



Speed effects of automatic camera enforcement on main road 51

Leif Beilinson



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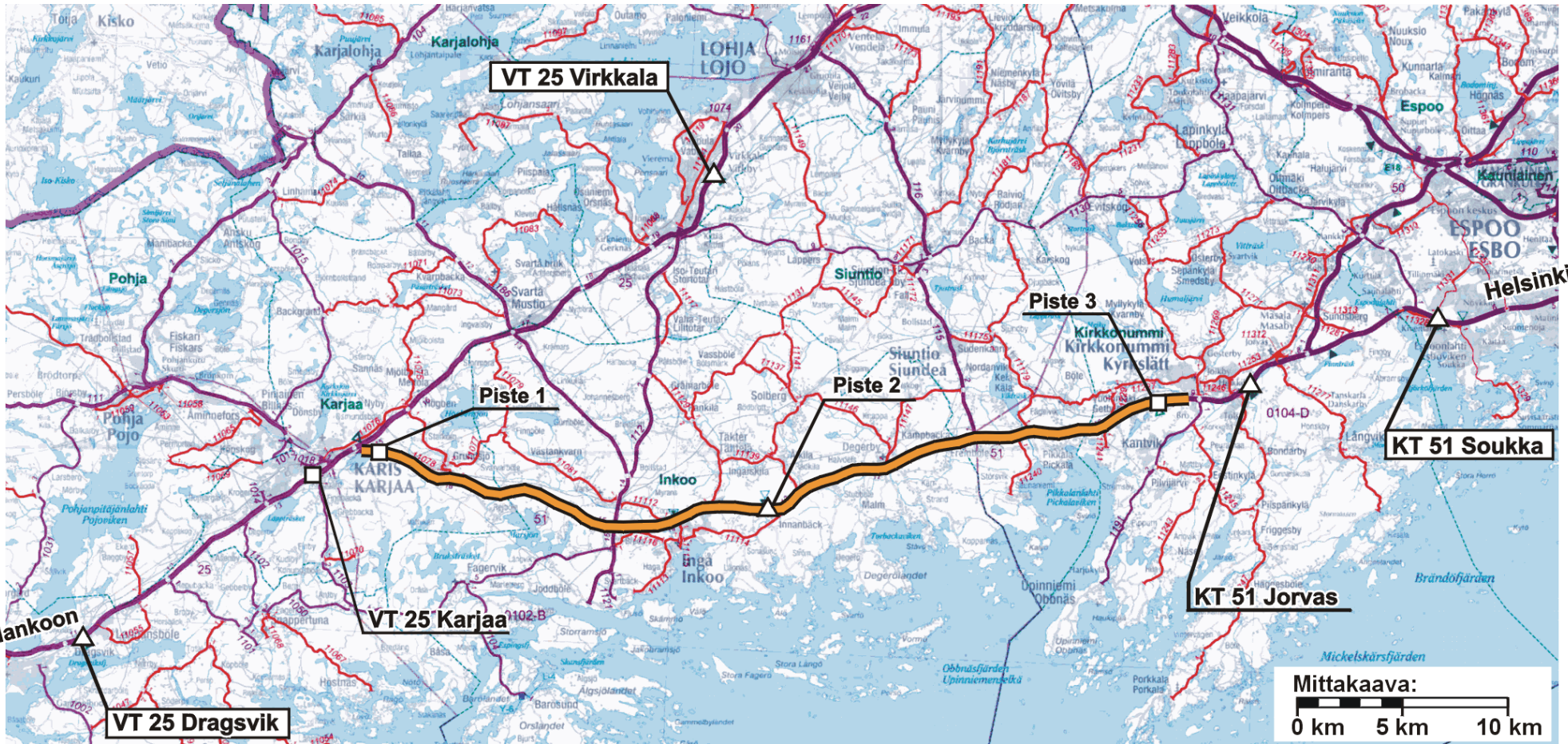
Mikko Räsänen, Leif Beilinson & Veli-Pekka Kallberg

Background, data, etc.

