



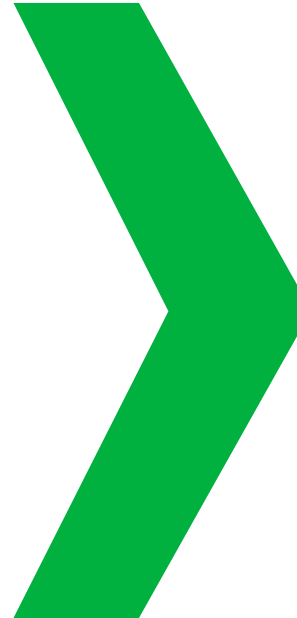
Speed Management and Enforcement



How to improve National Road Safety System

Tashkent, Uzbekistan
19 May 2023

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Director Government Affairs - Sensys Gatso Group
Chair IRF Road Safety Committee





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Introduction



Introduction

Why is speed so important ?

"A 1% reduction in mean speeds leads to a 2% reduction in injury accidents, a 3% reduction in serious injury accidents and a 4% reduction in deaths." (Aarts, L. & van Schagen, I. (2006), based on Nilsson (1982))

"It is estimated that speeding contributes to as many as one third of all crashes resulting in death, and is the most important contributory factor to road deaths and serious injuries." (ETSC 2008)

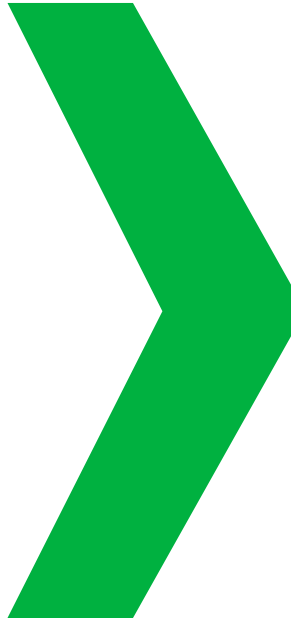


Introduction

Do you remember high school physics?

$$E_k = \frac{1}{2}mv^2$$

In which the kinetic energy of an object is equal to half the mass multiplied by the squared speed of that object.



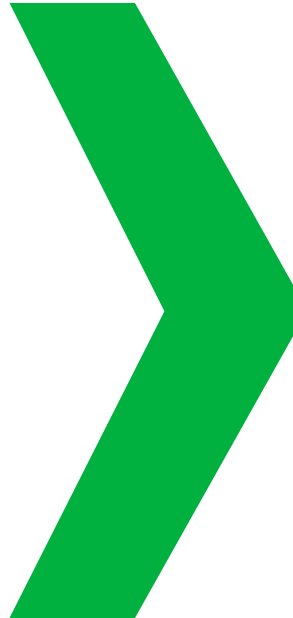


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What is the impact of this formula?



1. 60 or 30 km/h impacts KE by factor 4!
2. Even 60 km/h i.s.o. 50 has 49% more KE!
3. Impact on VRUs
4. Impact on braking distances
5. Impact on fuel consumption
6. Consider network effects at aggregate level



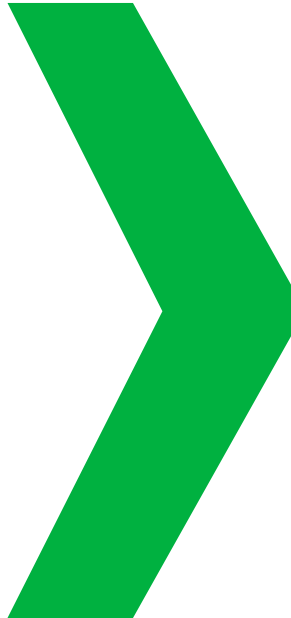


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What is the impact of this formula?



2100!!!!





