

**BEST PRACTICES – INSTITUTIONAL TRANSPORT AND  
MANAGEMENT OF ROAD SAFETY  
CARIBBEAN ROAD SAFETY WORKSHOP  
KINGSTON, JAMAICA  
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# **The Belize Road Safety Program**

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# BELIZE



➤ located in Central America and it is bordered to the north by Mexico, to the south and west by Guatemala and to the east by the Caribbean Sea

➤ diverse country with various cultures and languages (52.9% Mestizo; 25.9% Creole; 11.3% Maya; 6.1% Garifuna; 4.8% European; 3.9% Asian Indian; 1.0% East Asian; 1.2% Other; 0.3% Unknown)

➤ Area: 22,966 km<sup>2</sup> (8,867 sq mi)

➤ lowest population density in Central America with 35 people per square mile or 14 people per square kilometre

➤ Belize dollar is pegged at \$2 Belize = \$1 USD

➤ extreme biodiversity and distinctive ecosystems

➤ GDP estimated in 2018 - Total of \$1.912 billion and Per capita \$4,906

➤ Estimated economic loss for road traffic crashes US\$32,000,000 per annum (PAHO 2009)

# BEST PRACTICES

**ATTENTION**  
the fasten seatbelt sign is now on.



**DigiCasting**

it's coming... be ready.