Results

Conclusions

Speed effects of automatic camera enforcement on main road 51



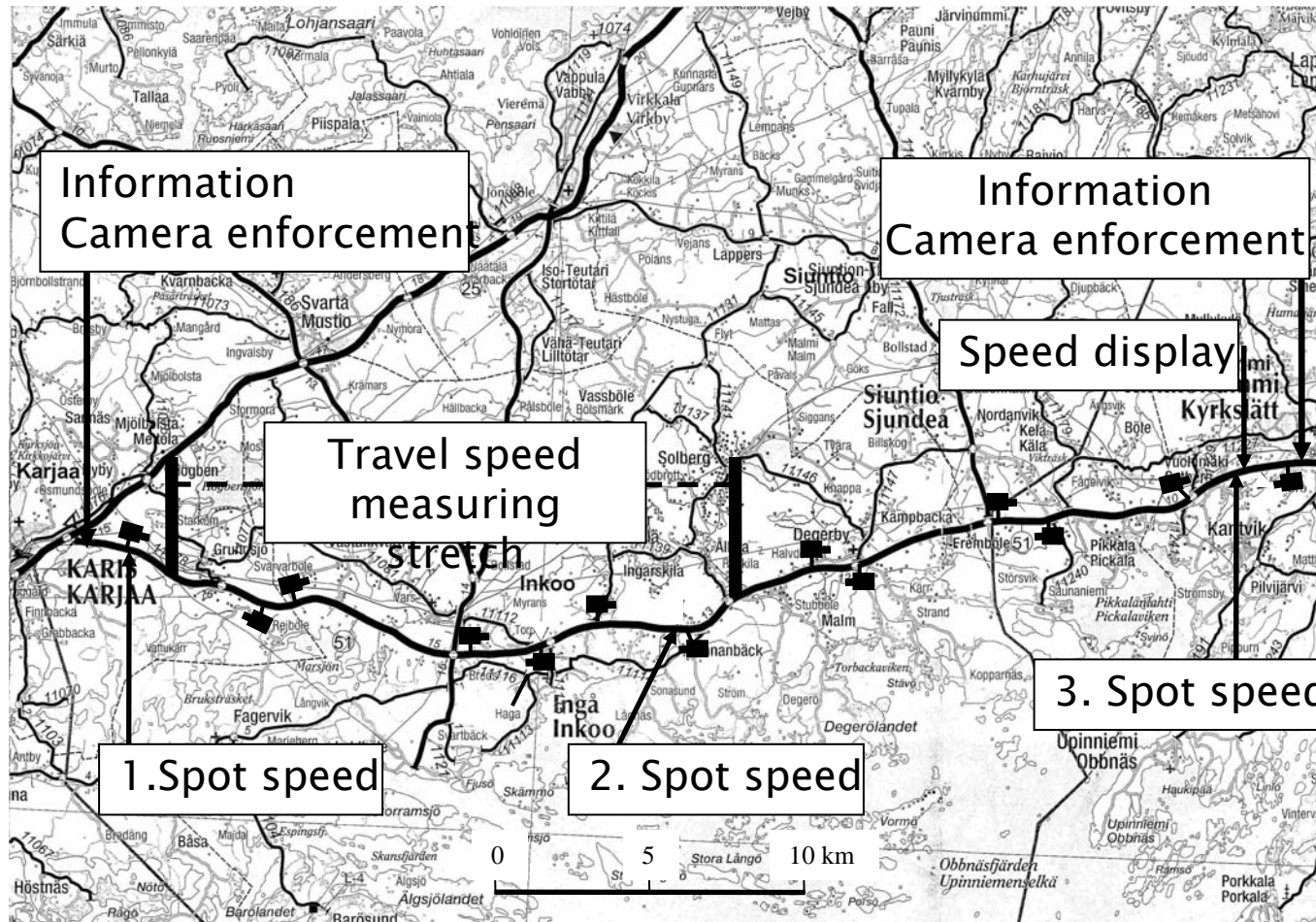
△ Tiehallinnon kiinteät LAM-pisteet

□ VTT:n omat mittauspisteet

VT 25 Virkkala Vertailupisteet

Valvontajakso

Enforced road stretch and measuring points



The schedule and measuring

Long-term effects

Measurement	2002												2003												2004							
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	
Spot speed		■	■		■	■								■	■		■	■								■	■		■			
Travel speed					■												■	■											■			

Before camera enforcement

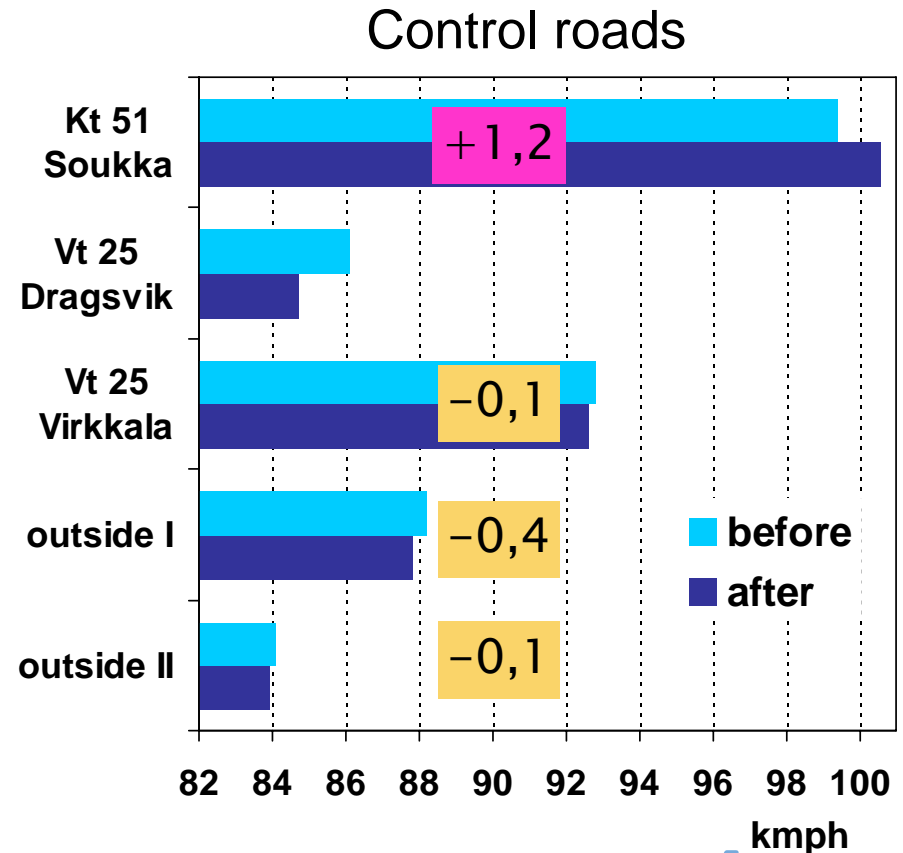
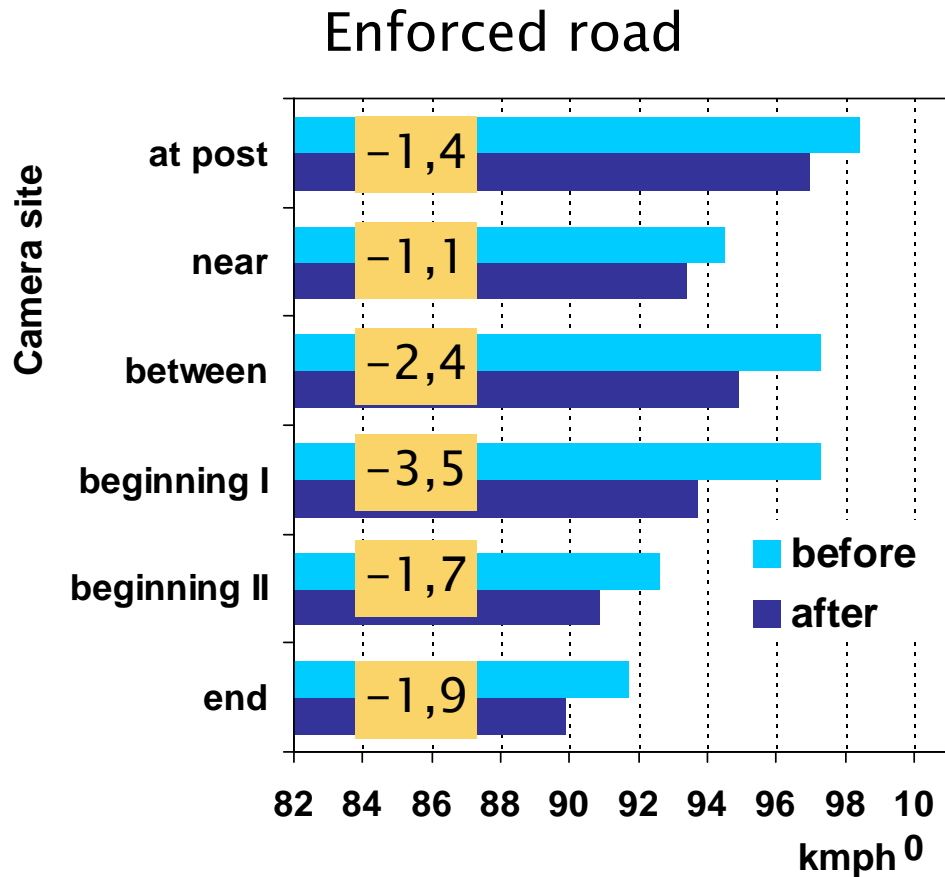
Immediate effects