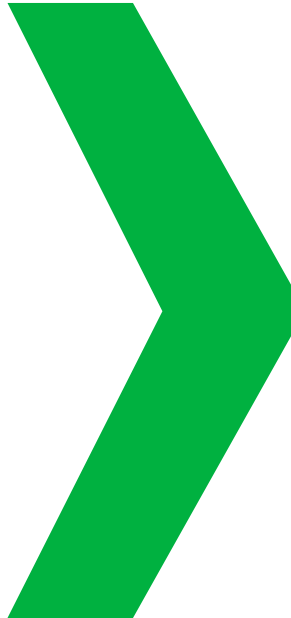
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What is the impact of this formula?



2100!!!

Lives could be saved on the EU road network if the average network speed is reduced by 1 km/h



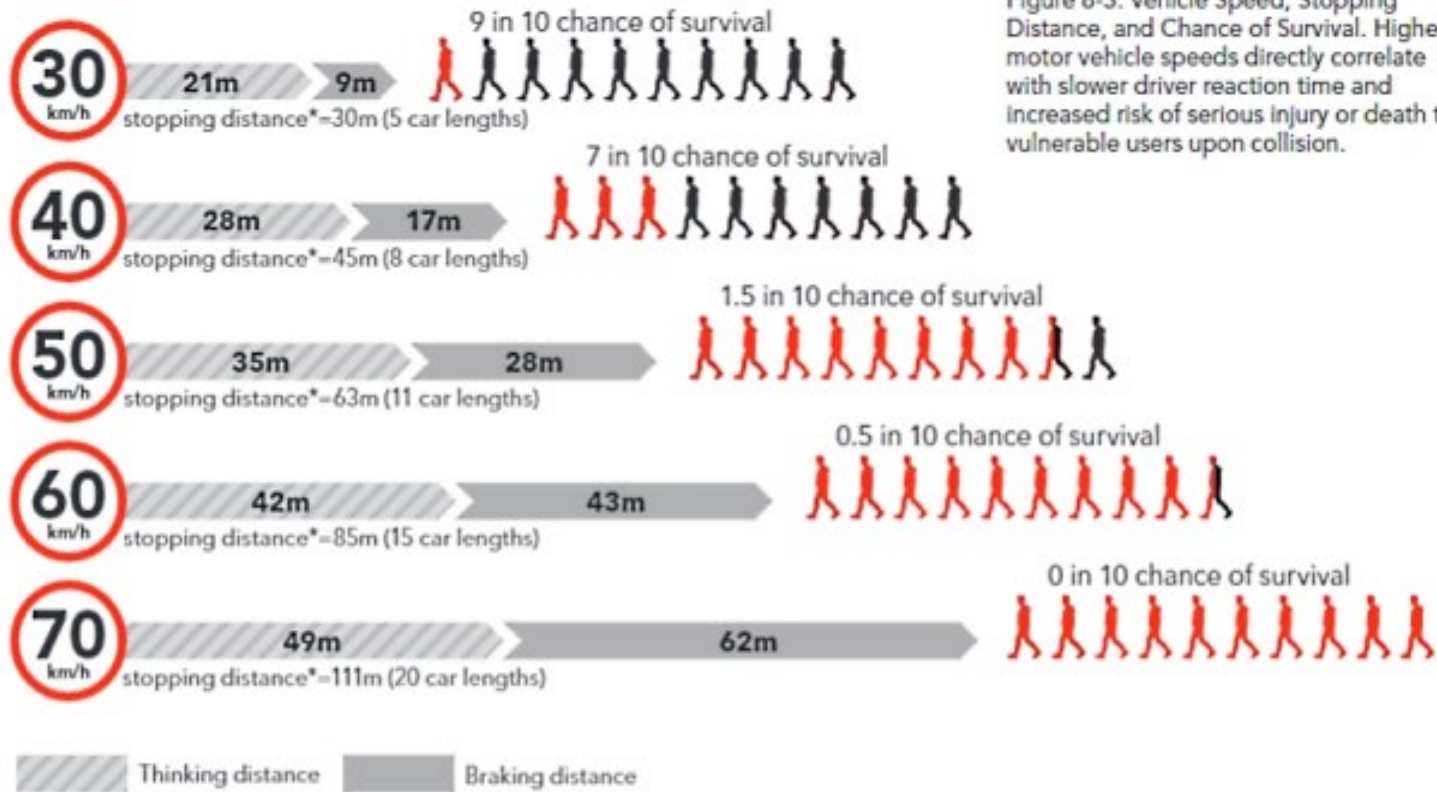
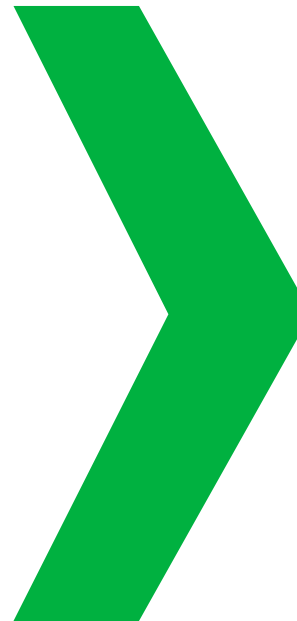


