input)	comfort of driving (compare driving without accurate info of speed limit with gambling about 750 euro input) Reduced tax	making recording ISA compulsory for specific road users such as regular speed violators, taxi-drivers, professional drivers lowering insurance of dangerous material transportation, very hard to promote	Reduction in insurance premium. Reduced vehicle tax
Tax subvention. Insurance premium	warranting of transport quality		Reduction in insurance premium. Reduced vehicle tax

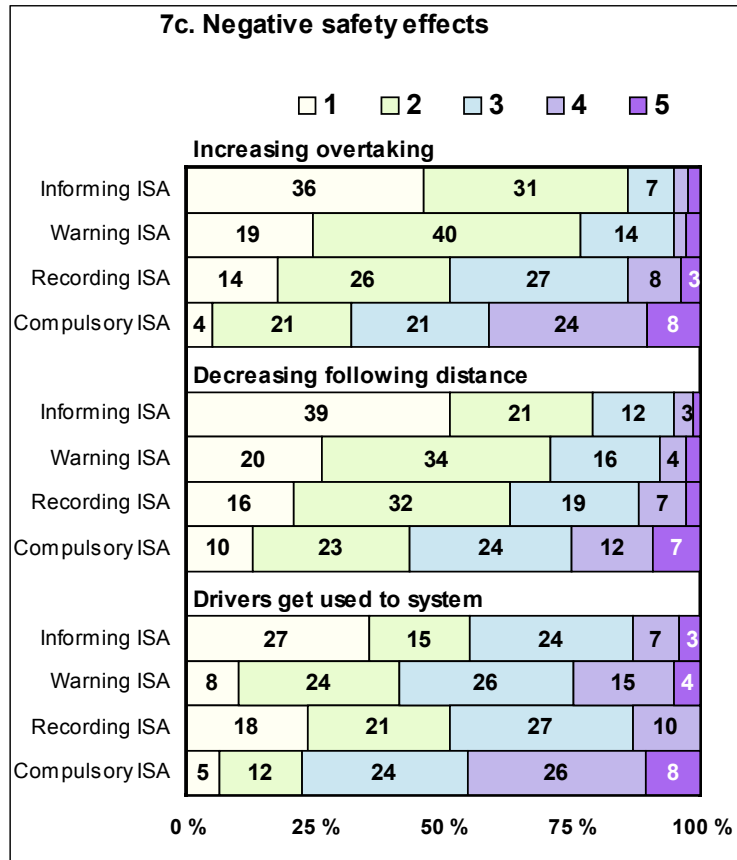
7b. continued

Informing ISA	Warning ISA	Recording ISA	Compulsory ISA
2nd round			
		Mandatory for people with multiple violations	Making ISA cost effective for insurance companies Demands from those who pay for transport.
	Insurance bonus, reduced vehicle tax	Insurance bonus, reduced vehicle tax	Insurance bonus, reduced vehicle tax Legislation on top speed limiters on cars. Insurance fees or tax should be lowered for ISA equipped cars. Road administration car fleet should be equipped Information about the safety impacts
Tax subvention/bonuses in insurances : economical reasons	Same as in informing ISA (see above)		
Bonuses in insurances	accurate info of speed limit with gambling about 750 euro input) Warranting of transport quality	Demand from municipalities buying transport services (quality assurance). Road administration car fleet should be equipped Bonuses in insurances against no speed violances ISA included in a large communication platform, also black box system, collision avoiding system, etc. Making recording ISA compulsory for specific road users such as regular speed violators, taxi-drivers, professional drivers	Insurance company. Traffic safety plans in companies ISA included in a large communication platform, also black box system, collision avoiding system, etc. Demands from buyers of transportation services Reduction in insurance premium. Reduced vehicle tax

7c. Negative safety effects

Automatic speed management may also have some negative effects on traffic safety. How significant do you think these effects would be)

Please, indicate the score on a scale of 1 to 5 (1 = no relevance ... 5 = very important, 6 = no opinion).



7c. Automatic speed management may also have some negative effects on traffic safety. Name some other negative safety effect.