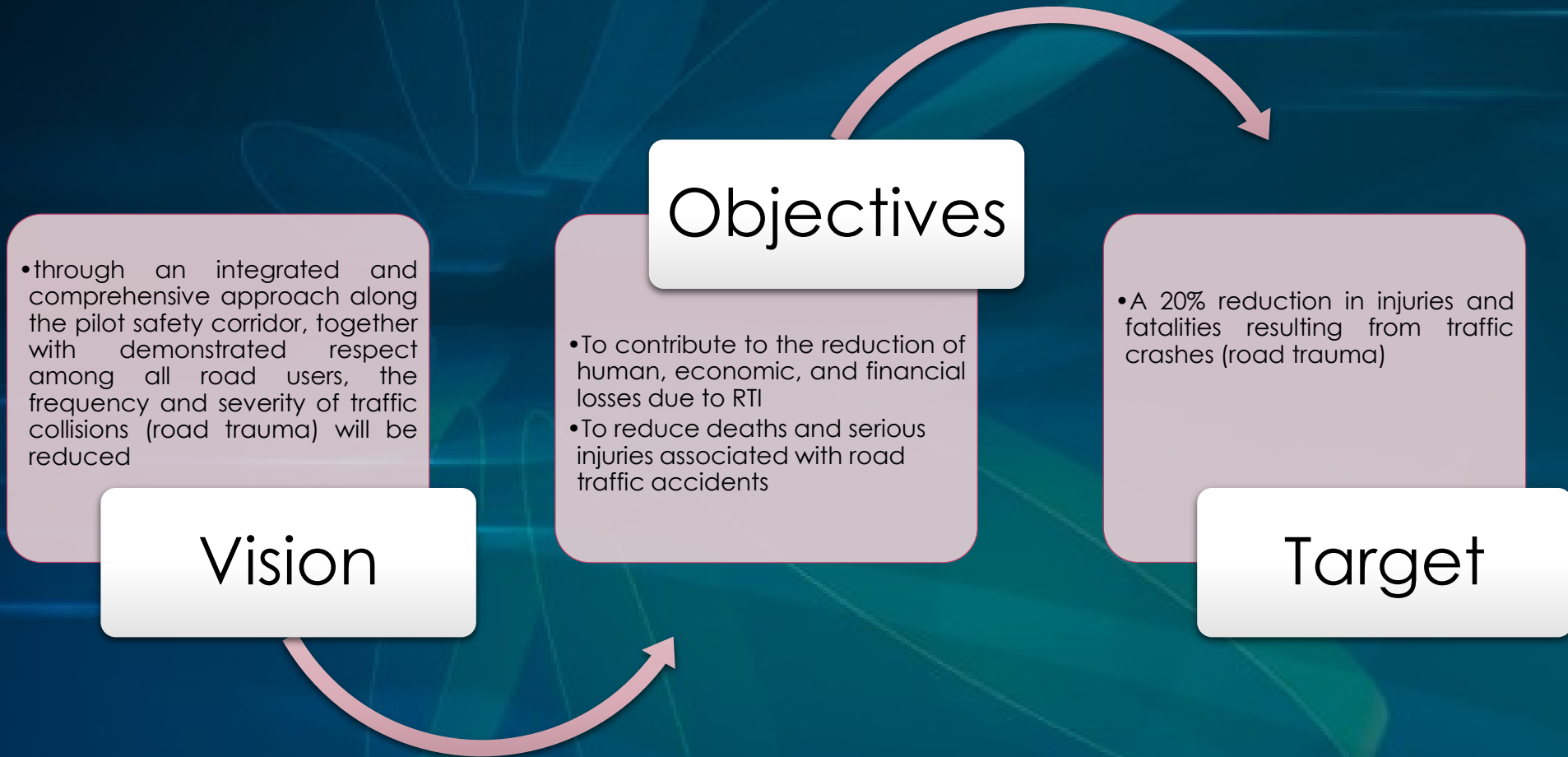
# Safe System Approach



Simultaneous Implementation of the five pillars for the UN Decade of Action for Road Safety 2011–2020 is vital to reduce deaths and serious injuries:

- Road safety management
- Infrastructure
- Safe vehicles
- Road user behaviour
- Post-crash response

# Overarching look



# Data Usage

## Joint Intelligence Coordination Centre 2015 Data

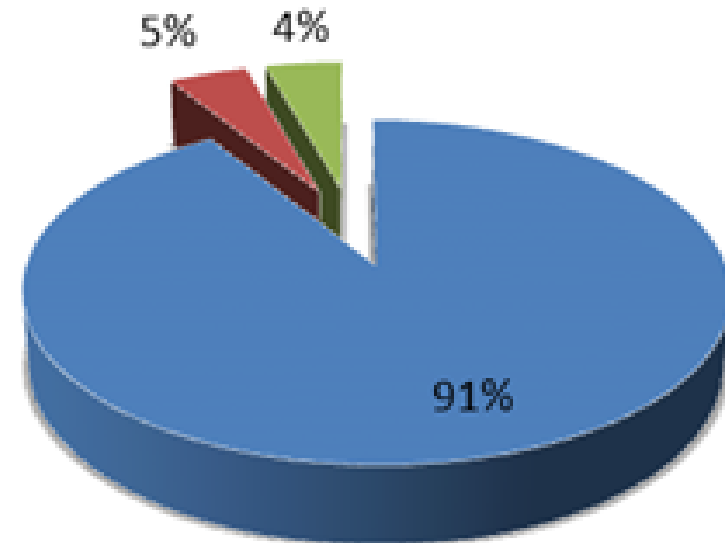
### Road traffic crashes

> Belize at a glance in 2015:

- » 1,984 traffic crashes countrywide
- » 83 fatal road traffic crashes
- » 88 serious traffic crashes
- » 1,813 minor traffic crashes