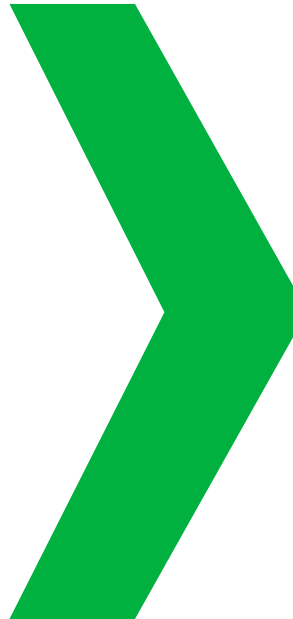
Figure 8-5: Vehicle Speed, Stopping Distance, and Chance of Survival. Higher motor vehicle speeds directly correlate with slower driver reaction time and increased risk of serious injury or death to vulnerable users upon collision.

*Stopping distances during wet conditions. Single car length=5.6m. Based on a 2.5s reaction time, representing 90th percentile of drivers.

source: Adapted from World Health Organization, 2008. Speed management: a road safety manual for decision-makers and practitioners. Transportation Association of Canada, 2011. Geometric Design Guide for Canadian Roads Part 1. 1.2.5.2 - 1.2.5.4.



- Reduce the average speed across all road types in the network
- Focus on urban areas which have a high percentage of vulnerable road users (max 50 km/h)
- Special focus on residential areas where motorised vehicles should be seen as 'guests' (max 30 km/h)
- Speed management and road safety important contributors to higher quality of life and urban sustainability



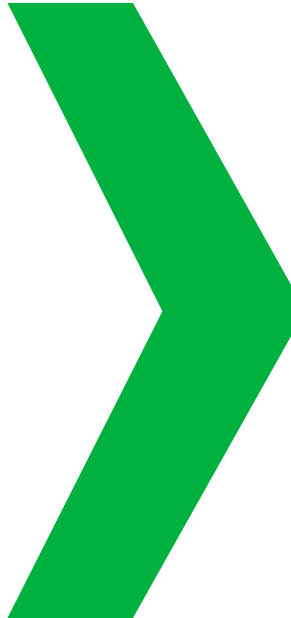


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Speed management measures



- Building or changing roads with traffic calming measures
- Matching the speed limit to the function of road
- Enforcing these speed limits
- Increasing the awareness of the dangers of speeding
- Promoting in-vehicle speed limiting technologies