winter speed limits (80 kmph)
summer speed limits (100 kmph)

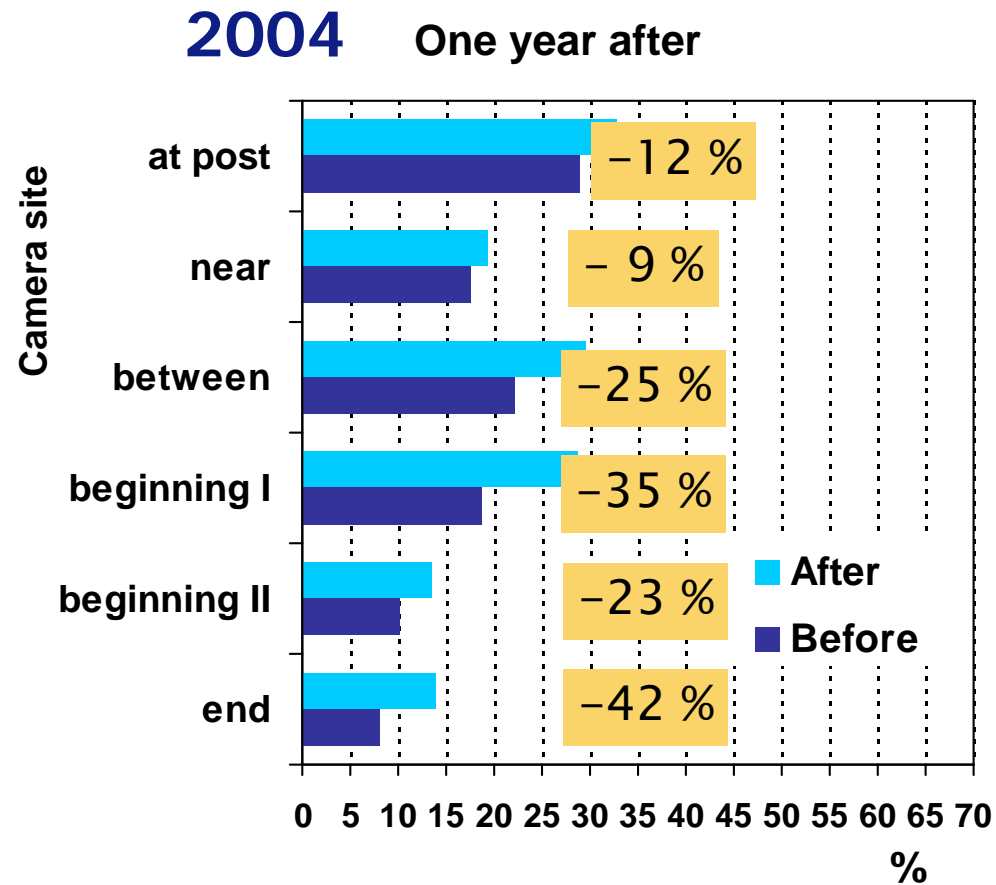
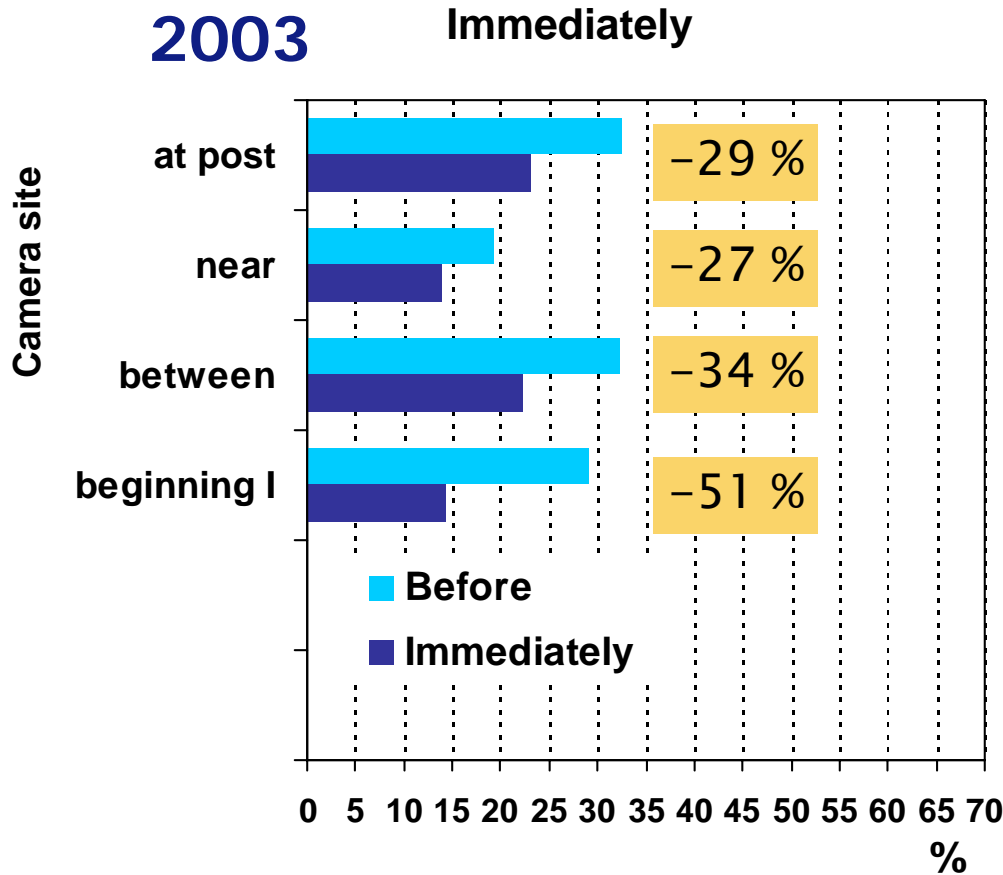
Traffic signs exposed 20.5.2003



