

Adopting iRAP Star Rating for Global Targets



INTERNATIONAL ROAD FEDERATION – INDIA WEBINAR

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1 JUNE 2021



www.irap.org



global charity - global standard - local leadership

 **100+** countries

 **2,500,000+** km

 **us\$80bn+**
investment made safer

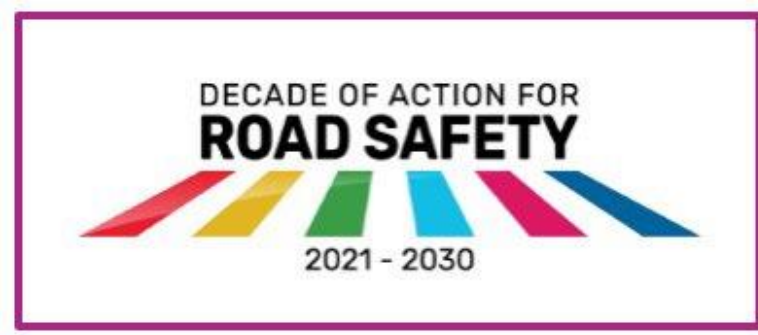


iRAP Partnerships for 2030 Impact



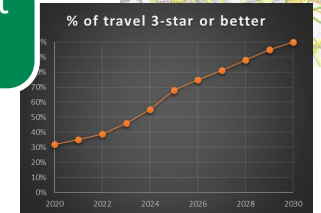
Policy and KPIs

Tools & Capacity



Evaluation & Evidence

Performance & Investment Data



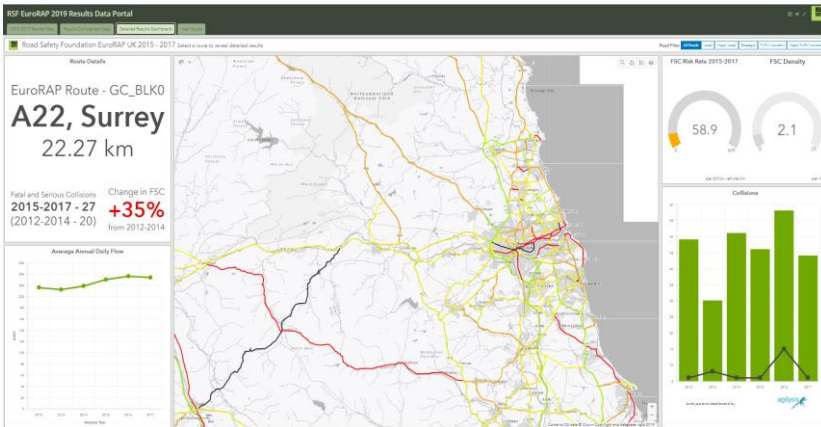
Projects & Upgrades

Mobilising Finance



The iRAP Global Standard

Global Risk Mapping

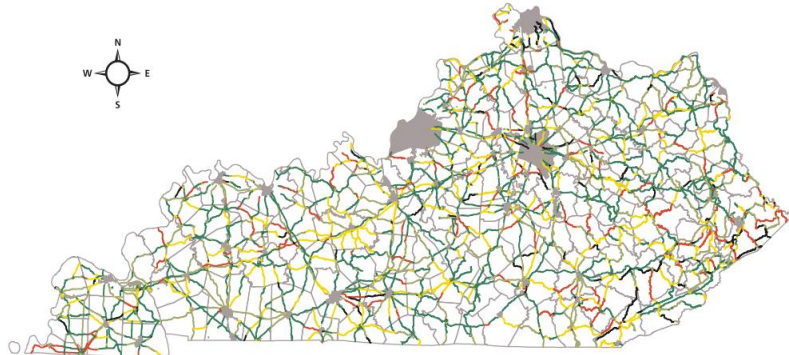


[EuroRAP Risk Mapping Results UK](#)