Traffic calming: Optical illusion markings





Traffic calming: Humps and plateaus





Traffic calming: Roundabouts





Traffic calming: Gateway treatments





Traffic calming: Road narrowing



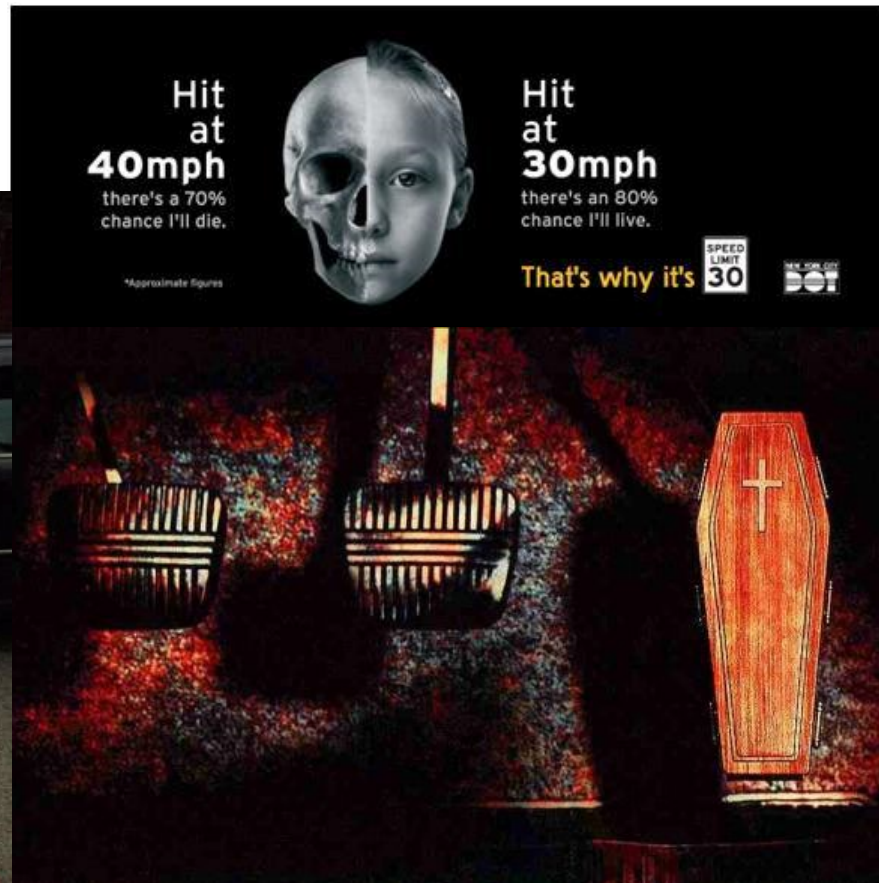


Matching speed to road function: Speed limit changes



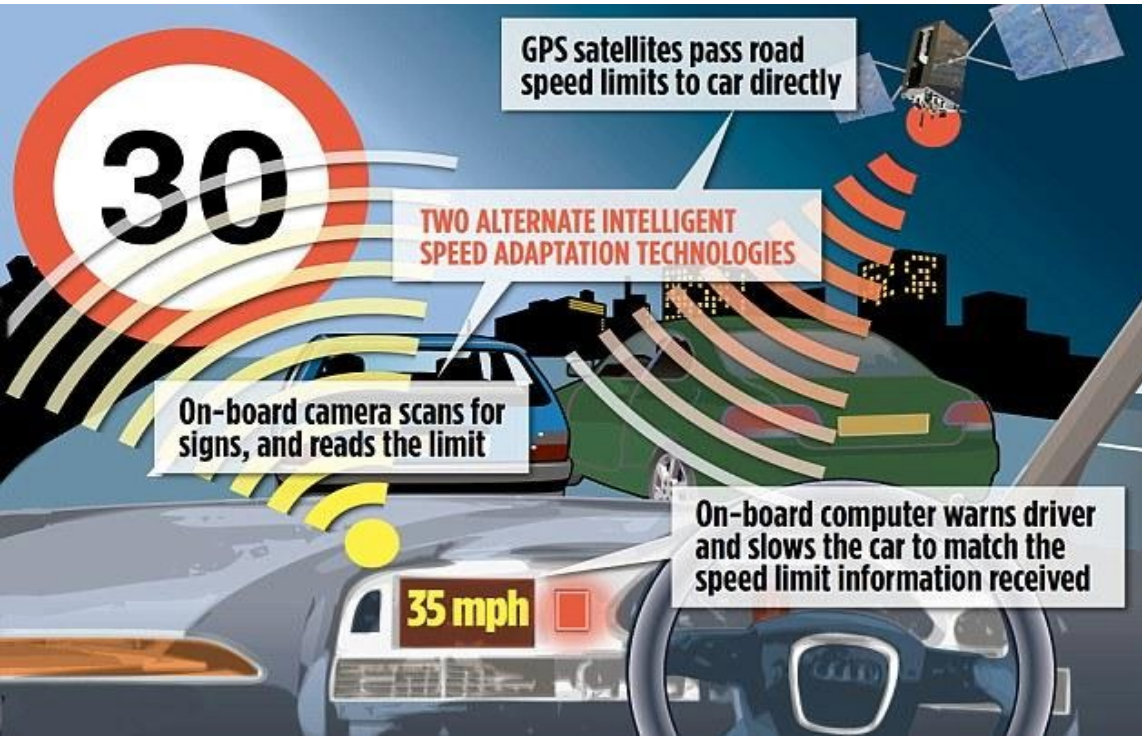


Creating awareness by publicity Campaigns



In-vehicle technologies

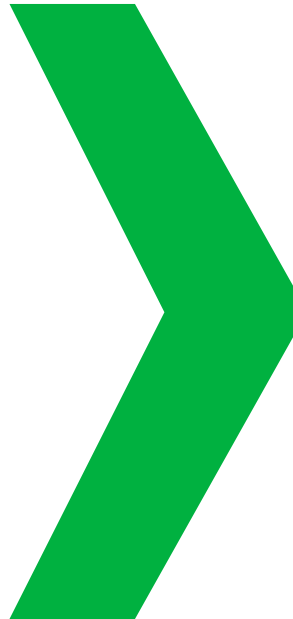
E.g. Intelligent Speed Adaptation



Speed enforcement

Introduction

- **Rising motorisation: maintaining enforcement levels**
- **Limits to manual police enforcement**
- **Speed management requires 24/7/365 approach**
- **Use valuable police resources for 'non-automatable' tasks**
- **Georgian authorities and NGOs fully aware of need for automated enforcement**





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Preconditions

- Wide political and administrative commitment
- Stakeholder involvement and alignment
- Suitable legal and regulatory framework
- Accurate vehicle and drivers license database
- License plate issuance, presence and quality
- Sufficient fine levels
- Legally enforceable fine collection conditions





The Automated Enforcement Chain



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From violation to court

- Violation evidence registration
- Transfer to back-office (BO) and data storage
- BO processing evidence to violation and fine notification (owner/driver, address/phone #, legal status, fine level, license points)
- Review and legal confirmation of violation
- Issue and send notification
- Receive notification
- Review evidence with fine payment / legal options
- Check collection status / send reminder
- Payment receipt
- Alternative: Court procedure (type approval / verification)



Centraal Justitieel Incassobureau
Ministerie van Justitie en Veiligheid

AFZ: POSTBUS 1794, 8901 CB, LEEUWARDEN

T.E. Snelreyder
Fiscalein 23
1234 AB Bovenroerdam
Nederland



Uw burgerservicenummer
123456789

CIB-nummer
0000-0000-0000-0000

Vormstaat op
23 september 2018

verkeersboete beschikking

Door u te betalen
€ 42,00

Dit bedrag is inclusief € 9,00
afnemersvoorschot.

