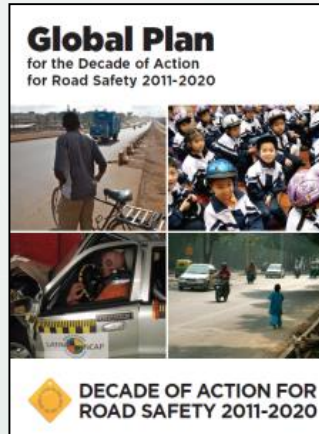


Safer Road Infrastructure & Speed Control

Brendan Halleman
International Road Federation

The UN Decade of Action For Road Safety:



Road Safety
Management

Safer Roads
& Mobility

Safer
Vehicles

Safer Road
Users

Post-Crash
Response

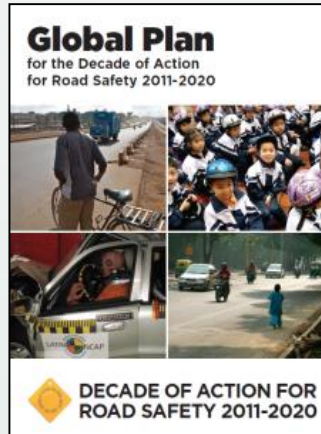
Safer
Speed

Building Industry Partnerships

“IRF delivers world-class **knowledge** resources, **advocacy** services, and continuing **education** programs which together offer a global marketplace for **best practices** and **industry solutions**”.



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Safe System, Safe Roads

....recognizes that road users will remain fallible and crashes will occur

....stresses that those involved in the design of the road transport system need to share responsibility for the safety of the system

....aligns safety management decisions with broader transport and planning decisions.

....shapes interventions to meet the long term goal.

Safe System, Safe Roads



Forgiving Roads



5 years prior

- 6 fatal head-on crashes
- 3 injury head-on crashes

4 years after

- No fatal head-on crashes
- No injury head-on crashes

Forgiving Roads

An aerial photograph of a city intersection in Malaga, Spain. The image shows a multi-lane road with a central pedestrian refuge area and protected bicycle lanes. Pedestrians are visible crossing the street, and several cars are stopped or moving through the intersection. The scene is captured from a high angle, showing the layout of the road and the surrounding urban environment.

Pedestrian Refuge Areas
Pedestrian Walkways
Protected Bicycle Lanes

Self Explaining Roads



Self Explaining Roads



Self Explaining Roads



Self Explaining Roads



Self Explaining Roads



Self Explaining Roads



Self Explaining Roads



Self Explaining Roads

75% road signs, traffic signals in Delhi are faulty: study

Nearly 75% of road signs, traffic signals and road markings in Delhi are not up to the mark and lead to millions of traffic violations without road users being at fault, says a study

✉ Mayank Aggarwal



Most traffic signals at intersections in Delhi were not functioning as per the prescribed standards or are wrongly installed, said the study. Photo: Mint

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Indian businesses adopting cloud tech despite security perception: study

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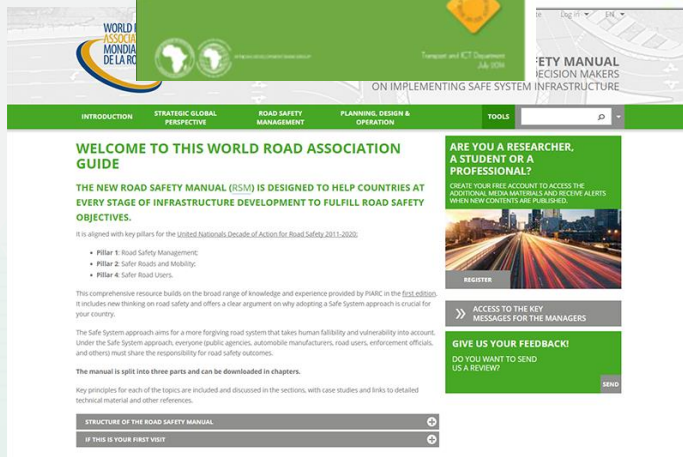
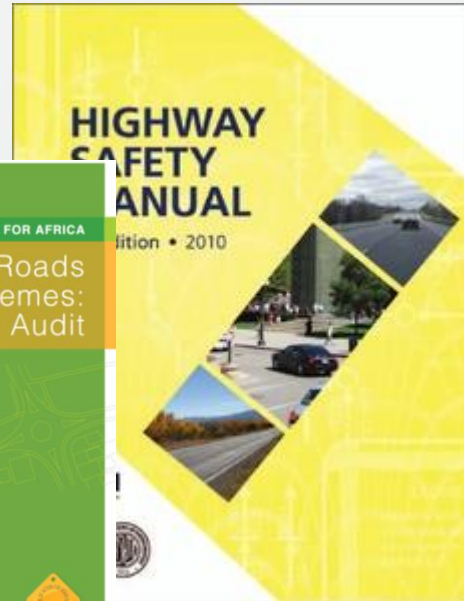
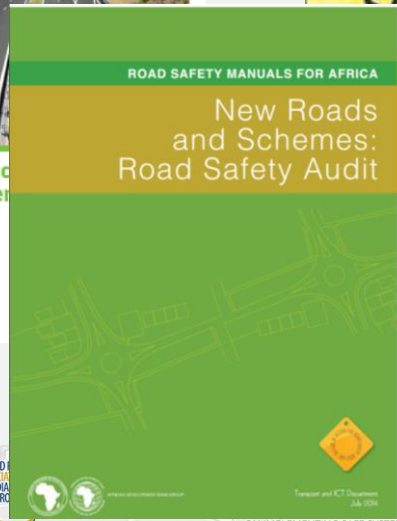
Coal India betting big on renewables: Piyush Goyal