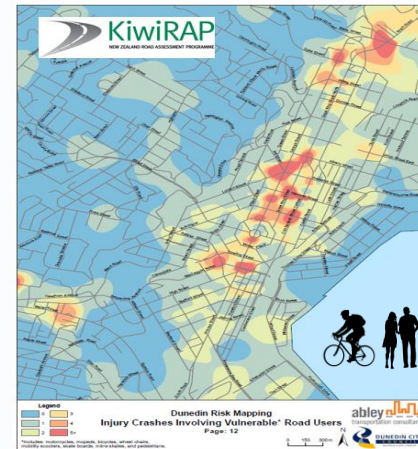


[AusRAP National Highways](#)

MAP 3. Crash Rate Ratio
(Crash Rate Compared to Average for Similar Road Types)

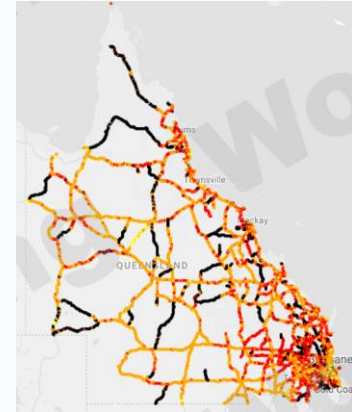


[usRAP Crash Rate Ratio](#)



[KiwiRAP Risk Maps](#)

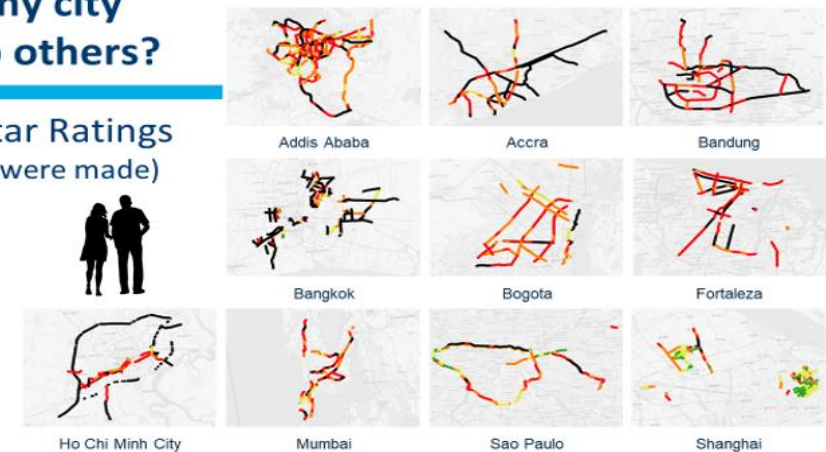
Global Star Rating



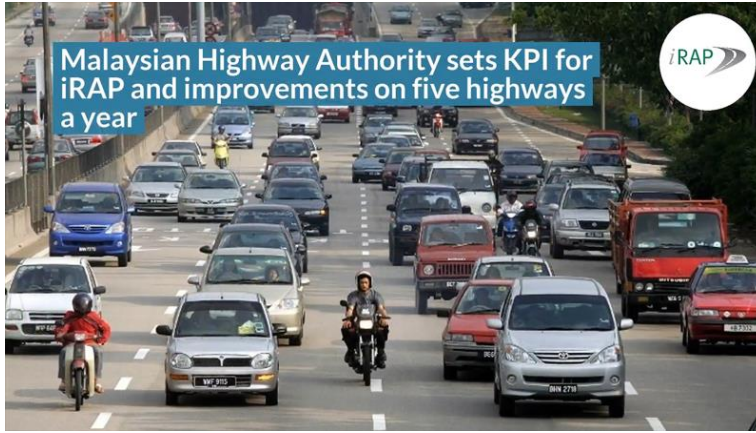
How does my city compare to others?