Summertime mean speed (kmph) before enforcement (2002) and one year after (2004)

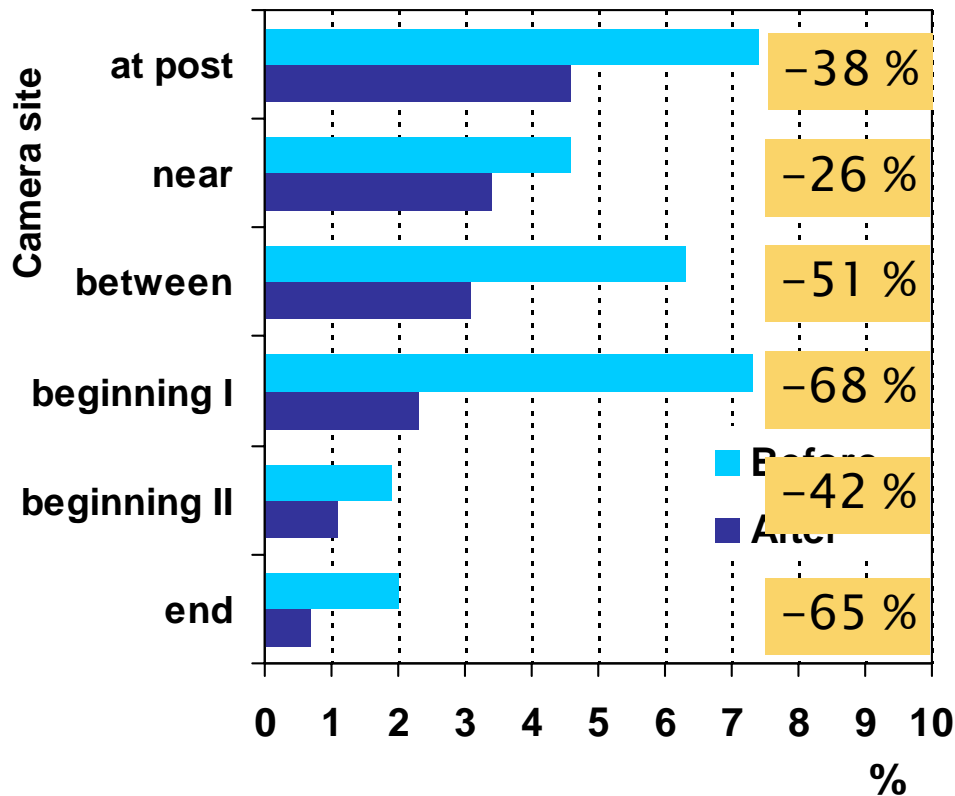


The percentage of drivers exceeding the speed limit by 1-10 kmph before enforcement (2002) and after during summers (2003 and 2004)