SBI moves insolvency proceedings against Electrosteel

Self Explaining Roads



Resources exist....



Resources exist....



Safety can be mainstreamed

*“The client will take into consideration relevant EU road and traffic safety management standards, identify road safety measures and incorporate technically and economically feasible and cost-effective road safety components into the project design to mitigate potential road safety impacts on the local affected communities. Where appropriate, the client will undertake a **road safety audit** for each phase of the project and routinely monitor incident and accident reports to identify and resolve problems or negative safety trends. (...).*

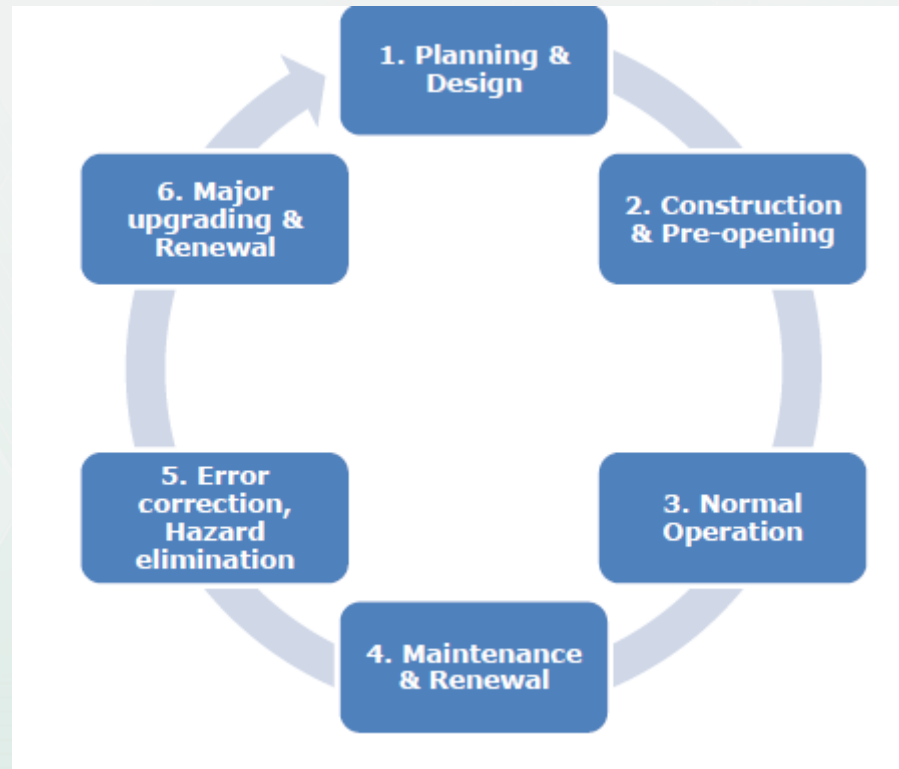


Safety Investment Decisions

Road Safety Impact Assessments
Design-stage RSAs

Road Safety
Audits

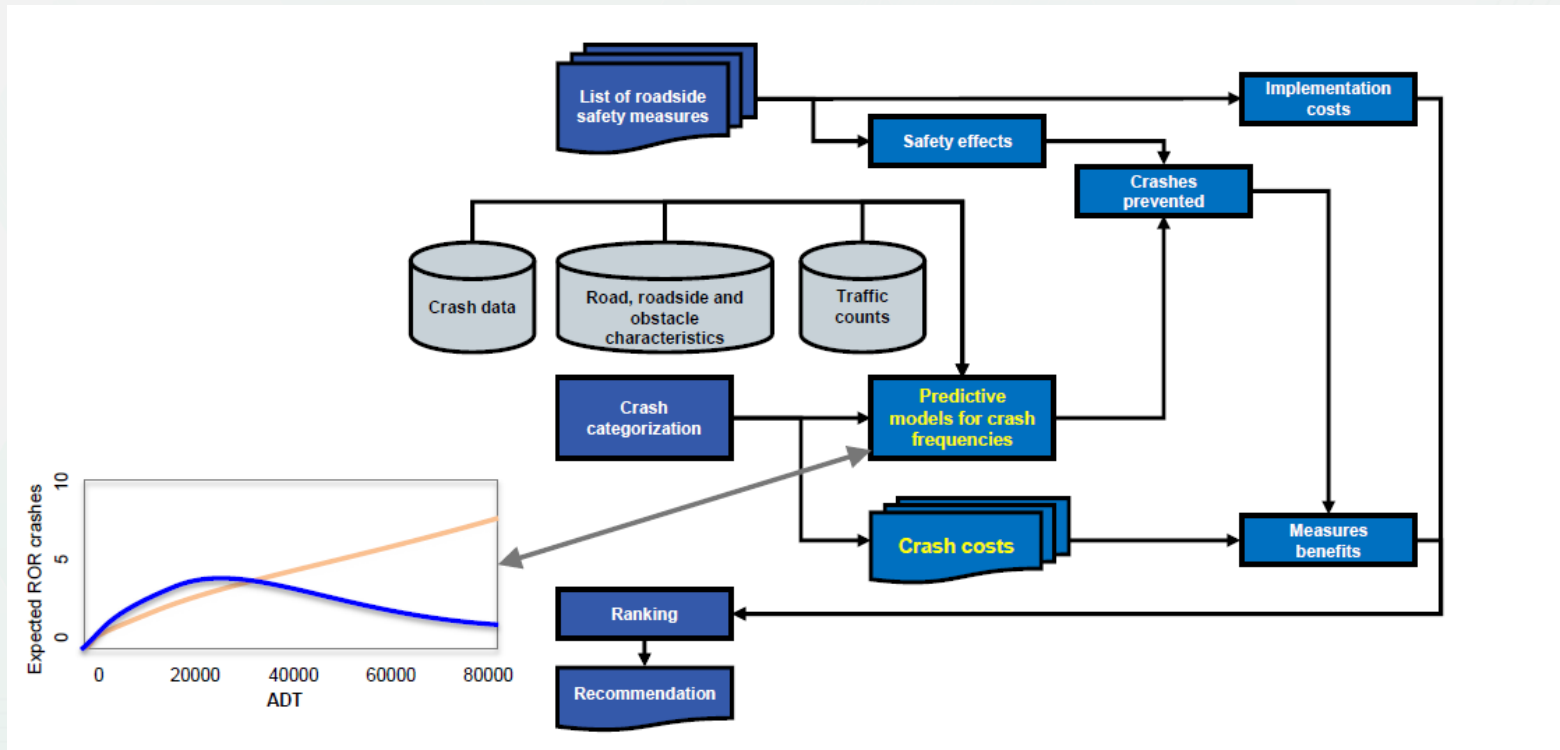
Black Spot
Programs



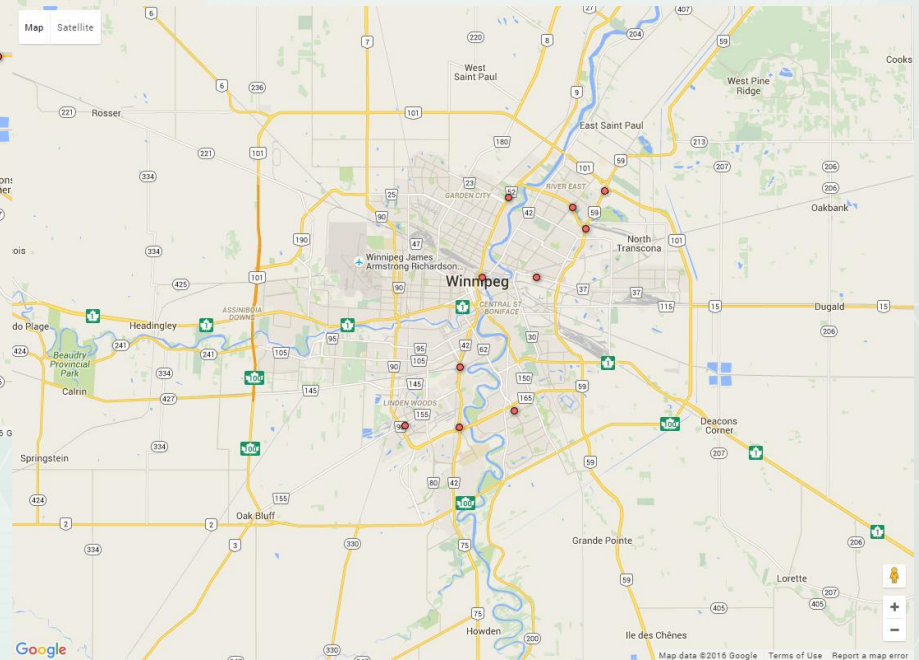
