

Towards Zero

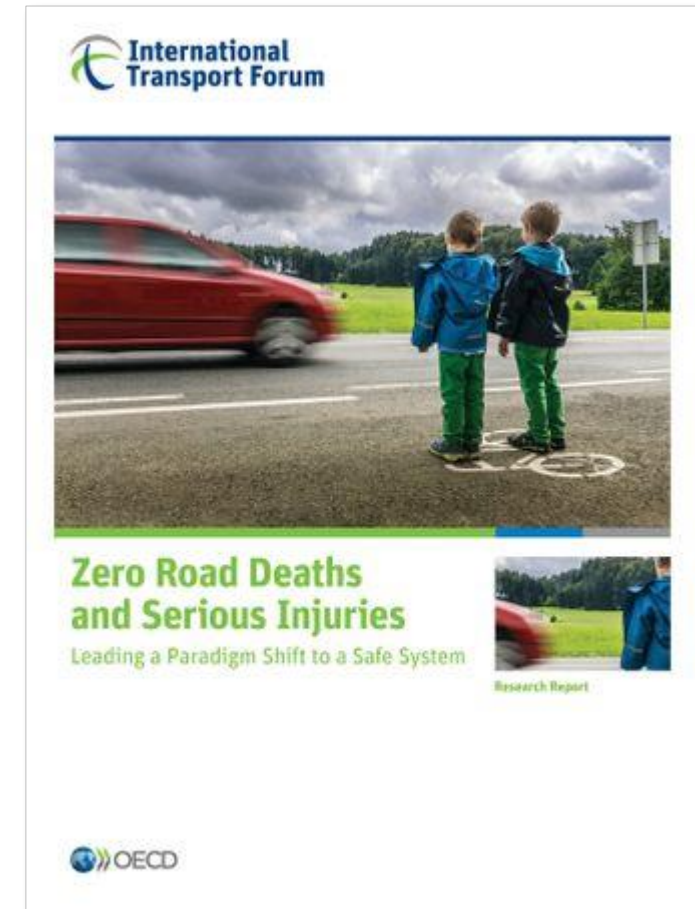
JOHN DAWSON

FOUNDING CHAIRMAN, EUROPEAN ROAD ASSESSMENT PROGRAMME

OECD: “Be ambitious, resolute, inclusive, concrete”

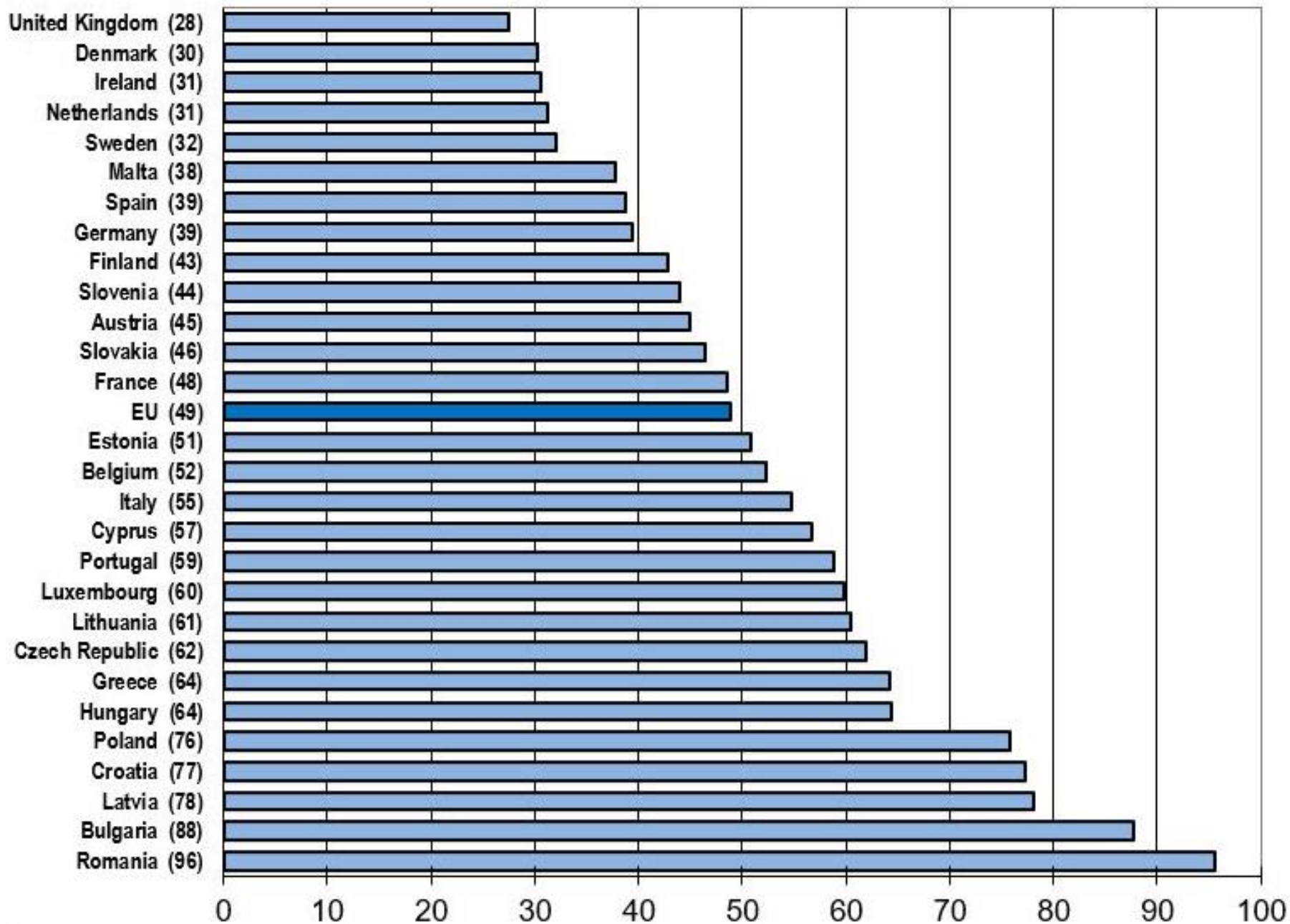
амбициозен решителен приобщаващ пецифичен