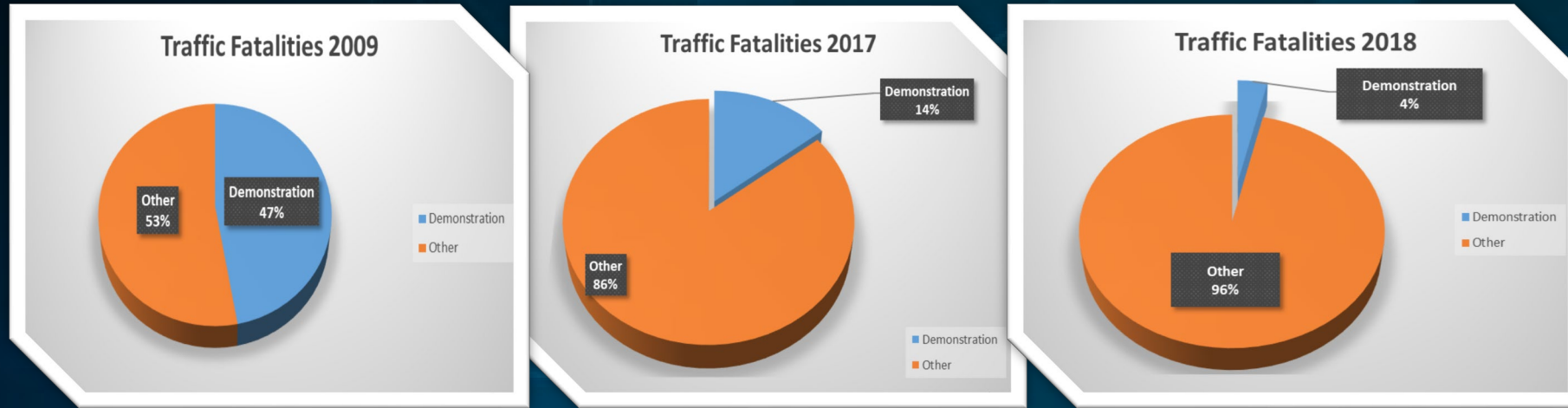
### Road Traffic Accidents

■ Minor Accident ■ Serious Accident ■ Fatal Accident



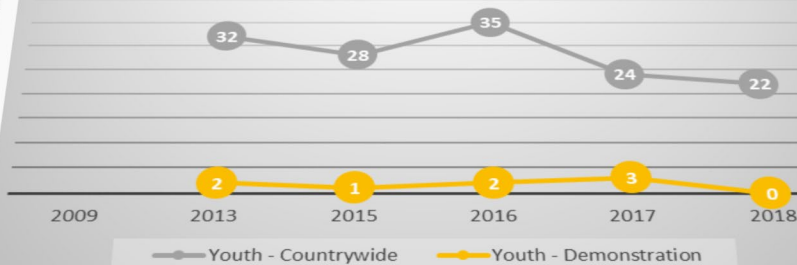


# Analysing Road Safety Data



**EXAMPLE:** Demonstration corridor from Belmopan to Belize City has shown a drastic reduction in fatalities from implementation in 2012 to present and in comparable to national data has reduced from 47% fatalities country wide to 4% fatalities country wide


**Youth (16-29) Road Traffic Fatalities  
Countrywide vs. Demonstration**




**Vulnerable road users group:** Demonstration Corridor (DC) from Belmopan to Belize City has proven that with the Safe System approach being implemented simultaneously, drastic reduction in deaths can occur. The graph shows that of the 32 youth country wide only 2 were from the DC or 6% of the youth population and at the end of 2018, 0% were recorded on the DC from the 22 youth who died as a result of road traffic crashed

# Accomplishments to date considering the Safe System approach



Description	Expected output	Achievement
<p>Education and Training</p> 	<p>100 teachers trained                      10 schools                      Curriculum and materials developed</p> <p>2,000 youth trained</p>	<p>198 teachers trained                      60 schools                      Curriculum rolled out</p> <p>3,700 youth trained                      further 25,000 sensitized</p>

# Accomplishments to date

Description	Expected output	Achievement
<p>Communications</p> 	<p>KAP surveys</p> <p>Strategy</p> <p>6 Campaigns</p>	<p>KAP surveys completed including the Post KAP Survey</p> <p>Strategy completed and being rolled out</p> <p>Campaigns developed and being aired</p>

## YOURS Initiative

- Grant agreement signed with GOB and CDB in 2014
- Contract signed with YOURS and GOB in Apr 2014
- Execution of training-of-trainers June 2014 & 2015
- Objective: To increase the youth's understanding of road safety, and youth-related issues surrounding the safe use of Belize's road network.



# BYRS in action



- 35 youths following pledge
- More than 4,000 of peers trained
- More than 25,000 reached through advocacy program
- Focus areas: Alcohol, Drink Driving, Seatbelt, Helmet, Use of traffic Lights and Speeding
- BEL provided a small grant to develop ad on use of traffic light
- SOL Belize provide grant to develop ads
  - Completed ads for helmet, roundabout and stop light
  - In process are ads for line markings and blind spots

# Education and Awareness Strategy

- »Age 0 to 4+
  - »Teach total protection
- »Age 5 to 7+
  - »Focus on protection and supervision
- »Age 8 to 11+
  - »Focus on becoming more independent and responsible for your own actions
- »Age 12 to 16+
  - »Teach independence and responsibility