Informing ISA	Warning ISA	Recording ISA	Compulsory ISA
Increased mental workload, driver distraction	Increased mental work load driver distraction		problematic overtakings may increase, stress "Delegation of responsibility", the driver becomes "too relaxed", i.e. a lower degree of attentiveness. Another effect might be does not "change mode" in time, e.g. approaches another car in front without taking action in appropriate time. (Like the
distraction of the driver	distraction of the driver		Speed Behaviour in decreased visibility People rely to much on the system and forget to look at traffic signs. The demonstration in Tilburg (The Netherlands) showed that some people even forget to accelerate and to shift gear because they rely on the system to reduce the speed when neces
Affecting general attetion	People want not the see/hear warnings	against "human rights"	
slow breaking	frustration		frustration, speed compensation (not found in the Netherlands/Tilburg trial) In special cases it might be negative not to be able to drive as fast as one would want to (in overtakings, e.g.) reliability service of the perhaps damaged system
	reliability service of the perhaps damaged system if speed limit data is out of date, the question of responsibility in case of accident	Orwell 1984...	if speed limit data is out of date, the question of responsibility in case of accident
Driver can pay too much attention to the informing device.	Young drivers can drive too fast deliberately in order to get the warning signal and show off to their friends by that.	(Young) drivers can drive too fast deliberately in order to show later their friends the "maximum speed" which is saved into the system.	Overtaking can become very dangerous.

7c. continued.

Informing ISA	Warning ISA	Recording ISA	Compulsory ISA
2nd round			
Increased mental workload, driver distraction	Increased mental workload. Driver distraction	Personal Freedom (unless mirrored by positive benefit)	No negative effects that cannot be countered by other measures People may drive faster in poor weather conditions. "Delegation of responsibility", Speed Behaviour in decreased visibility
Driver Distraction (assuming a visual display)	Driver Distraction (assuming an auditory display)	Orwell 1984...	Attempts to override, tamper. Desire to drive to maximum possible speed in any situation, taken out of context of actual current driving task requirements "Delegation of responsibility", the driver becomes "too relaxed", i.e. a lower degree of attentiveness. People rely too much on the system and forget to look at traffic signs. Reliability service of the perhaps damaged system
	If speed limit data is out of date, the question of responsibility in case of accident Young drivers can drive too fast deliberately in order to get the warning signal and show off to their friends by that. Might make the driver trust too much for the system and that way lower the drivers monitoring of fixed signs etc. Also a matter of legislation -> who carries responsibility of the malfunction of the system (in case police is giving me a fine without having no warning I would deny it)		

Question 8: Free comments

1st round

1. Answers from researchers and consultants should not be treated as one group
2. ISA system with a combination: first information or warning and after a short while compulsory!
3. Safety can only be improved if driver behaviour is changed for better. The behaviour is changed more with more drastic intervention to the behaviour. Unfortunately, user acceptance decreases as systems become more drastic. It should be noted that all evidence shows that user acceptance problems are encountered in the system introduction phase, drivers are quite content even with the compulsory system after they have more experience with driving with the system.
4. Looking forward to field trials in more countries.
5. Virtually no one would oppose legislation making "compulsory ISA" compulsory for drivers that have caused a fatal accident. As a condition for reclaiming their drivers license. This would immediately create a (very small) but existing and reliable (for the producers) market for ISA systems.
6. One key factor is probably if people are prepared to regard themselves as "professional drivers" or if they prefer to regard their cars as a mobile parts of their homes.
7. Safety implications need to be linked to traffic flow changes with ISA fitted to a large number of vehicles. This becomes increasingly important with higher traffic densities. Other headway control devices, vehicle to vehicle communication, telematics in general will all interact strongly with ISA systems. ISA will not be the only control telematic device on the vehicle by 2016. Drivers will have many "assisting" devices, which they will already take for granted.
8. "Black chip" is a cheap mass product version of the "black box", recording all the time (somehow) very accurately the xyz acceleration of the last few seconds/minutes before the accident. If it not exists, you should dream it up!
9. The best way to improve traffic safety is to improve the road standards. More highways with less chance for collisions. In urban areas intensive automatic speed control. At accident prone places special speed limits adaptive to the present traffic and road conditions
10. For the probability of ISA systems in cars I have used two figures: no legislation/mandatory
11. In our opinion, it is important to secure that the driver always will be the one that has the full responsibility for the driving. In this context, information-systems will be OK. However, systems designed to affect the drivers behaviour physically, may cause legal and behavioural problems.
12. good luck!!!
13. Large safety potential, acceptability will be a problem
14. informing connected with route guidance would be wonderful, warning should be possible to shut down, recording not good (it is always only a sensor data) and compulsory too near for the cruise control (GBS based cruise might be nasty in a slippery corner)
15. ISA will depend on: a) Standards agreement between car-makers) Rather cheap mass production and c) Reduced buying costs and insurance costs linked to safety equipment for the car owner. Measure c) can be introduced today.
16. Reduced speed is the most important safety measure. ISA is the most important new safety measure after the seat belt.
17. The ISA systems can decrease the amount of traffic tickets given to drivers, which declines the government's positive cash flow. Due to that it might be difficult to get for example lower taxation to vehicles equipped with ISA systems.
18. I don't think that ISA will have a very great effect on traffic safety although specially the warning system might help at least in the short run. Compulsory systems might meet some political resistance.