- ▶ **Be ambitious: safe roads not just safer roads.**
work back from zero, not incremental,
- ▶ **Be resolute: a sense of urgency.**
Success comes via leadership
- ▶ **Be inclusive: establish shared responsibility.**
Today, the road user is at fault but others must act
- ▶ **Be concrete:**
Underpin aspiration with specific metrics



Deaths per million 2018

СМЪРТНИ СЛУЧАИ НА МИЛИОН



Alcohol Belts Speed Vehicle Road

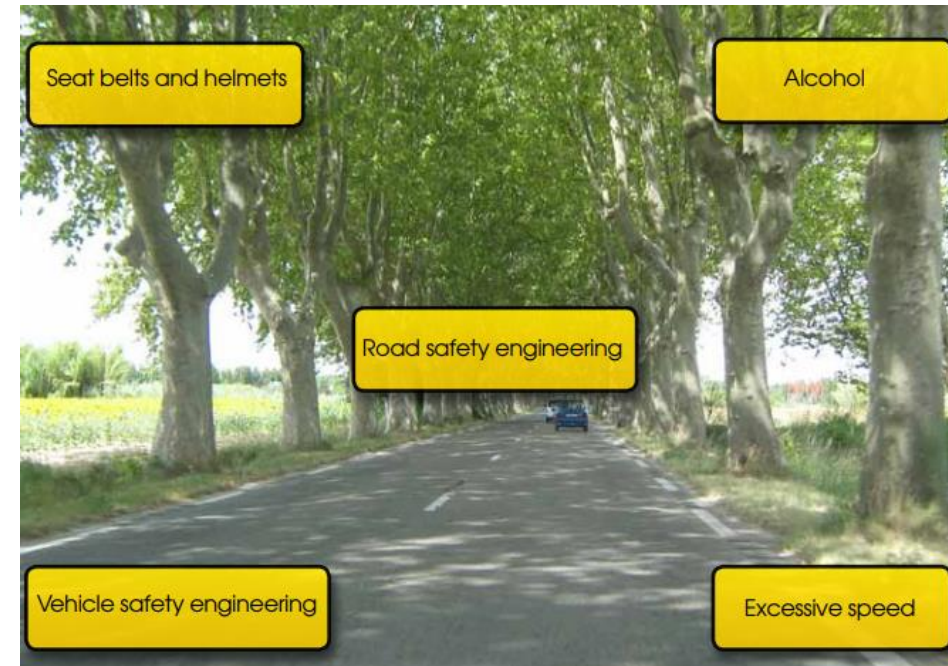
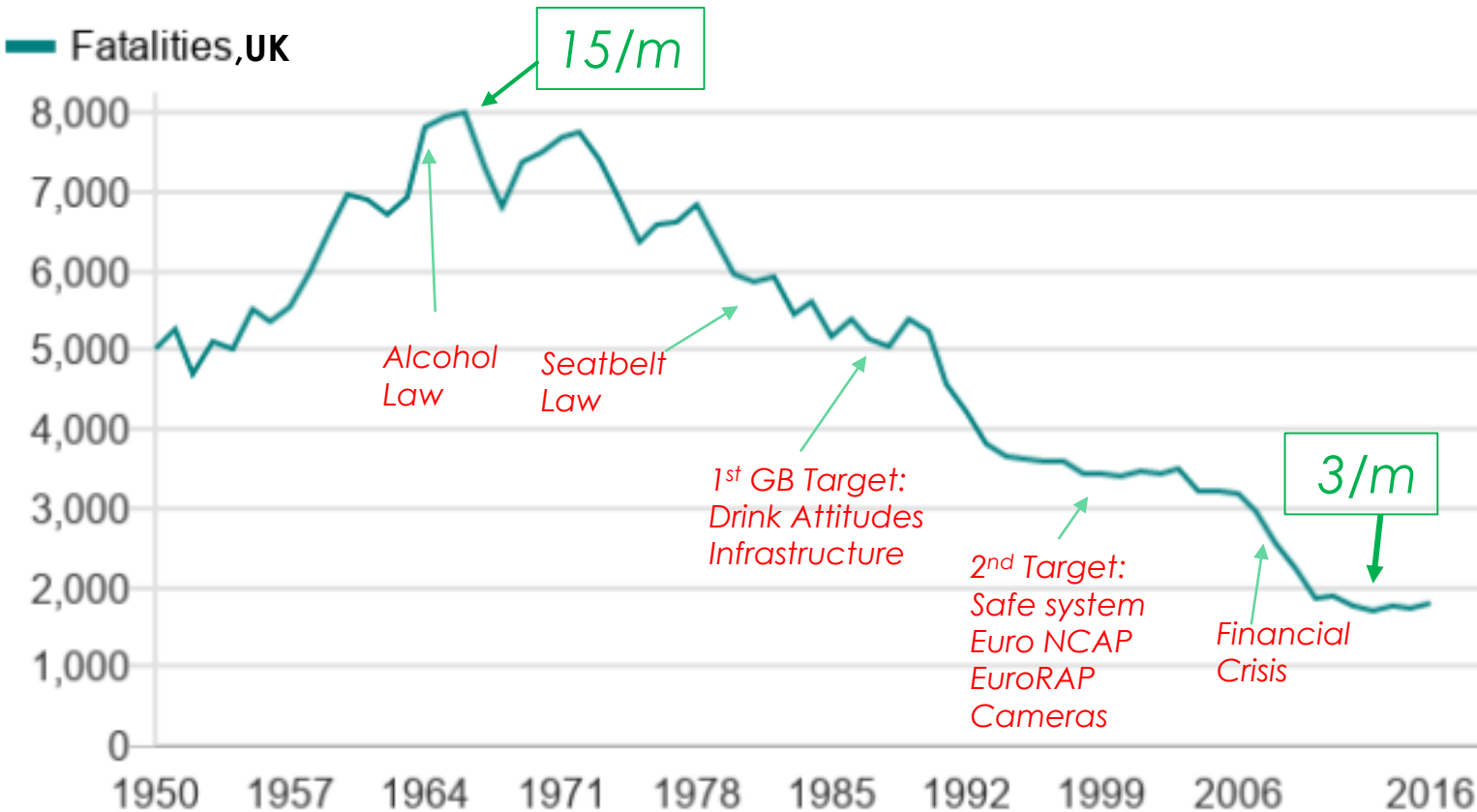
алкохол