Pedestrian Star Ratings (before changes were made)

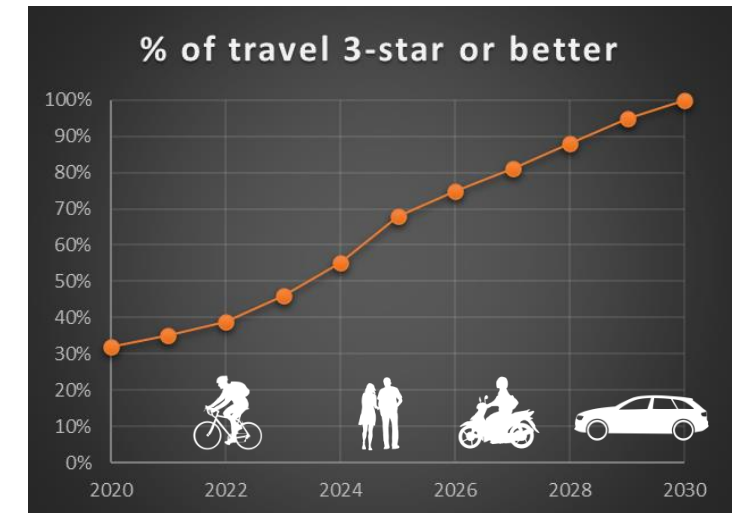
- 1 star
- 2 stars
- 3 stars
- 4 stars
- 5 stars
- N/A



The business case for safer road investment



INCOME	Return on ₹1
High	₹4
Upper-Middle	₹15
Lower-Middle	₹11
Low	₹18



<https://www.irap.org/2021/02/a-decade-of-action-for-safer-roads-irap-releases-results/>

<https://www.vaccinesforroads.org/business-case-for-safer-roads/>

Global Road Safety Performance Targets



NEW ROADS & STREETS



TARGET
3
2030



Target 3: By 2030, all new roads achieve technical standards for all road users that take into account road safety, or meet a three star rating or better.