# 5 Ps of road safety education and awareness

- **Begin** Pre-school
- **Be** Practical
- **Follow** Principles of child development
- **Be** Presented frequently
- **Have a** Place in the school timetable




## Overview Education and Awareness

- Road Safety Education starts in the early years.
- Behaviour change takes time and consistency, the curriculum ensures that all students learn Road Safety concepts.
- The resources are necessary, more toolkits must be procured for all schools in the country from Pre to Tertiary Institutions.
- Road Safety Education and Awareness (RSEA), the science of positively influencing attitudes and road user behaviour, is to support and work alongside the disciplines of engineering, enforcement, emergency services, infrastructure and road safety management.



# Accomplishments to date

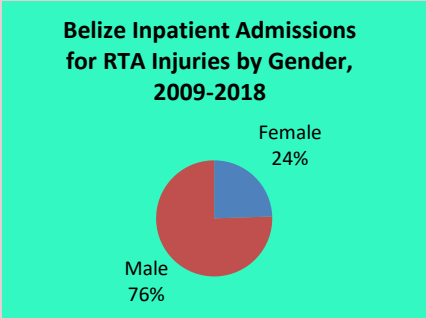
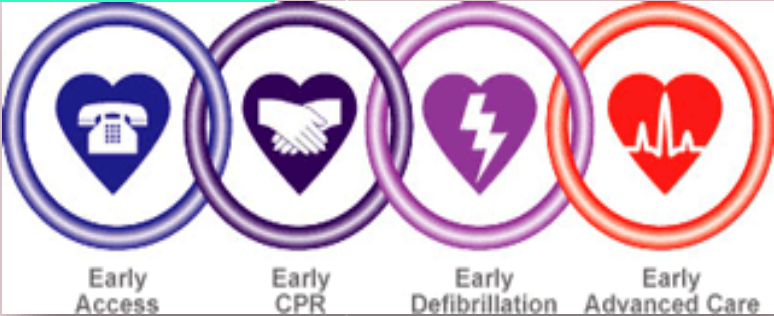
Description	Expected output	Achievement
<p>Enforcement</p> 	<p>2 highway patrols</p> <p>Radar guns and breathalyzers</p> <p>Enforcement training – Curriculum (I &amp; II) and materials developed</p>	<p>2 highway patrols delivered and operating</p> <p>2 radar guns; in-camera; and 12 breathalyzers</p> <p>C1 – 36 officers trained C2 – 92 officers trained Curriculum rolled out</p>



# Capacity Building for Enforcement Officer – mixing theory (50%) and practical (50%)



# Accomplishments to date

Description	Expected output	Achievement
<p>Emergency Services</p>  	<p>2 Type III Ambulances</p>	<p>2 Type III ambulances delivered and in operation</p> <p>Medical First Responders Training completed for 686 and skills utilized; Basic Life Support Training completed for 44 and skills utilized; First Responders Training delivered to 604 and skills utilized</p> <p>Curriculum rolled out for EMT Training (BERT and UB – certified program) – 15 graduated and supporting the Post Crash Care Response Program</p>

# Emergency Response Capacity Building

- Basic Life Support (BLS) and Medical First Response (MFR)  
Cohort I (18 persons)  
Cohort II (22 persons)
- Emergency Medical Technician (EMT) training  
-Cohort I (15 persons)



# Accomplishments to date

Description	Expected output	Achievement
Road Infrastructure	80 km upgraded to a 3 star rating  Post Construction Assessment	80 km upgraded including provision to accommodate climate change  Post Construction Assessment Completed



NOW



Widening and  
first coat  
surface  
dressing –  
Forest Drive



Drain  
construction -  
Forest Drive



# Bus lay bay

This assist bus operator to park clear of the travelling lane of other motorist





## Safety barriers

- Installed at this location with a depth of over fifteen feet – box culvert
- Note the energy absorbing end.