колани

скорост

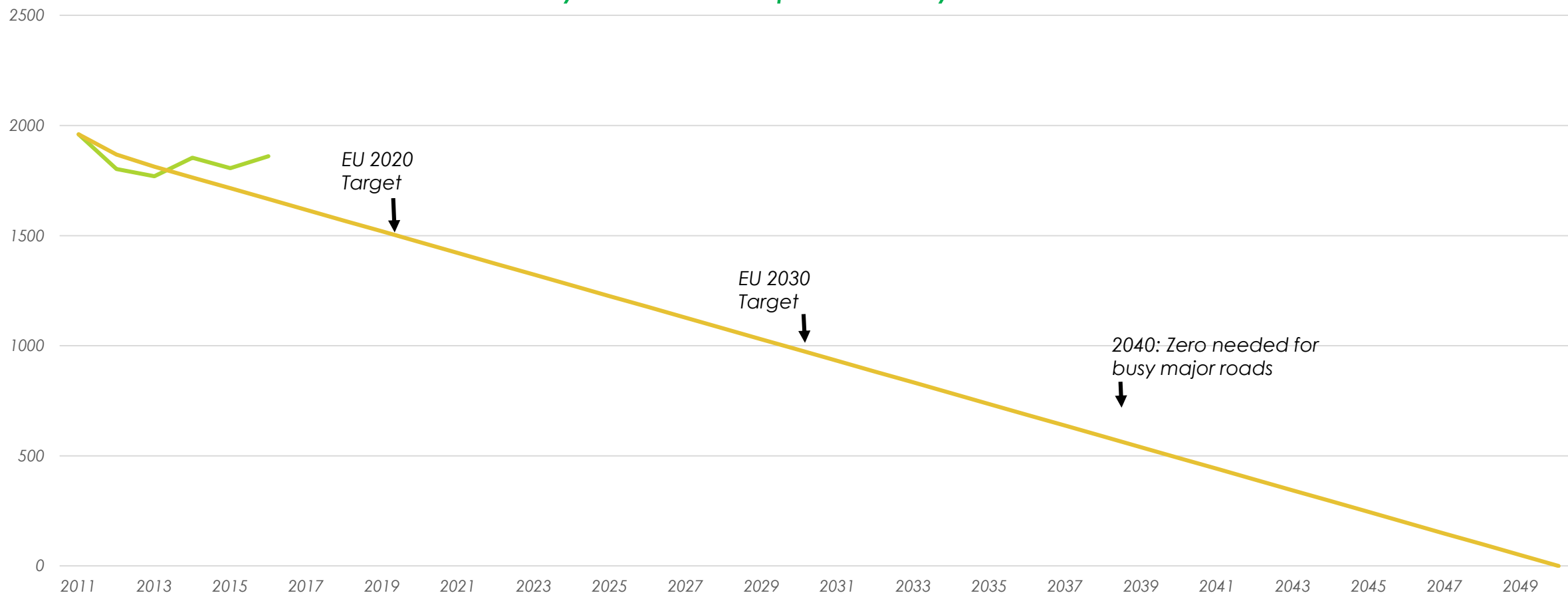
превозно

път



UK: Towards Zero Deaths by 2050

към нулеви смъртни случаи до 2050 година



Schematic courtesy of Road Safety Foundation

A Safe System Manages Energy

Управление
на енергията

Road Safety & Innovation Forum
Sofia, Bulgaria | May 15, 2019



The human body cannot manage uncushioned impact > 40kph

*The car alone
cannot protect
above 70 kph*



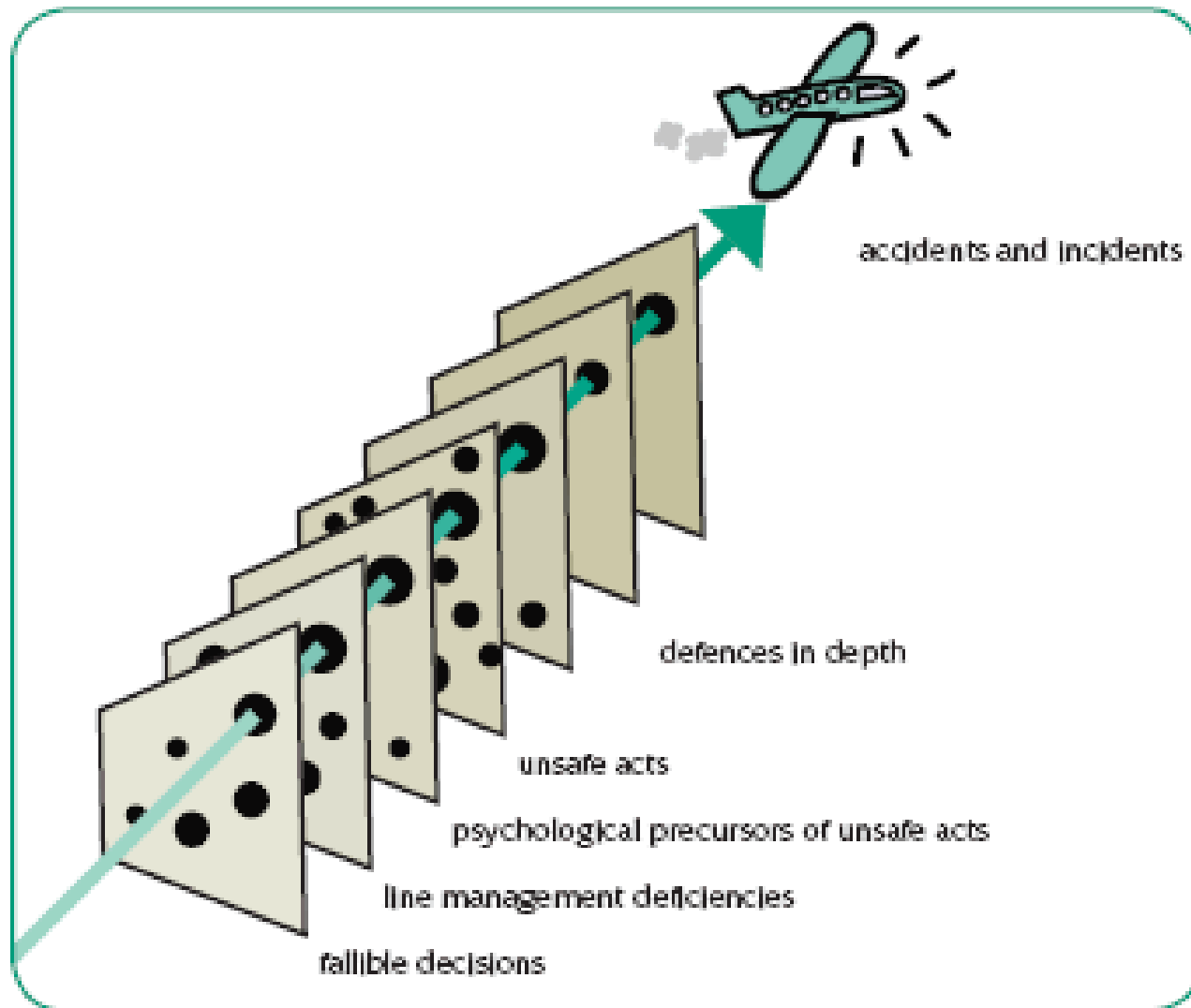
Speed Limits should depend on protection

*Legal speeds kill
unless car and
road work as a
system*

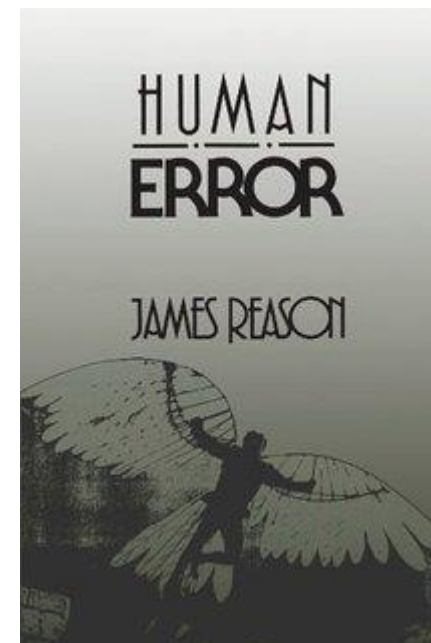
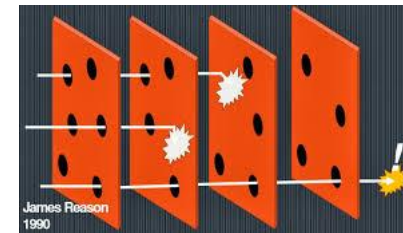


Safe System – layers of protection

слоеве на защита



“Swiss
Cheese”