2nd round

19. The first step should be: Modern Automatic Camera Enforcement, then Warning ISA and finally Compulsory ISA
20. If subsidised, many volunteers could be found to have ISA installed in their car indefinitely. This group of people could effectively show to the public at large that ISA works and increases driving comfort significantly. This would be more effective than any campaign in the media.
21. The idea of making ISA compulsory for traffic safety offenders (like an alcohol lock for drunk drivers) is intriguing. People who have caused traffic accident, or have been caught speeding several times, might be compelled to use ISA in order to retain their driving license.
22. The systems will come as they are the only effective safety system available in the near future (up to 2020). The "Big brother" fears will turn out to be exaggerated as a large majority of drivers will find the compulsory system as a "comfort" system.
23. The reason that it is 'nt totally anarchy on the road is the risk to be reported by the police
24. ISA in whatever form will be pursued and supplied if seen to a) be of accident reduction benefit, b) have no significant negative impact and c) have marketable appeal to drivers (and therefore manufacturers. This may require a changing perception as to what is socially acceptable for driver behaviour with regard to future driving, i.e. speeding becomes unacceptable AND/OR much more likely to result in a fine/ban (perceived risk of enforcement)
25. It is important that in future systems like ISA can help a man to drive safety and if necessary forces him to reduce his speed. As long as all depends on the person behind the "wheel", the situation gets better only very slow.
26. Looking forward to field trials in Norway. Systems designed to affect the drivers behaviour physically, may cause legal and behavioural problems. ISA will depend on: a) Standards agreement between car-makers b) Rather cheap mass production and c) Reduced buying costs and insurance costs linked to safety equipment for the car owner. Measure c) can be introduced today. Reduced speed is the most important safety measure. ISA is the most important new safety measure after the seat belt.
27. I don't think that ISA will have a very great effect on traffic safety although specially the warning system might help at least in the short run. Compulsory systems might meet some political resistance.
28. I really hope for new technology in this field. But it is a politically difficult thing as mandatory ISA probably would mean changing some EU-regulations. Speed cameras, though, should be used when possible. There is a good preventive effect once people have got used to it and try to drive according to speed limits. This might even help out in introducing Informing and Warning ISA as an option. People don't want to get their picture taken, but they will also be happy if they don't have to look at the speeder all the time.