EXISTING ROADS & STREETS

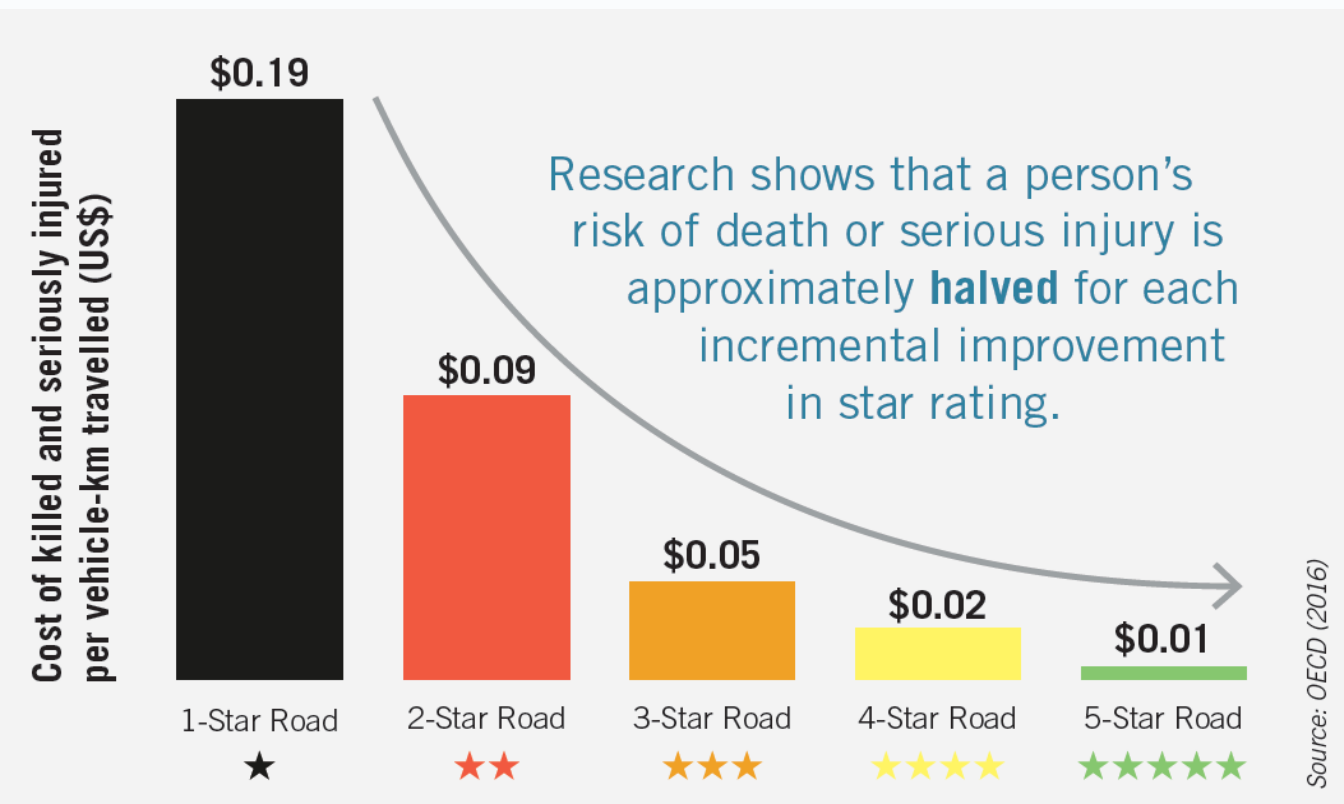
TARGET
4
2030



Target 4: By 2030, more than 75% of travel on existing roads is on roads that meet technical standards for all road users that take into account road safety.



Star Ratings and the Injury Burden



https://www.oecd-ilibrary.org/transport/zero-road-deaths-and-serious-injuries_9789282108055-en



The Human Impact of Road Injuries every day

NEW VICTIMS EVERY DAY	HUMAN IMPACT	NEW COSTS EVERY DAY
819	Lives Lost	\$ 101 million
5,750	Fractures - Limb	\$ 58 million
174	Severe Acquired Brain Injury	\$ 57 million
2,277	Internal Injuries	\$ 38 million
1,283	Brain Injury (Mild) / Head Injury	\$ 23 million
15	Quadriplegia	\$ 19 million
3,195	Soft Tissue (Neck / Back) / Whiplash	\$ 10 million
1,245	Fractures - Other	\$ 9 million
196	Other Spinal	\$ 8 million
836	Dislocations	\$ 8 million
3,801	Contusion / Abrasion Laceration	\$ 5 million
16	Paraplegia	\$ 5 million
224	Degloving	\$ 4 million
1,913	Other Injuries	\$ 4 million
1,032	Sprains / Strains	\$ 3 million
56	Amputations	\$ 2 million
457	Concussion	\$ 929,000
52	Burns (Severe / Moderate)	\$ 598,000
10	Nerve Damage	\$ 128,000
2	Lost Of Sight / Eyes	\$ 7,000
23,353	TOTAL	\$ 354 million

<https://www.vaccinesforroads.org/>

Indian Road Assessment Programme (IndiaRAP) <https://indiarap.org/>

IndiaRAP is a locally led, globally supported programme for India

Collaboration between iRAP and the Asian Institute of Transport Development (AITD) – all partners welcome

IndiaRAP establishment supported by FedEx



Special Consultative Status with the United Nations

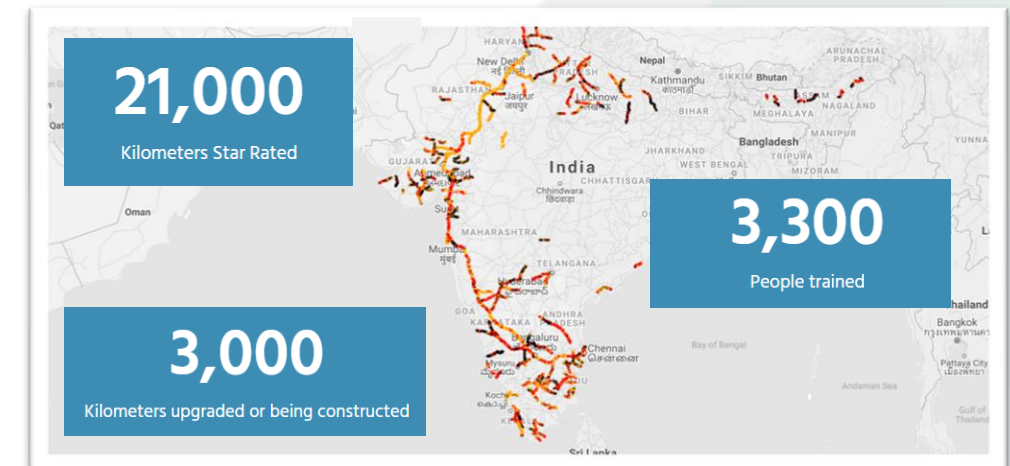


IndiaRAP
INDIAN ROAD ASSESSMENT PROGRAMME

*IndiaRAP is hosted by
Asian Institute of Transport Development (AITD)*



Supported by FedEx



What Star Rating is your next project?