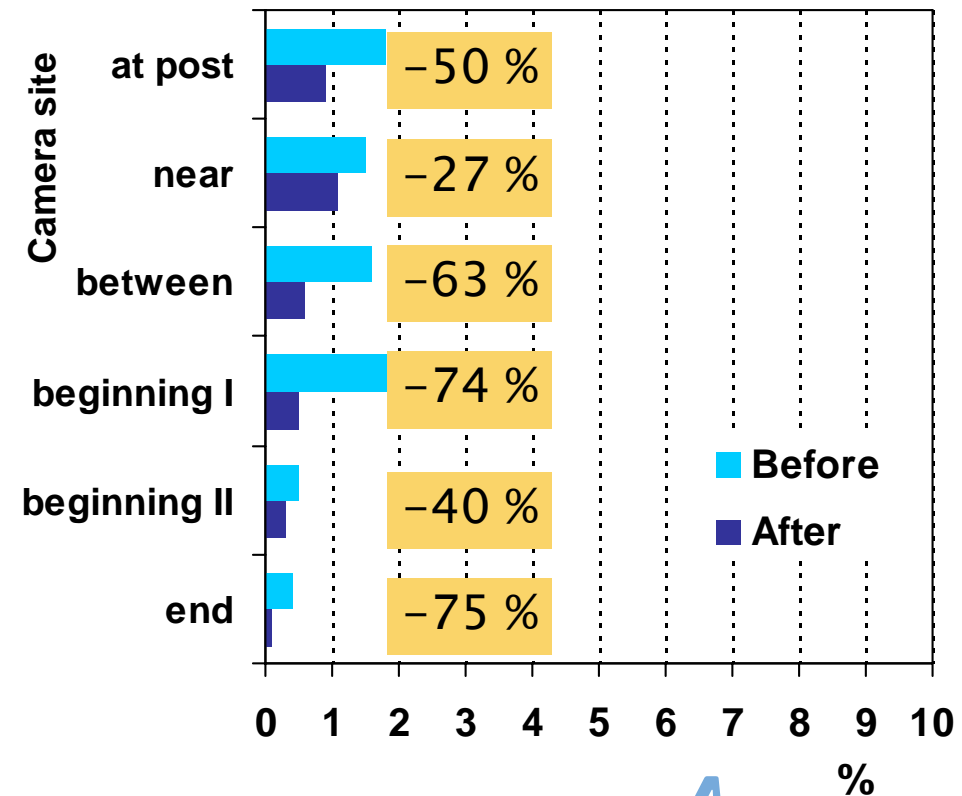


The percentage of drivers exceeding the speed limit by 11-20 kmph and by more than 20 kmph before enforcement (2002) and one year after during summer (2004)