List of respondents

1. Anne Eriksson, Road Administration, Denmark
2. Anders Lindkvist, Movea Trafikkonsult AB, Sweden
3. András Várhelyi, University on Lund, Sweden
4. Anne Leppänen, Road Administration, Finland
5. Anneli Johansson, Road Administration, Sweden
6. Annika Feychting, Jacobson & Widmark, Sweden
7. Antero Karppinen, Genimap Corporation, Finland
8. Ari Liimatainen, Road Administration, Finland
9. Arne Lindeberg, Road Administration, Sweden
10. Bard Oien, Road Administration, Norway
11. Björn Abellsson, SCC, Sweden
12. Björn Silfverberg, LT-consultants, Finland
13. Christel Kautiala, SCC Viatek Ltd, Finland
14. Christer Hyden, University on Lund, Sweden
15. Derek Charters, MIRA, UK
16. Eero Pasanen, City of Helsinki, Finland
17. Elke Bossaert, Langzaam Verkeer, Belgium
18. Eric de Kievit, AVV, The Netherlands
19. Erik Dahlberg, Scania, Sweden
20. Finn Amundsen, Road Administration, Norway
21. Hannu Lehto, LT-consultants, Finland
22. Harri Peltola, VTT, Finland
23. Harri Rauhamäki, Tampere university of technology, Finland
24. Harry Lahrmann, University of Aalborg, Denmark
25. Helge Thingelstad, Norges Automobil Forbund, Norway
26. Ilse Vleugels, Langzaam Verkeer, Belgium
27. Inge Alsaker, Road Administration, Norway
28. Inge Fosselie, Road Administration, Norway
29. Irina Jonsson, Road Administration, Sweden
30. Jens Christian, Madsen, University of Aalborg, Denmark
31. Johan Verlaak, Vito, Belgium
32. Juha Laakso, SCC Viatek Ltd, Finland
33. Juha Luoma, VTT, Finland
34. Juha Tapio, VTT, Finland
35. Juhani Hyöriinen, Road Administration, Finland
36. Juhani Vehviläinen, Jussa Consulting, Finland
37. Jussi Kauppi, The Association of Finnish Local and Regional Authorities, Finland
38. Kalevi Lintula, Finnish Motor Vehicle Inspection Ltd, Finland
39. Kari Heinäniemi, Peek Traffic Oy, Finland
40. Kari Rantala, Police, Finland
41. Kari Saarinen, VISY Oy, Finland
42. Kerstin Westin
43. Knud Grøndahl Mortensen, Hansen & Henneberg, Denmark
44. Lars Sahlin, AerotechTelub (konsult), Sweden
45. Larus Agustsson, Road Administration, Denmark
46. Leif Beilinson, Road Administration, Finland
47. Luc Int Panis, VITO, Belgium
48. Mads Oppegaard, Road Administration, Norway
49. Magda Draskoczy, University on Lund, Sweden
50. Mark Fowkes, MIRA, UK
51. Matti Juhala, Helsinki University of Technology, Finland
52. Mika Varjola, SCC Viatek Ltd, Finland
53. Mikko Ojajärvi, Ministry of Transport and Communication, Finland
54. NN, Statens Bilinspektion, Denmark
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56. NN, Swipnet, Sweden
57. NN, The Norwegian Haulier's Association, Norway
58. Oliver Carsten, University of Leeds, UK
59. Otto Kärki, Road Administration, Finland
60. Ove Knekt, The Finnish Vehicle Administration, Finland
61. Panu Sainio, Helsinki University of Technology, Finland
62. Pauli Matilainen, Police, Finland
63. Peter Eriksson, Road Administration, Sweden
64. Petri Jääskeläinen, Central Organisation for Traffic Safety, Finland
65. Petteri Portaankorva, Road Administration, Finland
66. Reino Lampinen, Ministry of Transport and Communication, Finland
67. Richard Muskaug, Road Administration, Norway
68. Risto Kulmala, VTT, Finland
69. Staffan Eriksson, City of Stockholm, Sweden
70. Stein Johannessen, Norwegian University of Science and Technology, Norway
71. Sverker Almqvist, University on Lund, Sweden
72. Timo Ernvall, Helsinki University of Technology, Finland
73. Tomi Ristola, Traficon Ltd, Finland
74. Trond Karlsen, Road Administration, Norway
75. Ulf Lindström, Road Administration, Finland
76. Ulla Alapeteri, Road Administration, Finland
77. Åke Svedberg, Road Administration, Sweden
78. Örn Thorvardarson, Trafikkrådet i Island, Inland