TARGET
3
2030



Target 3: By 2030, all new roads achieve technical standards for all road users that take into account road safety, or meet a three star rating or better.

TENDERER	1	2	3
Base Cost	\$3.2 million	\$4.6 million	\$5.1 million
Star Rating	★ ★	★ ★ ★ ★	★ ★ ★
Trauma Cost	\$11.1 million	\$3.2 million	\$6.4 million
TOTAL	\$14.3 million	\$7.8 million	\$11.5 million





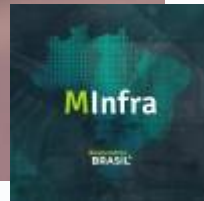
TARGET
4
2030



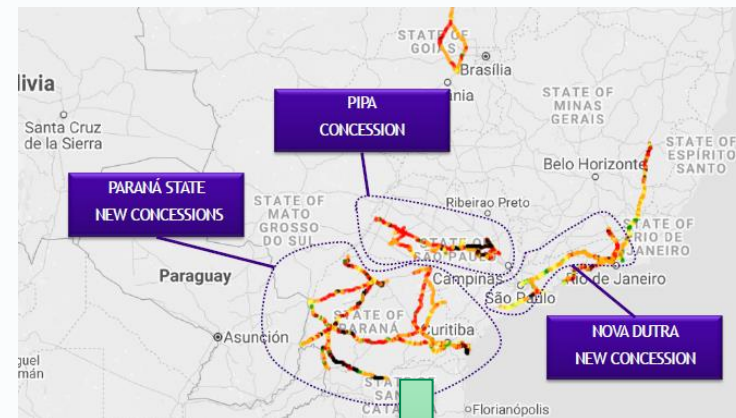
Target 4: By 2030, more than 75% of travel on existing roads is on roads that meet technical standards for all road users that take into account road safety.

% of travel 3-star or better



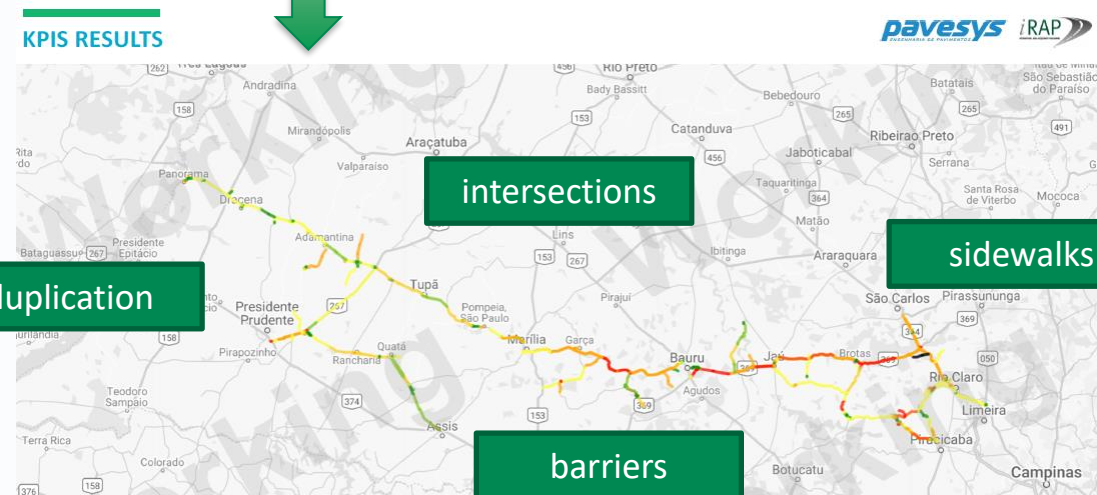


- ≈US\$ 2 billion in concessions across country
- All with **3-star or better** performance criteria
- 94,000 direct jobs
- e.g. PiPa concession / Grupo EcoRodovias