Safe System
- layers of protection



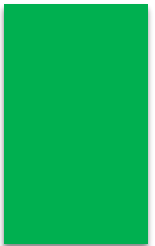
The Safe System

One in every 500 human decisions in medium stress environments is wrong

-star drivers

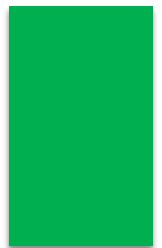
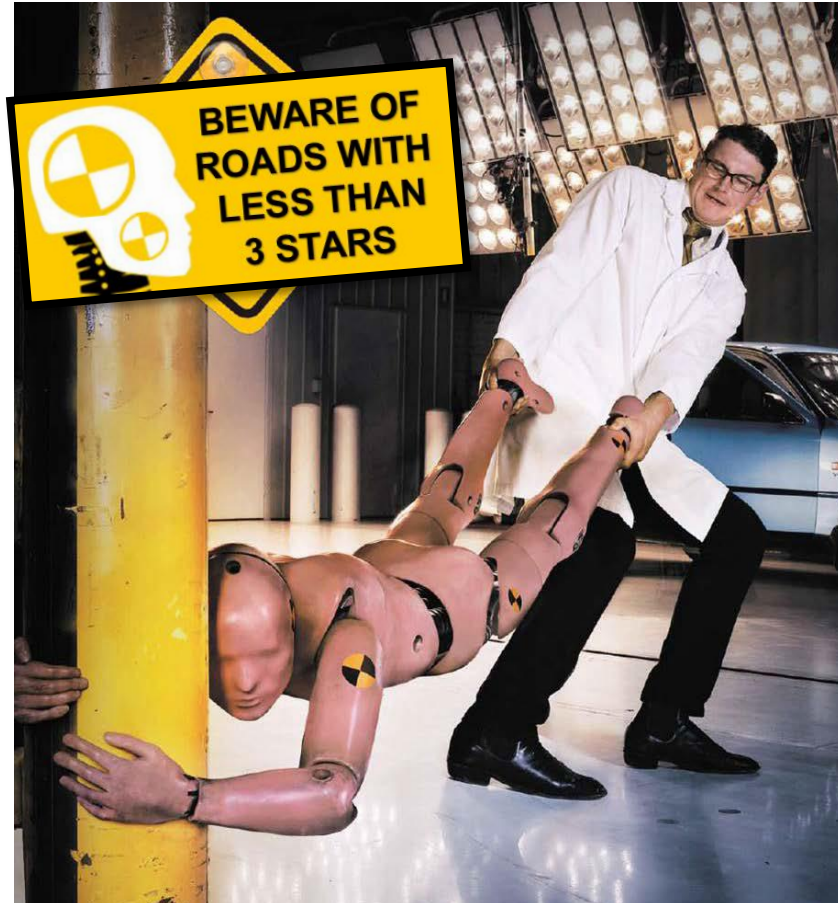
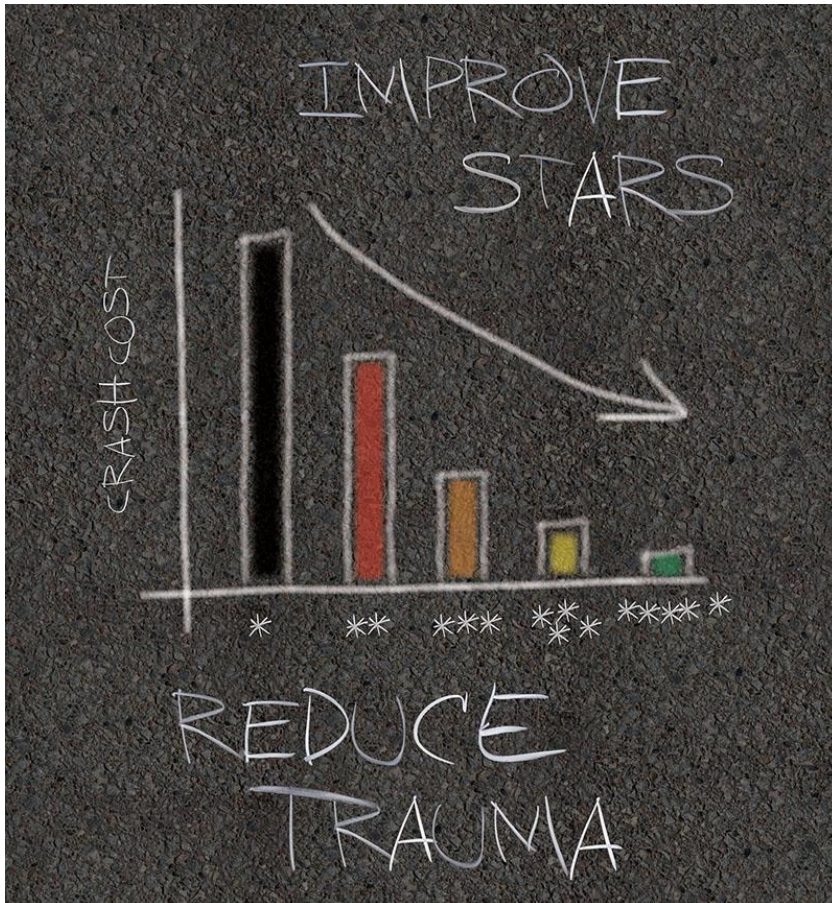
5-star cars

5-star roads



Beware of Roads with Less than 3-stars

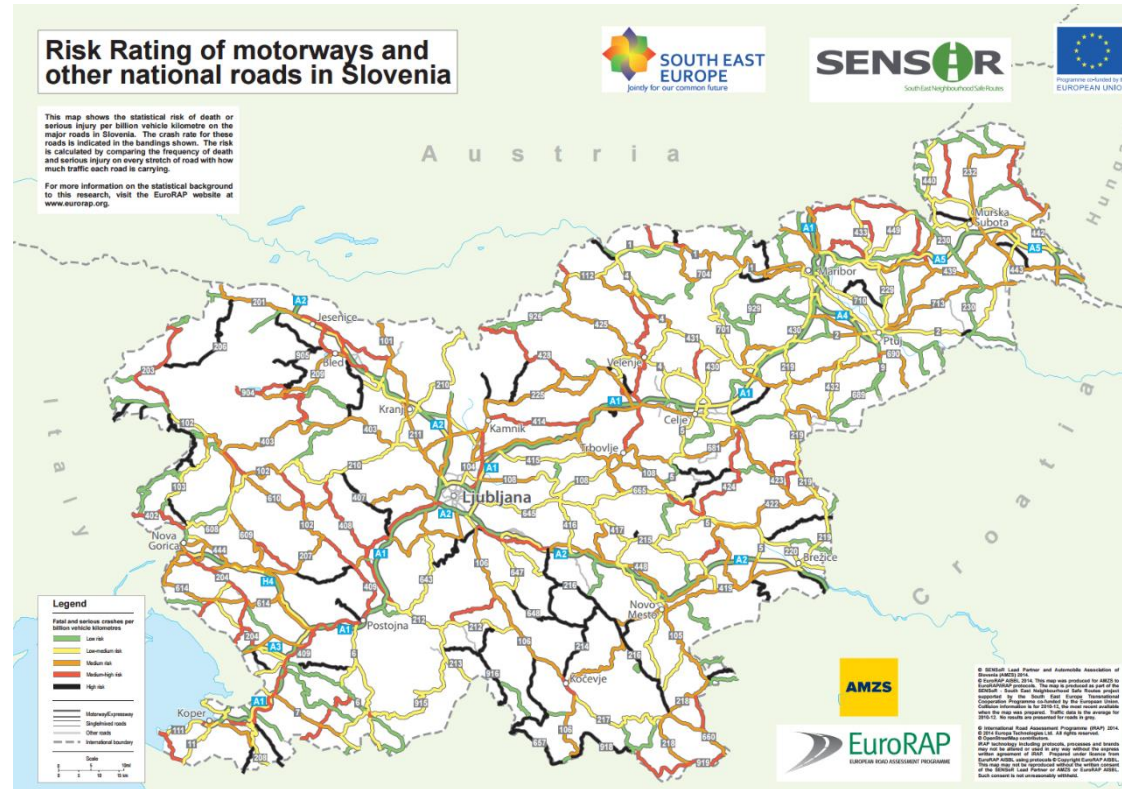
Пазете се от пътища с по-малко от 3 звезди



