





الإمارات العربية الشحدة إرة لنطيويسر البستسينسة التسحيتينية

POLICIES FOR MULTIAGENCY COORDINATION IN VIEW OF THE SAFE SYSTEM APPROACH

TC C.1 "PROGRAMS AND POLICIES FOR ROAD SAFETY"

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ROAD ACCIDENTS AND ROAD FATALITIES A WORLD WIDE PROBLEM





 \approx **50M** injuries per year

#1 cause of death between 5-24 years old#3 cause of death between 5-40 years old#8 cause of death for all ages groups



Up to 3% GDP, more than \$500bi



ROAD ACCIDENTS AND ROAD FATALITIES A DISPROPORTIONATE RISK



PROGRESS FAR FROM UNIFORM

Less than 25% of the countries (48) had a decrease on road fatalities (3 years)

17% of LMIC (23)had a decrease on road fatalities (3 years)

Risk of Road Fatalities of LIC=3xHIC

54% VRU



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source: WHC

ROAD FATALITIES

WORLD DISTRIBUTION



source: WHO, Global Status Report on Road Safety 2015

الامبارات العربسة المتحدة

UNITED ARAB EMIRATES MINISTRY OF INFRASTRUCTURE

الــــــة الــــــةـــــل DEPARTMENT OF TRANSPORT PIARC



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ROAD ACCIDENTS AND ROAD FATALITIES GLOBAL STATUS REPORT ON ROAD SAFETY 2018



EVERY 24 SECONDS SOMEONE DIES ON THE ROAD



7 Dec 2018 – INSUFFICIENT PROGRESS TO TACKLE LACK OF SAFETY ON THE WORLD'S ROADS

"These deaths are an unacceptable price to pay for mobility. There is no excuse for inaction. This is a problem with proven solutions." WHO Director - General Tedros Adhanon Ghebreyesus

"Road Safety is an issue that does not receive anywhere near the attention it deserves – and it really is one of our great opportunities to save lives around the world. We know which interventions work"

Michael R. Bloober, Founder and CEO of Bloomberg Philantrophies







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SAFE SYSTEM APPROACH KEY PRINCIPLES



SOLUTIONS FOUND IN 5 PILLARS Well design system to ensure the physical limits of human body

System that eliminates of fatalities and serious injuries

System that absorbs the road users mistake

Road SAFETY management SAFE roads and roadsides SAFE vehicles SAFE road users SAFE post-crash response

TARGET ZERO





SAFE SYSTEM APPROACH A BIG CHALLENGE

FROM

blame the road user

exclusive road user responsibility

common approach (individual and uncoordinated actions)

road fatalities and injuries are normal and acceptable

TO...

accept and accommodate human error and its vulnerability

share responsibility to road transport system designers, road users and other players

systematic, integrated and holistic approach and response

everyone has the right to use the road without the risk of being involved in an accident that could result in serious or even fatal injuries



SAFE SYSTEM APPROACH WHAT WE NEED TO IMPLEMENT IT? (1)

> Political and government leadership:

- aspirational, ambitious and clear vision
- intersectorial and coordinated actions across various ministries
- Support and commitment at the highest levels of government and stakeholders
- Dedication and effort from stakeholders and society Public and media awareness
- Funding: more investment on road safety to save lives





SAFE SYSTEM APPROACH WHAT WE NEED TO IMPLEMENT IT? (2)

- > Guidance from a strong lead Agency as a Road Safety Authority: National Road Safety Strategy and Plan of Action
- > Good information: improve quality of collection of data (crash and road state/condition)
- > Human resources to built capacity and knowledge: skilled staff to analyze the data and define specific actions to prevent road traffic crashes, minimize their consequences, and evaluate the impact of these actions
- > Sharing Knowledge: national capacity and international cooperation

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Cooperation: multi and inter institutional approach







SAFE SYSTEM APRROACH WHO WE NEED TO IMPLEMENT?