# Roundabout

BEFORE



AFTER



Belize City to Belmopan

# CASE STUDY

## RAP PARTNERSHIPS SAVING LIVES

# Belize City to Belmopan



In collaboration with:



Upgraded  
highest risk  
road claiming  
50% of lives

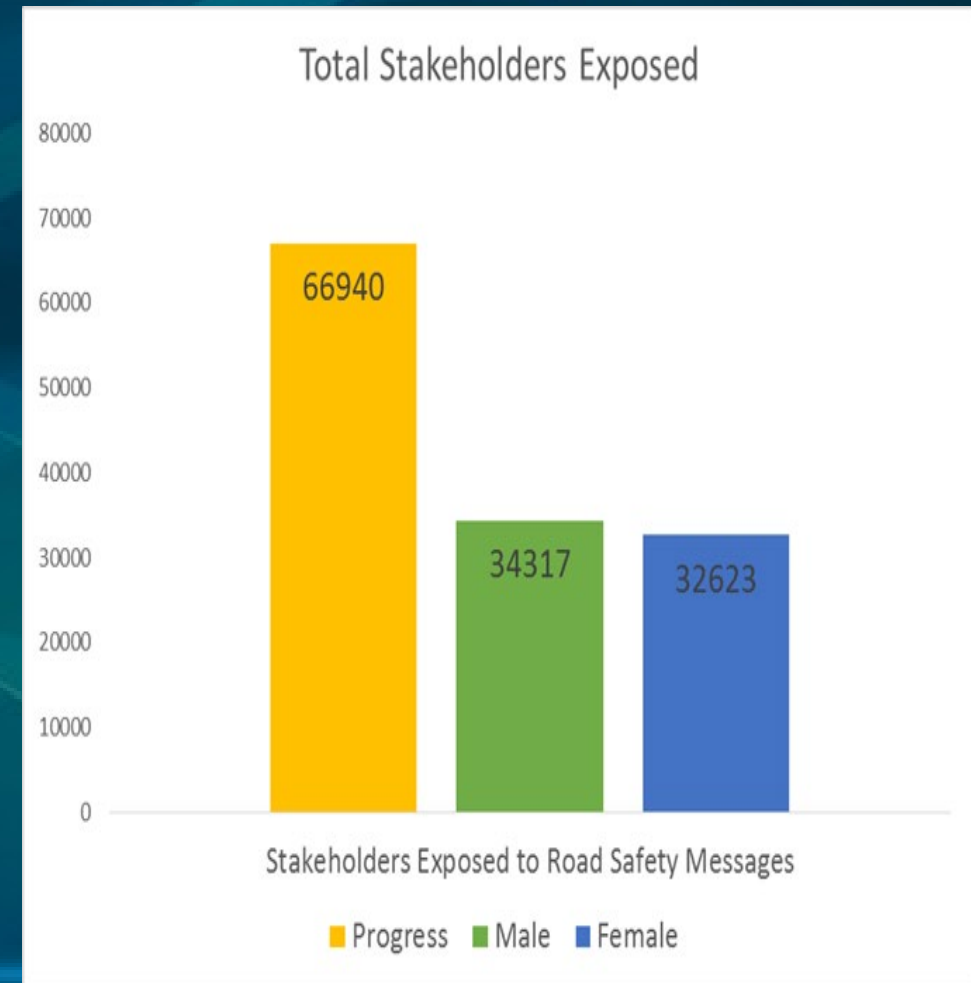
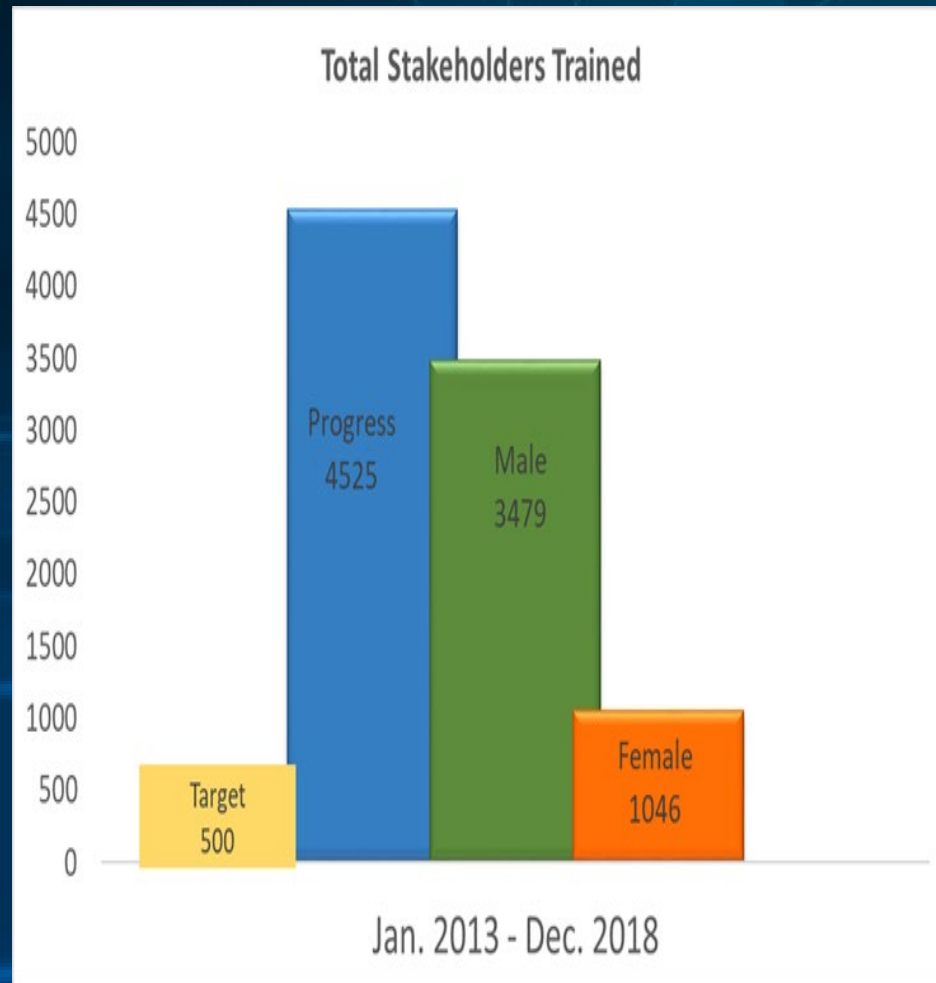
Fatalites  
dropped from  
33 per year to  
average of 8