We can measure system safety

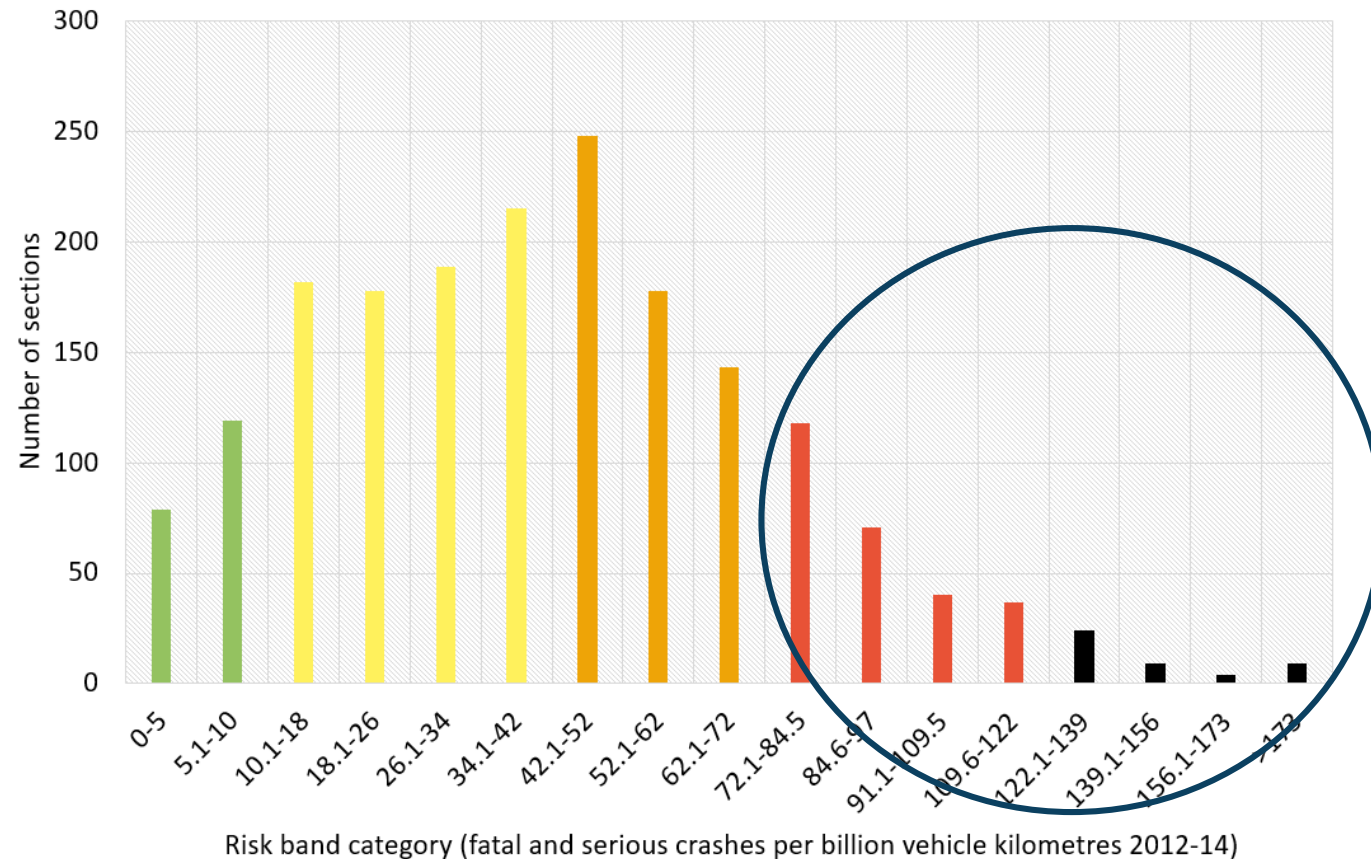
Crash Rate Risk Maps: measure system safety as users, vehicles and roads combine