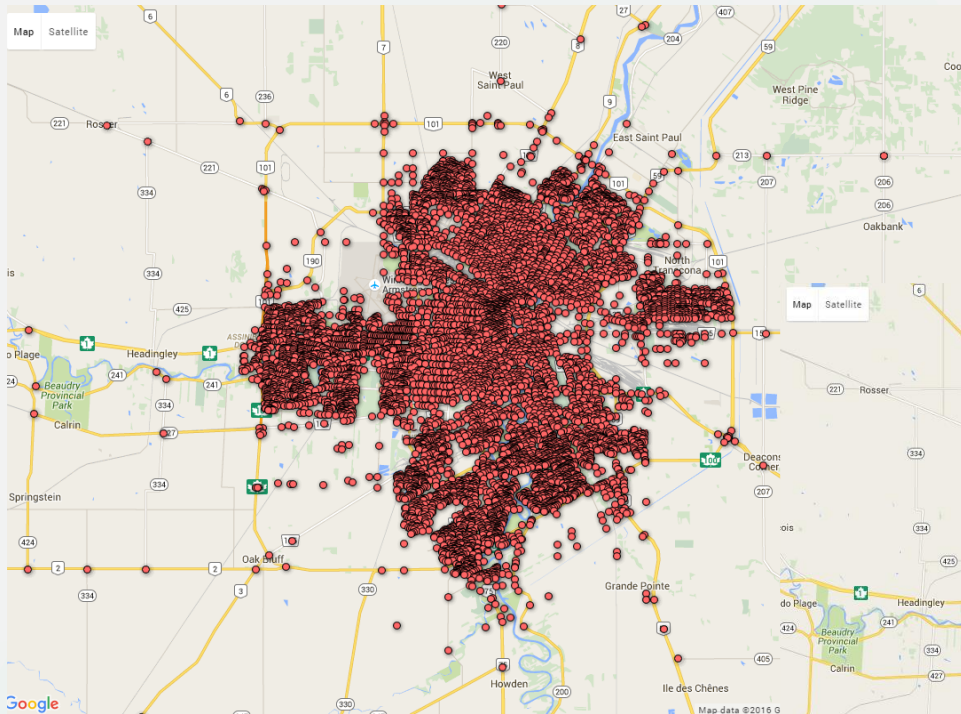
Pre-opening Stage RSAs

Road Safety Inspections
Network Safety Management
iRAP survey

Safety Investment Decisions: Portugal



Safety Investment Decisions: Canada



Safety Investment Decisions: Croatia

RETROREFLEKSIJA
Application for road markings and traffic signs retroreflection measurements over

Traffic signs > Hrvatske ceste d.o.o. > Istarska županija > DC300 Umag (D75) - čvor Buje (A9) 20.01.2016. > 1/0,163 E34

Road: DC300
Section: Umag (D75) - čvor Buje (A9)
Direction: D1R
Location: Right
Chainage: 1/0,163
Test date: 20.01.2016.
Measured by: -

Traffic sign details

Symbol code: E34
Dimensions: 60*30
Shape: Rectangle
Manufacturer: Beat Signal
Plate thickness: 2,1 mm

Backing: Freestanding
height: 174 cm
distance to road: 243 cm
CE number: No

Retroreflective sheeting details

Class: Class I

Retroreflecting coefficient values [cd/(lx*m²)]			