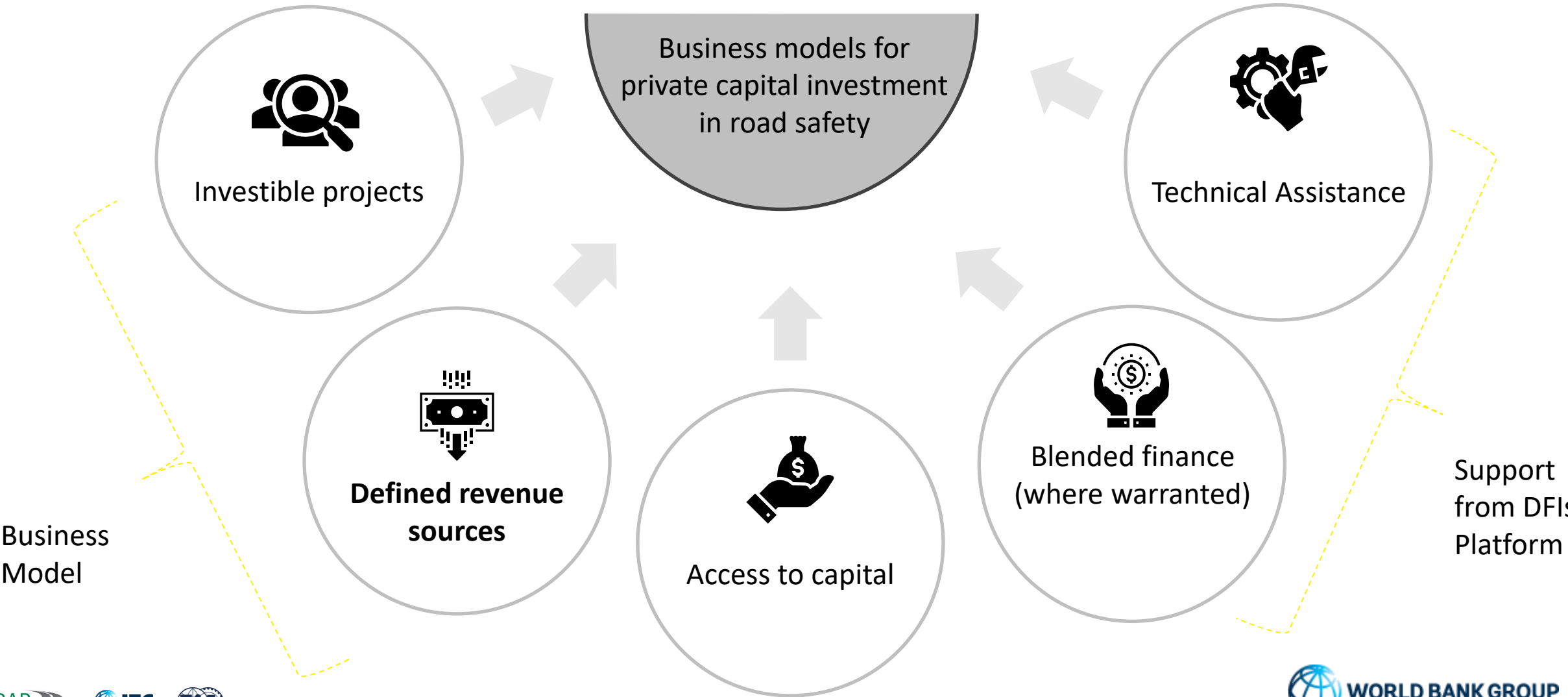


35 year
investment plan

iRAP monitoring
every 5 years



Developing Business Models for the private sector to invest in road safety: Defining capital investments, identifying revenue (funding) sources, building in incentives and adding donor support and technical assistance to allow access to private finance



TARGET 3
2030

Target 3: By 2030, all new roads achieve technical standards for all road users that take into account road safety, or meet a three star rating or better.