Once you can measure,
you can track - and
benchmark

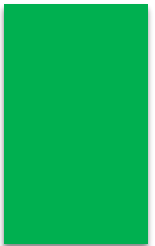


Maps: one language for public, members, police, engineers, Treasury

If you can measure, you can manage



300+ roads with unacceptably higher risk



We can measure *in-built* safety

вградена безопасност

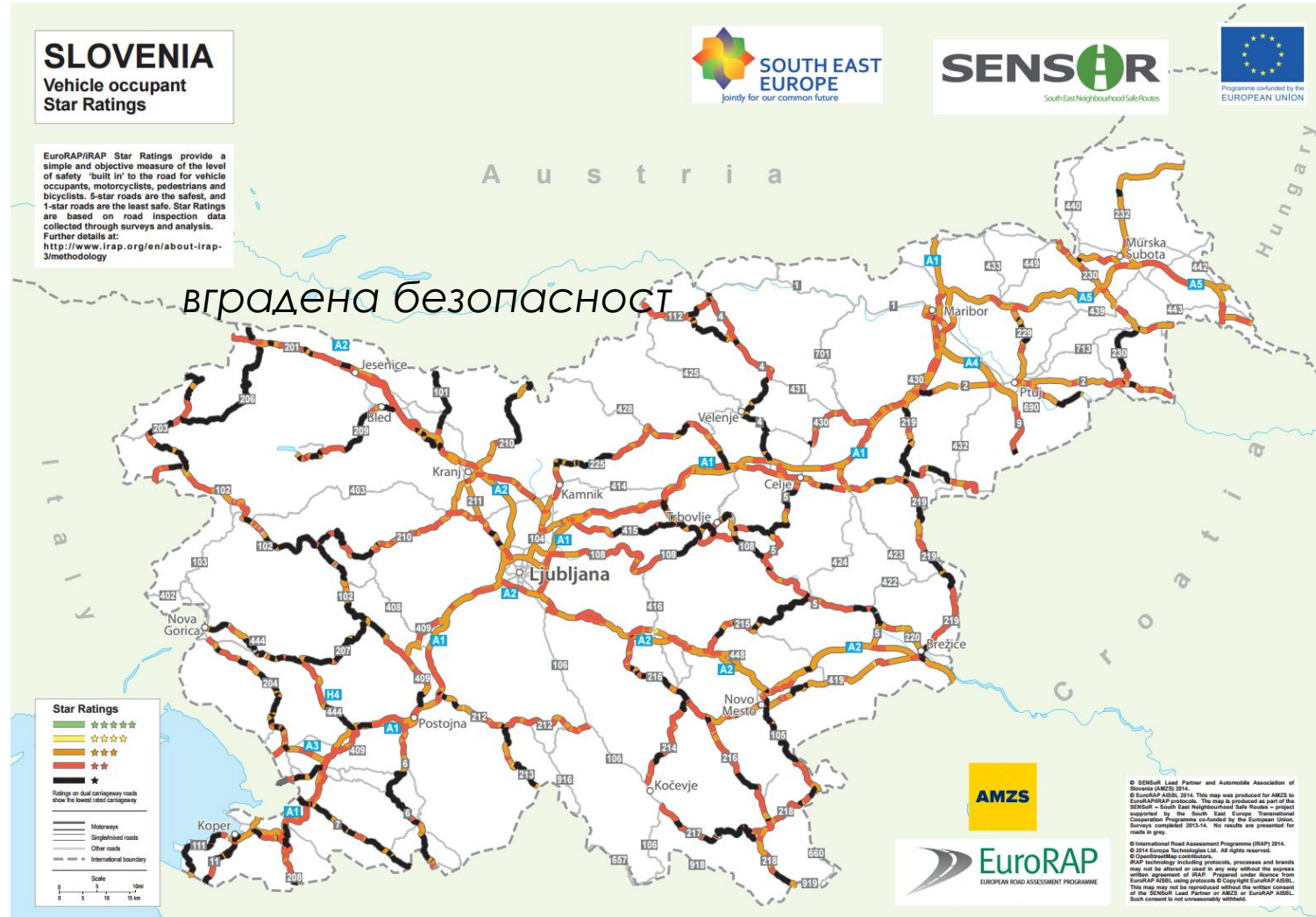
Star Rating: like NCAP, RAP measures *in-built* safety of road infrastructure



Key innovation:

Once Star Rating measured,
high return