Als u niet op tijd betaalt,
wordt de boete hoger.
Bedrag na 1e verhoging € 58,50
Bedrag na 2e verhoging € 108,00

⚠ Omschrijving overtreding
Overschrijding van de maximum
snelheid binnen de bebouwde kom
(Beboude VAO's)

📅 Wanneer
6 februari 2017 om 16:25 uur
(Vrijgesteld door oppoortpauzetoets
Administratieve Bijzondereverwijzing C118,
zaaknummer 1234)

📍 Waar
Gemeente Apeldoorn
(Beekbergen, Berg en Dalweg - Inrijding
Zandgraven)

🚗 Kenteken
01-XXX-X
(De kenteken staat op uw naam of u
wees op dat moment de houder van het
voertuig)

📏 Gemeten snelheid
58 km/h, 55 km/h na correctie
(De toegestane snelheid was 50 km/h)

Betaal tot
23 november 2018

op rekeningnummer
NL56 INGB 0705 0051 00
op naam van
CIB

met betalingsrekening
0000 0000 0000 0000

**U kunt het bedrag op
twee manieren betalen:**

➤ Ga naar [qib.nl](#), log in met
DigID en betaal via iDEAL, of

➤ maak het bedrag over.
Controleer goed of u alles juist
hebt ingevoerd.

Vragen?
Meer informatie
Op [qib.nl](#) staat meer informatie over
deze verkeersboete. Bent u geflitst?
Dan kunt u de foto daar ook direct
bekijken.

Niet eens met de boete?
Meld dit dan uitdrukkelijk op 01-10-2018 bij
de officier van justitie door te bellen of te
gaan. Dit kan digitaal op [om.nl](#)
verkeer. Daar staat hoe u dit kunt doen.
Parker CVOA, Afdeling Mulder,
Postbus 50-000, 3100 HA Utrecht.
U krijgt van ons een brief met de
beslissing van de officier van justitie.
Tot die tijd hoeft u niets te betalen.

Wilt u in delen betalen?
Op [qib.nl](#) kunt u zien of dat mag voor
deze verkeersboete. Zo ja, dan kunt u
daar direct regelen dat u in delen gaat
betalen.

Andere vragen?
Website [qib.nl](#)
Telefoon 059-2342130

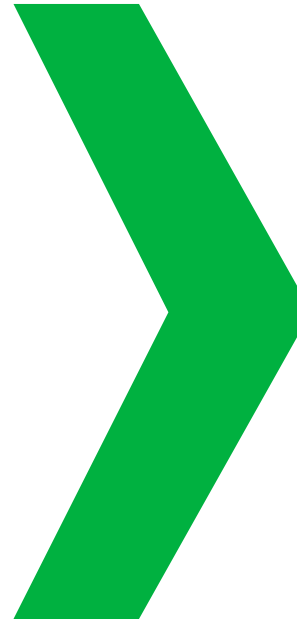


Speed enforcement

Objectives



- Secure strong political, administrative and public support for automated enforcement
- Create an enforcement environment with a high subjective chance of apprehension
- Avoid and counter any link with 'revenue generation' and 'taxes'
- Actively communicate road safety reasons, benefits and results of enforcement



Spectrum of automated enforcement models

Hardware & back office 100% **government** purchased, owned, operated, maintained.

Hybrid models with differences in:

- Hardware investment
- Compensation private party
- Activity split between government and private party

Hardware & back office 100% **privately** purchased, owned, operated, maintained.

Europe, Asia,
Australia/NZ/Canada

United States, Africa,
Latin America





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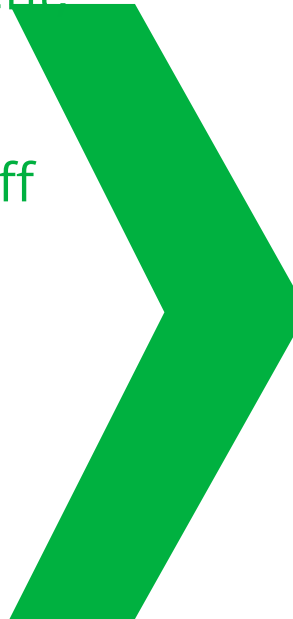
Automated enforcement models