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SAFE SYSTEM APPROACH SAFER ROADS AND ROADSIDES (1)

- > **Promote land use** taking into account safety and mobility: functionality, homogeneity, predictability, forgiveness
- > **Define road investments** based on safety and considering the road users and its vulnerability: self explaining and forgiving road infrastructure
- > **Democratization of safe mobility**: coexistence of all road users and new mobility patterns
- > Be proactive instead of reactive: road safety impact assessment (risk mapping) and inspections to assess the risk and the safety quality of the roads to target investment





SAFER ROADS AND ROADSIDES (2)

- Analyze crash data to understand crashes and risks and to identify measures to address the key crash types
- Evaluate and monitoring the road interventions: cost benefit analysis
- Good perform of maintenance of roads
- Promote road safety ownership among road authorities and infrastructure managers: engineers, urban planers both local and national level, making them legally responsible for improving road safety on their networks through cost effective measures



SAFER VEHICLES

- > Harmonize global standards with mandatory and essential safety requirements (minimum safety rating)
- Implement new car assessment programs
- Encourage vehicles manufactures to make vehicles more safe
- > Innovation and new technology to reduce the likelihood and the severity of crashes
- > Encourage managers of fleets to have a road safety manager program and to purchase, operate and maintain safe vehicles
- > **Define a strategy:** transition and coexistence phase





SAFER ROAD USERS

- Promote awareness of SS and risk factors
- Targeted Education driver engagement
- Compliance and Enforcement (automatic enforcement)
- Activities to reduce work-related road traffic injuries
- Establish driver licensing programs
- > Establish programs for the youngest and for the elderly





POST-CRASH RESPONSE

- > High standards of emergency response services: quality emergency care
- > Arrive fast: promote e-call on vehicles
- > Act fast: develop pre-hospital care systems and training rescue teams
- Develop hospital trauma care systems and its evaluation
- > Provide early rehabilitation and support to injured patients
- > Investigate crashes to define how to improve emergency response and avoid road trauma









SAFE SYSTEM APPROACH HOW TO IMPLEMENT IT?



Cultural and mentality shift:

- Road fatalities and serious injuries are not inevitable •
- Zero deaths is the only acceptable number •
- This is the only mode of transport that accepts this • numbers

Convince the Government

Cooperation and alignment between stakeholders

Create buzz and awareness on the whole society







HOW TO CONVINCE THE GOVERNMENT?

Demystify: We cannot afford to make our roads safer! Yes We Can!

Demonstrate the inevitable

there is no better investment than the investment is Road Safety

it saves lives

It has a high return: social, economic and reputational

Cost benefit ratio 1:8









a strong correlation between investment in road infrastructures and the reduction of road deaths

Investment in +3.200 km of roads with higher quality and safety 75% reduction in road fatalities

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INVESTING IN SAFER ROADS

THE PORTUGUESE CASE



benefit to the country and to the society - the savings resulting from the reduction in roads accidents is more than twice its cost

Source: European Commission - Press release – nov 2016 – Road Safety evolution in UE Custo Económico e Social dos Acidentes de Viação em Portugal (2012, Arlindo Donário e Ricardo dos Santos, Preços de 2015 OCDE

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THE PORTUGUESE CASE IP 4 – AMARANTE / VILA REAL





IP4 – AMARANTE /VILA REAL

It brought road fatalities!

- Difficult orography ► Reduced geometric characteristics ► Slopes 7% 8% Curves < 350m
 No separated carriageways (2 or 3 lanes)
 High traffic, high %HV
- Lack of homogeneity









IP4 – AMARANTE / VILA REAL

- - It brought road fatalities!

• High altimetry heights ► snow+fog ► Lack of visibility





IP4 – AMARANTE / VILA REAL

- - It brought road fatalities!

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20 km
9 years (1996 to 2004)
393 road crashes
48 fatalities
51% Head on crashes









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IP4 – AMARANTE / VILA REAL

In 2004, we implemented a set of measure, not only to reduce speed, but also to reduce the number of overtaking

- Improvement of the road pavement
- Placement of poles to separate the lanes
- Third lane suppression in some areas





















THE PORTUGUESE CASE IP4 – AMARANTE / VILA REAL

Placement of warning side panels with LEDs

Significant improvement of signaling and guidance Ο











43 LIVES SAVED 332 LESS INJURED



IP4 – AMARANTE / VILA REAL

2016 (May)

IP4 was replaced with a highway with the Marão Tunnel Motorway



two lanes in each traffic direction, a median barrier, controlled access, wide shoulders and good design characteristics.





IP4 – AMARANTE / VILA REAL

This motorway has also the longest Portuguese tunnel, with 5,5 km





Since May 2016 up to now, there are no fatalities!







INVESTMENT IN ROAD INFRASTRUCTURE RESULTS



SAFE SYSTEM APPROACH GETTING TO ZERO

Can we do it? Can we achieve it? Can we afford it? Can we?











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