Safer Road Investment Plans
can be generated.



Crashes that Kill and Maim

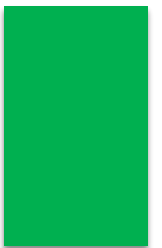
- 1. Run-off crashes with roadside objects*
- 2. Brutal side impacts at junctions*
- 3. Head-on crashes*
- 4. Pedestrians and cyclists hit at speed*



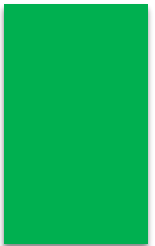
Safe Roadsides



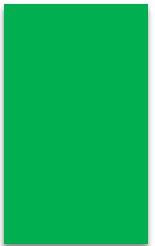
Safe Junctions



Safe Overtaking



Safe Towns & Villages

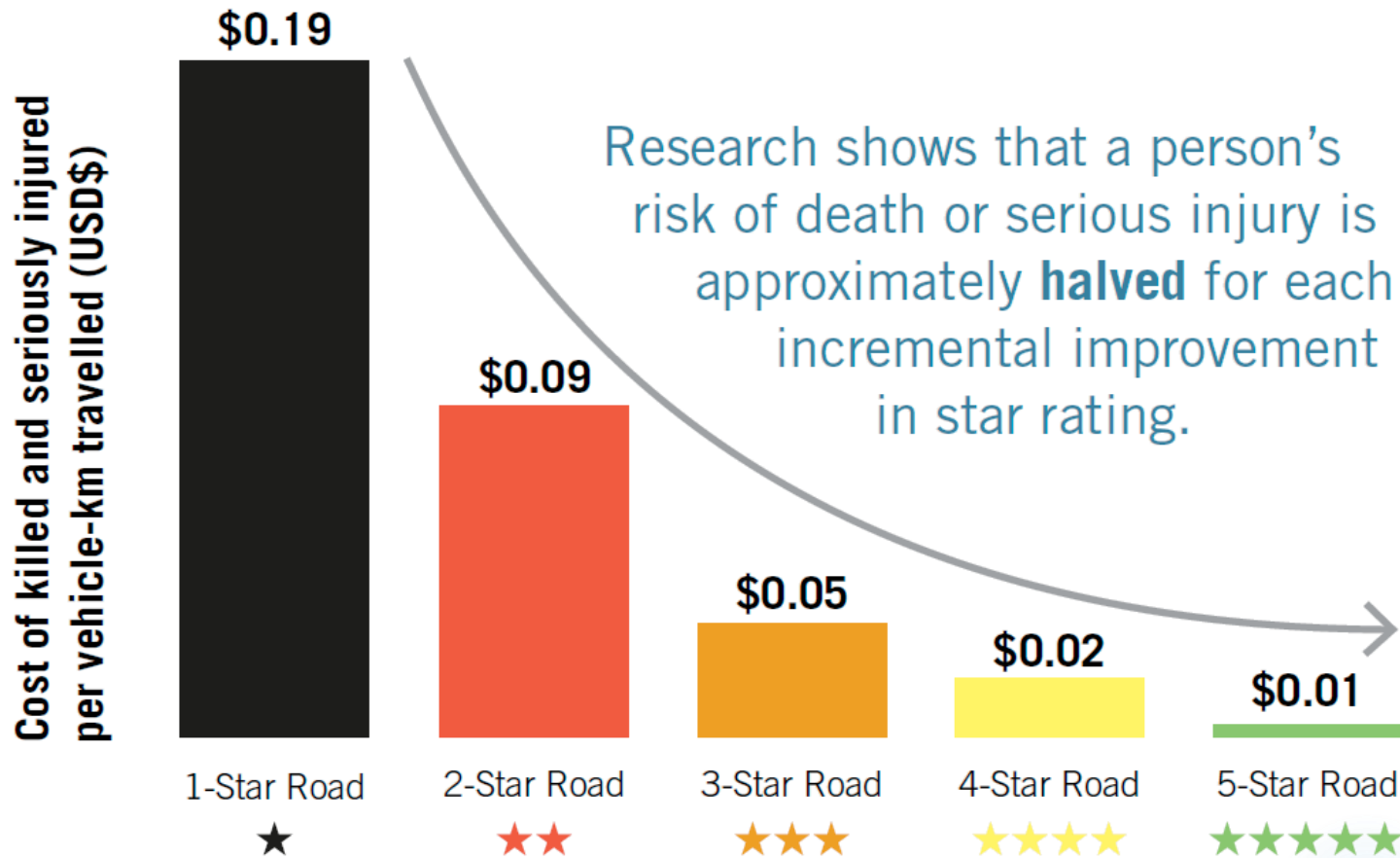


Why is UN 2030 Target 3-Star?