TARGET 4
2030

Target 4: By 2030, more than 75% of travel on existing roads is on roads that meet technical standards for all road users that take into account road safety.

3-star or better PPPs and major highways



- PPPs to deliver a 3-star or better standard by 2030 or similar
- Shadow toll / availability payment funded through savings to government, insurance and/or health system
- Link concession period extensions to “higher-performing star rating outcomes” (e.g. 4 and 5-star)



Example of a vehicle occupant 5-star road section (Spain)





Decade of Action Partnerships

10 year partnership with a country to achieve >75% of travel on 3-star or better roads for all road users



India	
Annual number of fatalities (WHO, 2015)*	299,091
Population	1,324,171,392
Fatalities per 100,000 population	23
Annual number of fatalities and serious injuries	3,290,001
Annual cost of fatalities and serious injuries	\$129,087,481,191
Annual cost of fatalities and serious injuries (% of GDP)	5.6%
What can be achieved with >75% of travel on 3-star or better roads for all road users by 2030	
Infrastructure and Speed Management Investment required	\$91,630,968,000
Annual Investment as a % of GDP (2020-2030)	0.26%
Reduction in fatalities per year	101,231
Reduction in fatalities and serious injuries (FSI) over 20 years	22,270,776
Economic Benefit	\$801,757,136,251
Benefit Cost Ratio	9