Star rating  
increase from  
5% 3-star to  
100%

US\$14.3 million  
invested in road  
safety

Prince  
Michael  
International &  
IRF Flagship Road  
Safety Awards

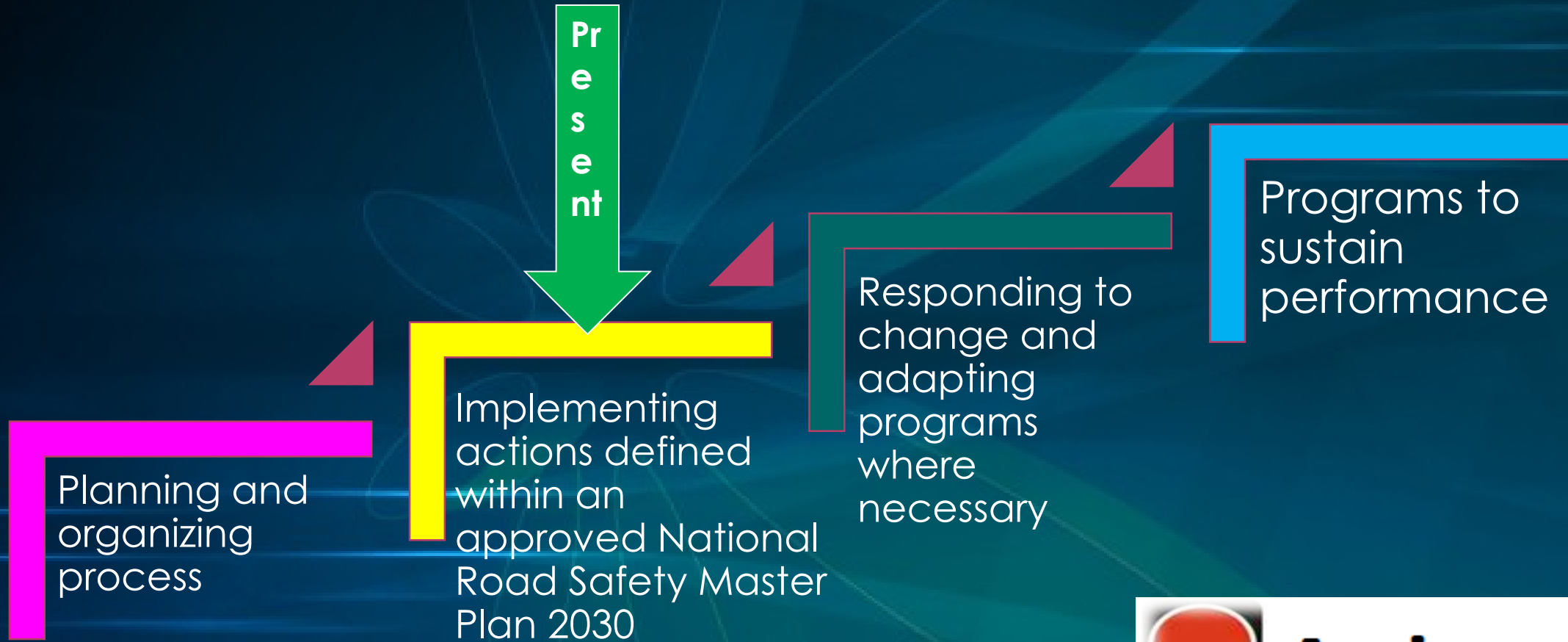
# Capacity Building



# Some lessons learnt

- Maintaining and strengthening a sustained road safety management system using a multifaceted approach
- Conducting annual review of progress and identification of gaps
- Continued capacity building of professionals within each line Ministry so as to build on existing technologies, approach and at the same time adopting to national situation
- Incorporating utility companies into the design/planning process from inception
- Ensuring effective support from the IFIs like the Caribbean Development Bank and key line Ministries
- Ensuring that The Capacity Review and iRap effective tools inform road safety investment planning and decision making
- Incorporating wide stakeholder engagement in the decision making process has entrenched ownership across all project participants and sound coordination of efforts and partnership
- Ensuring that the highly consultative approach during implementation empowers all project participants to identify and own their role in the broader system-wide approach to road safety, and have accordingly committed appropriate human and fiscal resources
- Developing a Road Safety Master Plan 2030 for the country and Five-Year Road Safety Operational Plans for Municipalities and line Ministries
- Having a “Champion” to take on the responsibility of leading and overseeing the initiative is key
- Collaborating with other related efforts (SIF/WB, IDB, etc.) at the national level can maximise the effective use of existing financial and human resources

# Management Guide



-  **Arrive**
-  **Alive**
-  **Amigo(a)**

The background is a solid teal color with faint, overlapping outlines of leaves or petals, creating a subtle, organic pattern. The text is centered in the lower half of the image.