UN Target 3: 3-Star or better for new roads

UN Target 4: 75% of travel 3-Star or better for existing

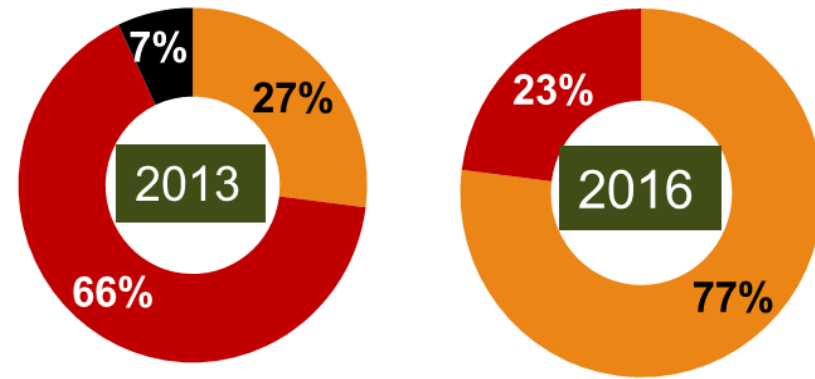
Economic Cost
per km
Travelled



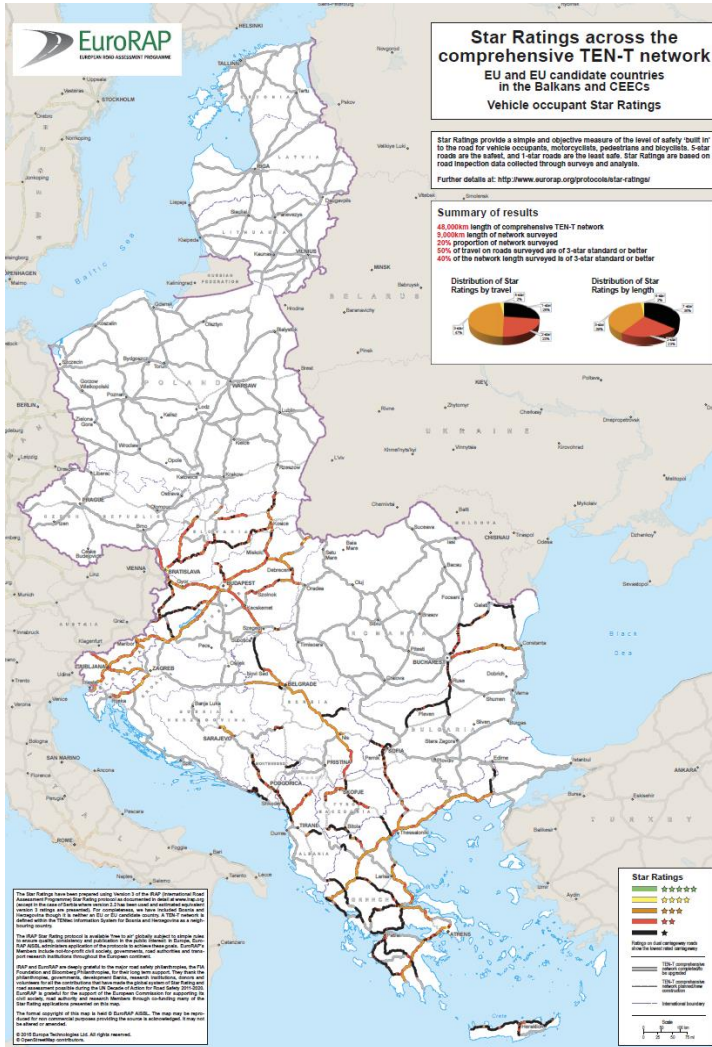
Source: OECD (2016)

Slovakia: Safer Road Investment Plan (SRIP)

- More than **HALF** inspected major roads were 2-stars or less
- Safer Road Investment Plan implemented on 327kms
- cost **€40m**, **27%** to **77%** at 3-Star
- **350** ksi saved over economic life
- Now 3-Star+ target all motorways



TEN-T: Quick, high return SRIPs available



Comprehensive TEN-T

In Eastern EU

- 15% of network travel only
- 36% deaths
- 56% travel below 3-Star

NB indicative sample estimates

	Length (km)	% Travel 3-Star or better	% deaths on 1- & 2- star
Western EU	105,034	87	29%
Eastern EU	41,563	44	81%
TOTAL	146,597	81	48%

Maintenance type counter-measures

BCRs of 7 available in east

3-star travel lifted from 40% to 60%

Slovakia: Example Countermeasures

D1 Trnava – Lúka Junction

- ✓ safety barriers, passenger side
- ✓ sealed shoulder extension, passenger side



2013



2016

- ✓ energy-absorbing barrier ends
- ✓ sealed shoulder extension, driver side

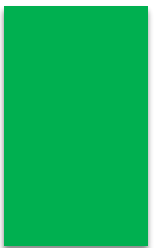


Quick win: affordable, high return, modular

Typically 50% of deaths concentrated on 10% roads

NB

Infrastructure Directive 'primary network'



Safer Road Investment Plans

безопасна пътна инвестиционна програма

The EIB and EBRD
now welcome
safety lending

ViDA in your
language is free

Training, support
available

Just ask!