NATIONAL HIGHWAY
AUTHORITY OF INDIA



NH9, NH19, NH24B,
NH25, NH56A&B,
NH28, NH45, NH65,



<https://www.vaccinesforroads.org/business-case-for-safer-roads/>

<https://indiarap.org/>

www.irap.org

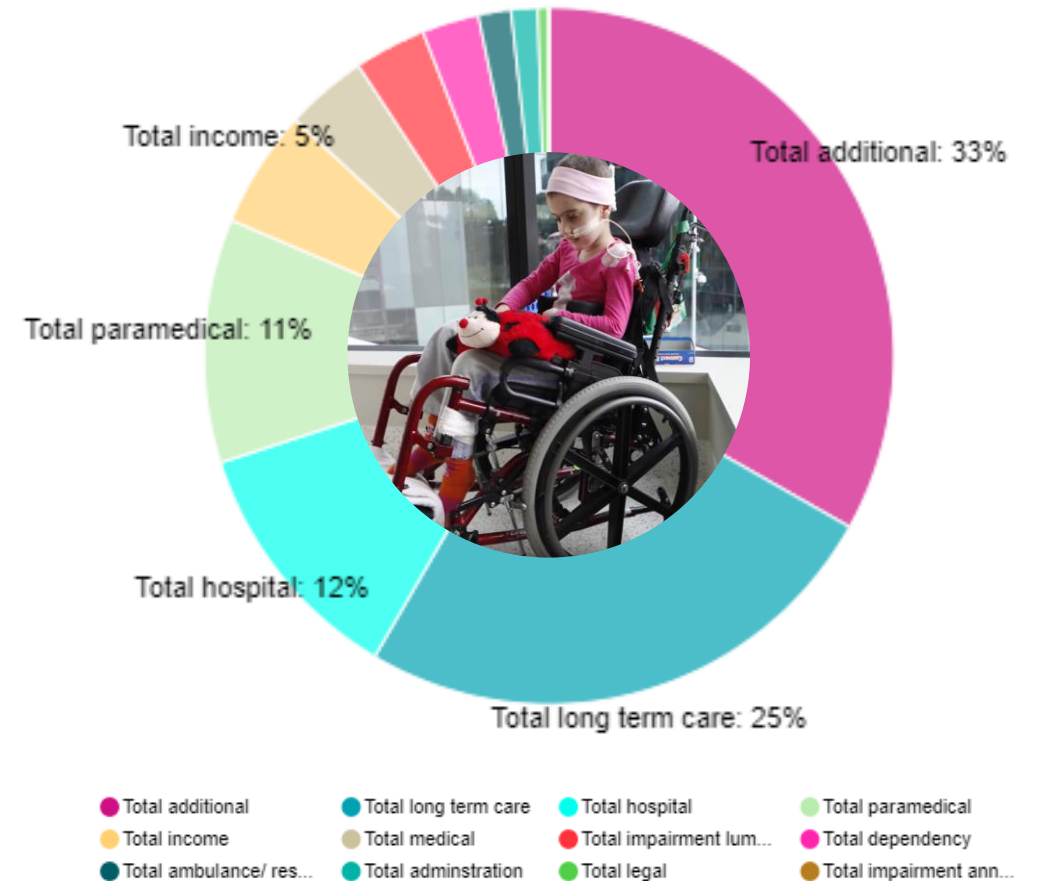
Estimated Project Savings

The Real Human Benefits of 3-star or better roads



Injury	People saved	Lifetime costs saved
Fatality	40	\$6,100,000
Brain Injury	53	\$25,400,000
Fractures	127	\$7,700,000
Internal Injuries	53	\$5,000,000
Quadriplegia	3	\$3,900,000
Soft Tissue	153	\$1,700,000
Contusion	127	\$1,100,000
Other	113	\$4,400,000
TOTAL	669	\$55,300,000

Where are the savings



Let's unlock the win-win-win of safer roads together....



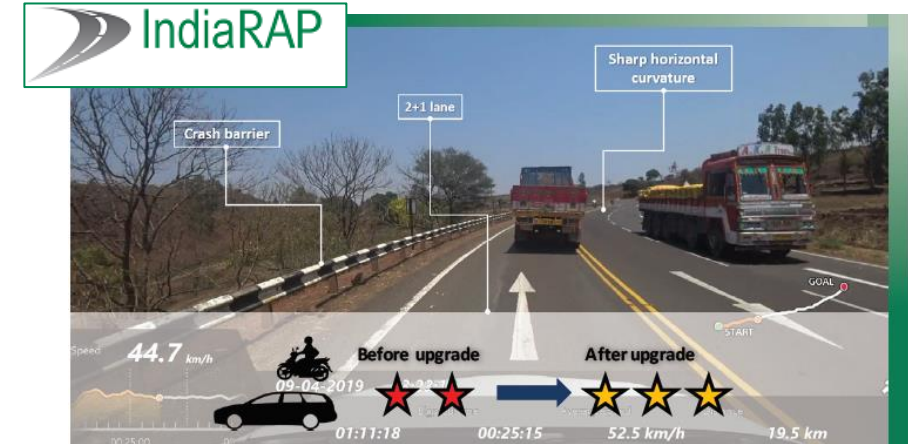
SAVE LIVES



SAVE MONEY



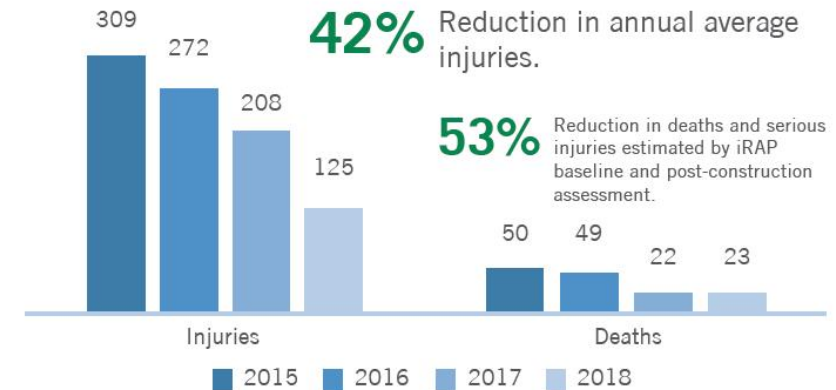
CREATE JOBS



54% Reduction in annual average deaths after road improvement.

42% Reduction in annual average injuries.

53% Reduction in deaths and serious injuries estimated by iRAP baseline and post-construction assessment.



Source: blogs.worldbank.org/IFHuman lives need not be lost in road crashes-much less at current levels

For more information

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 @irapsavinglives

 iRAPfb

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<https://vida.irap.org/>

<https://www.starratingforschools.org/>