Default government model



- Government clears preconditions
- Selects enforcement locations, procures enforcement networking and BO equipment
- Manages back-office and trains and employs BO staff
- Issues violation notifications
- Manages fine collection process and initiates court proceedings





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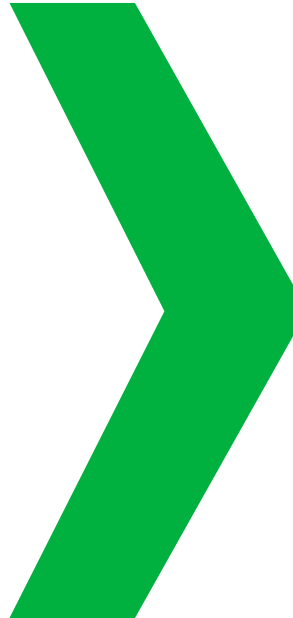
Automated enforcement models



Public Private Partnership (PPP) or managed services model



- Government clears preconditions, sets locations, number and type of cameras
- Based on predefined criteria and KPIs government selects company to carry out entire enforcement process for a certain contract period.
- Review and legal confirmation of violations only by police.
- Discussion issues: financial model, fine collection account, procedures, staff screening, back office, PR, type approval, verification, KPIs





IRF

STATEMENT OF POLICY

by the International Road Federation

“Public Private Partnerships in Traffic Enforcement”

July 2, 2015

In most countries traffic enforcement cameras and other equipment are purchased, owned, and operated by government organizations. The past two decades have seen a wide-ranging wave of privatizations and introduction of public private partnerships (PPP) in formerly government-owned or controlled activities, including traffic enforcement. Implementing this concept requires a set of principles and good practices presented in this IRF policy statement.

Public Private Partnerships in Traffic Enforcement

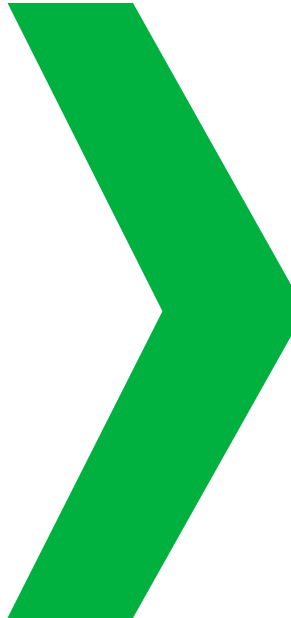
A White Paper from the International Road Federation

White Paper

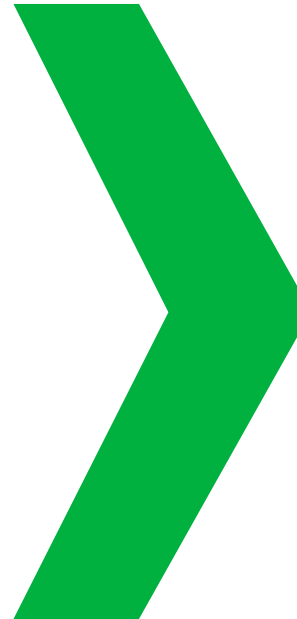
www.IRFnews.org

16

02



- **Importance of reducing average road network speed**
- **Infrastructure adaptations**
- **Matching speed to road function**
- **Raise awareness through publicity**
- **Manual and automated enforcement**
- **Consider IRF PPP enforcement model**
- **Speed reduction enhances Quality of Life and livability in cities, towns and villages**





E'tiboringiz uchun katta rahmat. Savol va munozara???



Please refer to the IRF 'Statement of Policy', White Paper 16-02 and IRF Webinar on Public Private Partnerships in Traffic Enforcement on the IRF website:

www.irfnews.global

Contact and further information for follow up session:

IRF Road Safety Committee or contact me at

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