Exceeding by 11-20 kmph

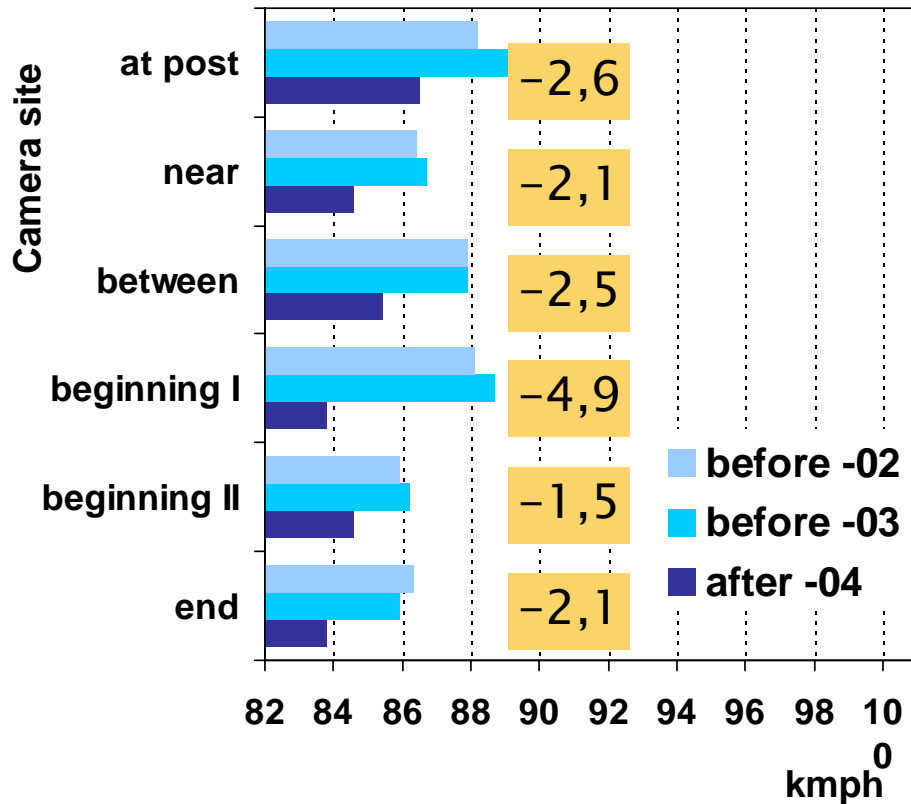


Exceeding by more than 20 kmph

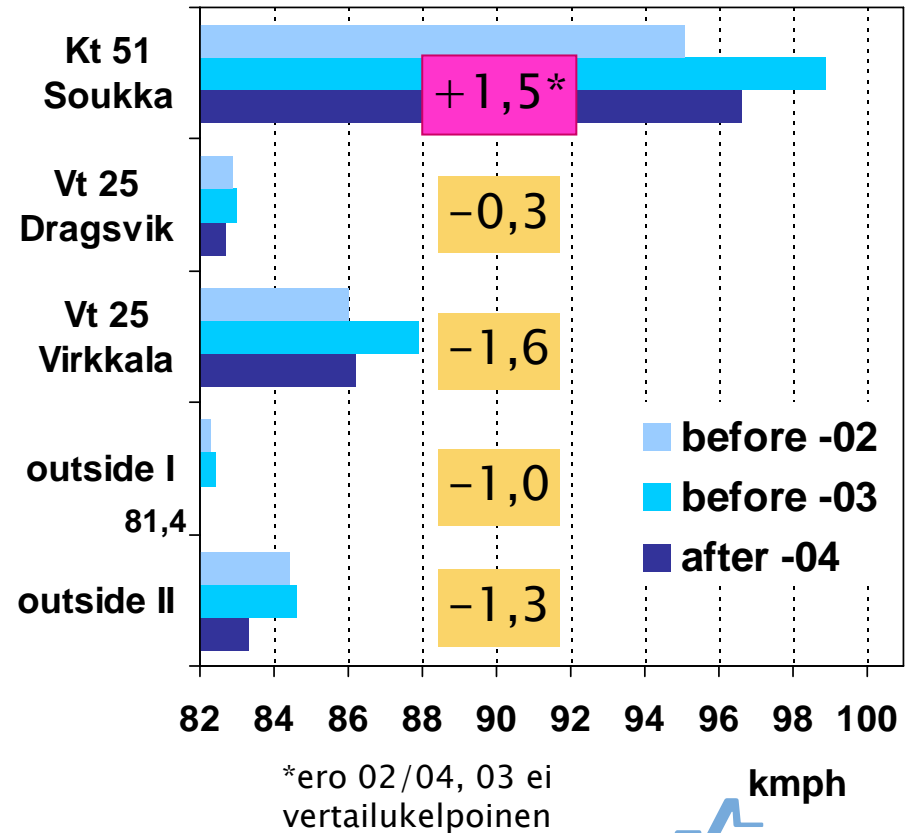


Wintertime mean speed (kmph) before enforcement (2002/2003) and one year after (2004)