Color	Minimum value	Measured value	Assessment
White	50,0	96,1	✓

Note: -

Back

- Average age of technically correct signs: **6,34 years**
- Average age of technically defective signs: **11,54 years**



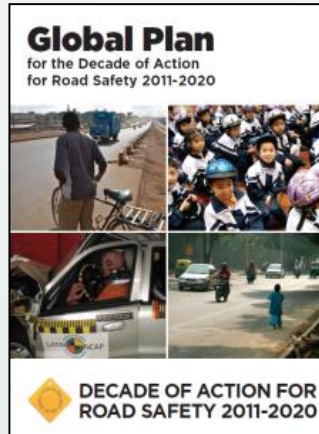
Closing thoughts

- Make an economic case for road safety investments
- Use your road asset management systems to guide period safety improvement needs
- Set high standards for the professionals involved in designing and auditing your roads
- Leverage technological enablers.

Available Resources

- *Road Infrastructure Safety Management*, ITF/OECD
- *Highway Safety Manual*, AASHTO
- *Road Safety Manual*, PIARC
- *Road Safety Manuals for Africa*, AfDB
- *Road Safety Toolkit*, iRAP
- *Crash Modification Clearinghouse*
- *Best Practices for Effective Road Infrastructure Safety Investments*, CEDR
- *Reducing Deaths in SVCs*, ETSC

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