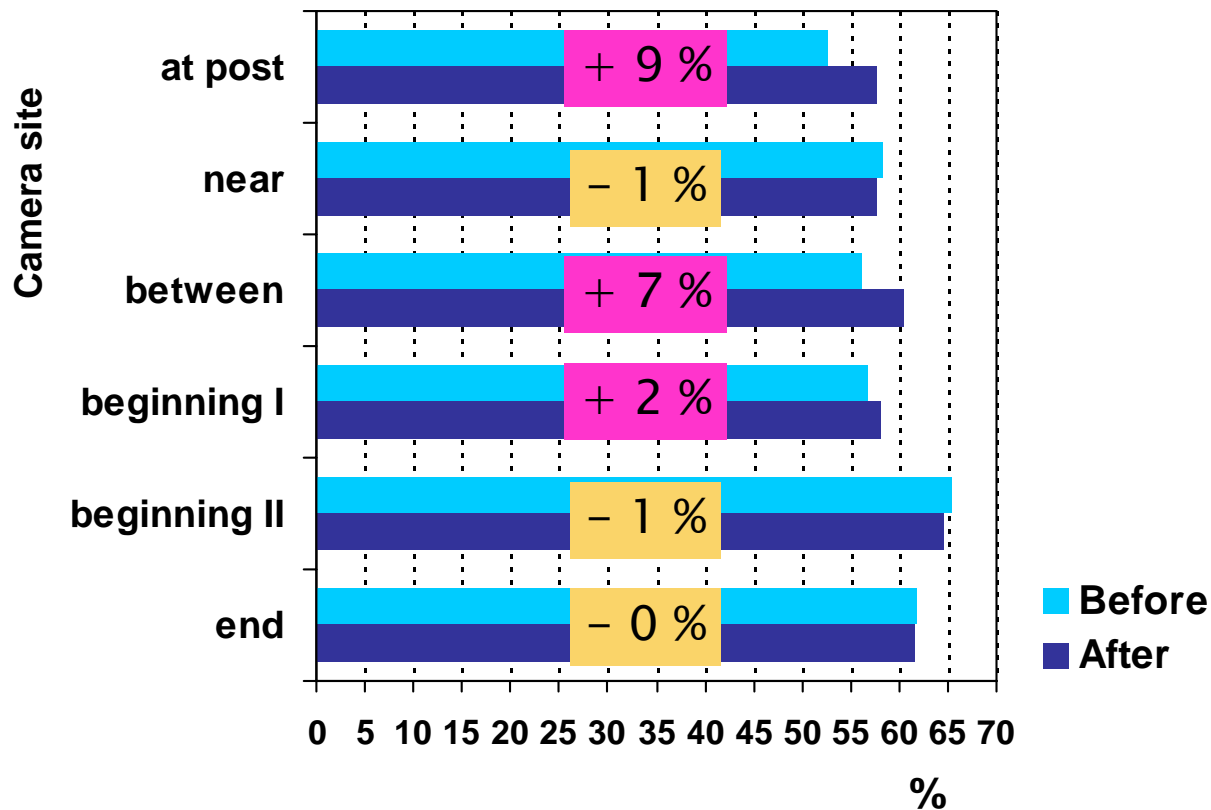
Enforced road



Control roads

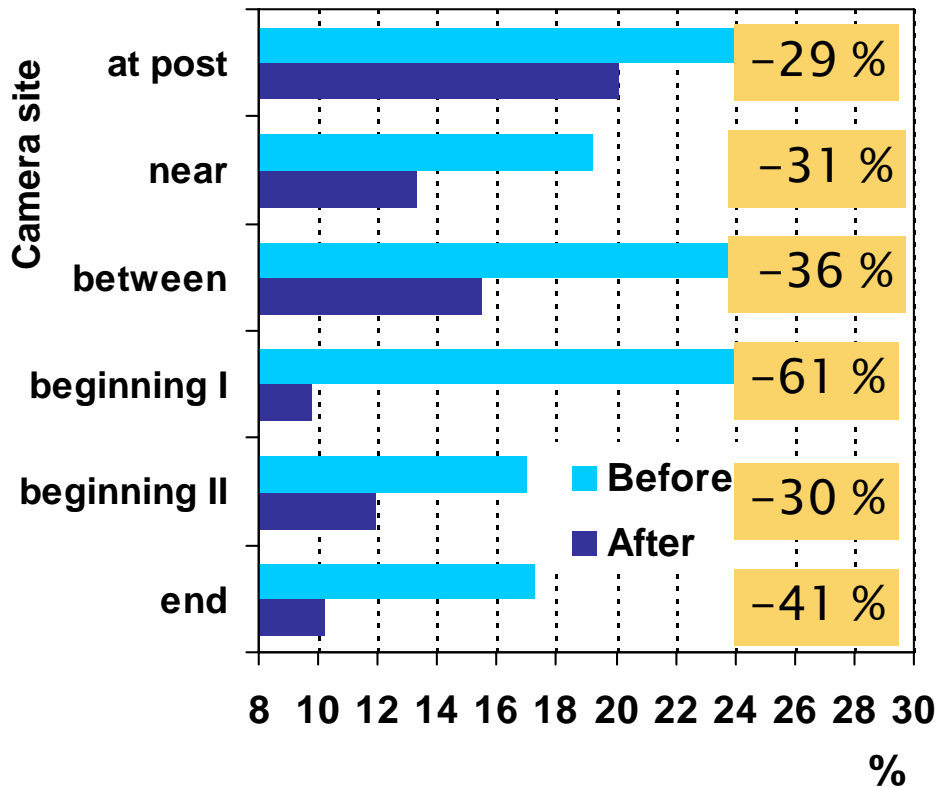


The percentage of drivers exceeding the speed limit by 1-10 kmph before enforcement (2003) and one year after during winter (2004)

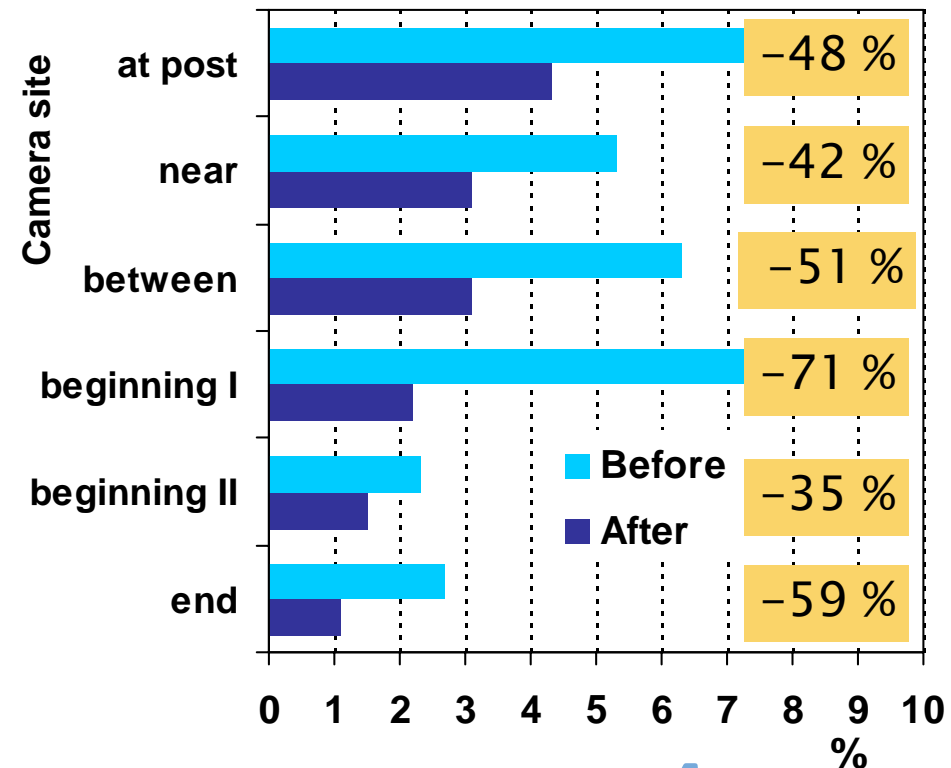


The percentage of drivers exceeding the speed limit by 11-20 kmph and by more than 20 kmph before enforcement (2003) and one year after during winter (2004)

Exceeding by 11-20 kmph



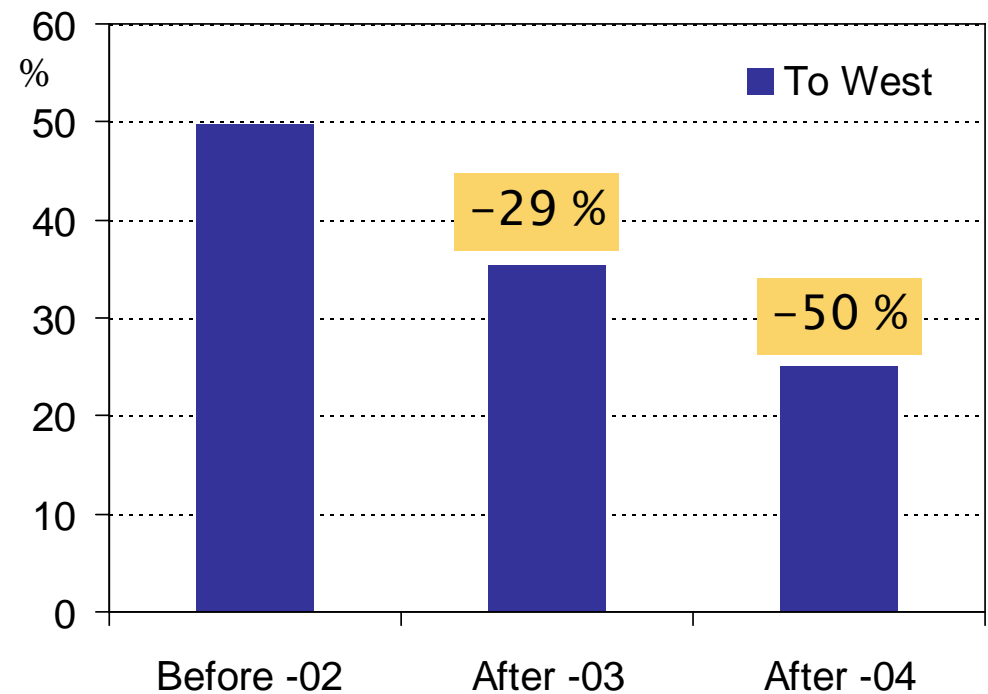
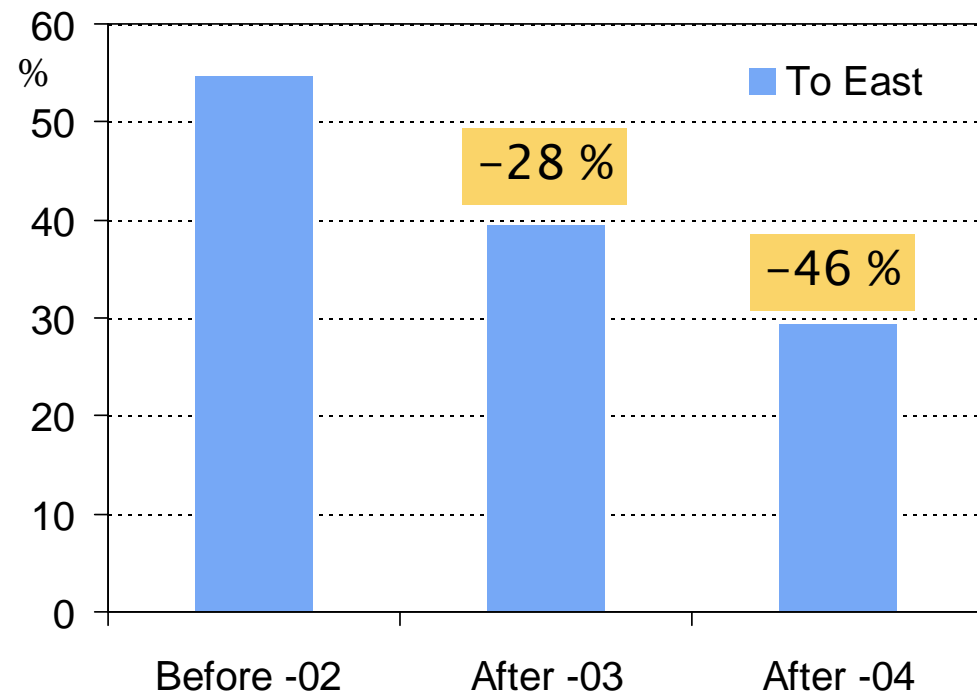
Exceeding by more than 20 kmph



Travel speed

Direction		Before -02	Immediately -03	After -04	Differ. 02/04	95% Confidence Interval
Helsinki	mean speed	95,4	92,2	93,3	-2,1	-1,5...-2,6
	st. deviation	7,4	6,3	6,5		
	n	1262	1385	1812		
Karjaa	mean speed	92,6	90,4	92,2	-0,4 ns	0,4...-0,8
	st. deviation	7,4	6,7	6,2		
	n	1672	1762	1739		

The percentage of overtaking vehicles



Conclusions

Mean speeds

- During summertime (100 kmph) the reduction in mean speeds (1.1 – 3.5 kmph) was about the same immediately after the camera enforcement was introduced and a year after.
- During wintertime (80 kmph) the mean speeds decreased by 1.5 – 4.9 kmph.
- No effects outside the enforced road section.



Overtakings

- The number of overtakings halved (summertime measurement).

Exceeding the speed limit

- In the summertime exceeding the speed limit by more than 20 kmph halved at all surveillance area measurement spots immediately after automatic enforcement. The effect was almost the same a year after the beginning of enforcement.
- In the summertime exceeding the speed limit by 11–20 kmph decreased at least by a fourth at every measurement point.
- Exceeding the speed limit by more than 20 kmph during wintertime halved at three measurement points and at three other decreased at least by a third.
- In the wintertime proportion of speed limit exceedings of 11–20 km/h decreased at least by a fourth at every measurement point. However, the proportion of these exceedings remained at 10–20% during the first winter with the enforcement.

Thank You !