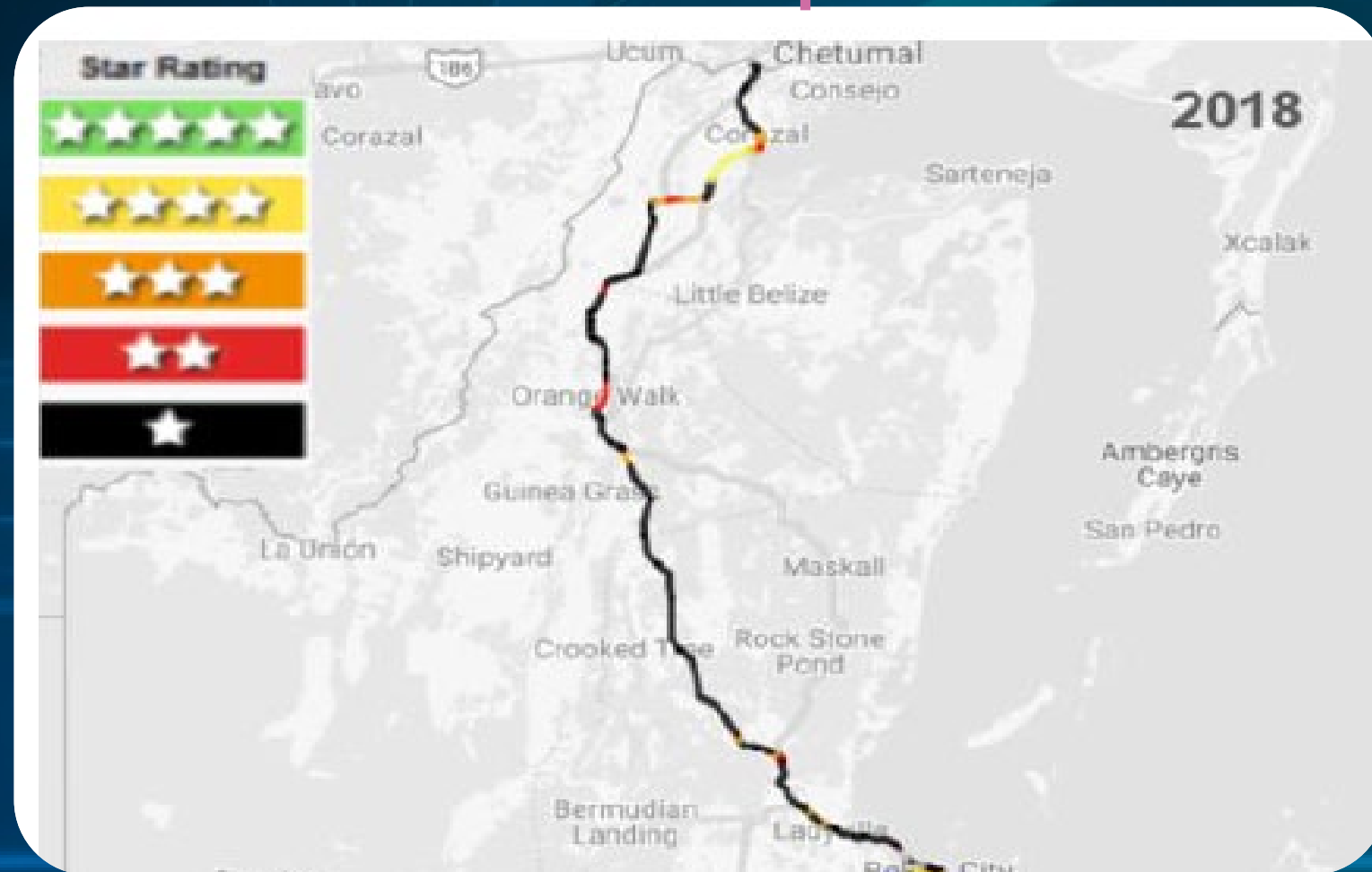
# ONGOING EFFORTS AND EXPECTATIONS

Start Smart  
Save lives





Road Safety Investment being rolled out through key line ministries with support of other key line ministries:  
Works – Infrastructure  
Economic Development – Non-infrastructure



# Non-infrastructure interventions include (RSP 2)

1. Goods: vehicles and equipment to support improved road safety management, enforcement and post-crash care.
2. Institutional Strengthening: consultancy services to support incorporating gender considerations into the school road safety curriculum; a road safety consultancy; mental health and psychosocial support consultancy; Belize Youths for Road Safety (BYRS) institutional strengthening consultancy; BYRS resource mobilisation consultancy; and a traffic law enforcement consultancy.
3. Other Project Support Services: consultancy services to develop a computerised monitoring and evaluation system that is integrated across multiple stakeholders; conduct pre- and post-project Knowledge, Attitudes and Practices Surveys; and the development of road safety messaging Project Management: consultancy services to support the RSU, along with in-kind contributions provided by GOBZ line ministries for a period of 51 months.

# Infrastructure interventions include (MOW advancement)

- Infrastructure intervention:
  - ❖ Upgrading of Major Highways and Coastal Road with funds from IFIs
  - ❖ Continued improvements of secondary roads with Government funds

# Growth and Sustainable Development Strategy 2016-2020

- The Growth and Sustainable Development Strategy (GSDS) is Belize's medium term comprehensive national plan that serves as a guide for the overall development of Belize.
- The GSDS is aligned with the country's vision Horizon 2030 and it mainstreams the Sustainable Development Goals (SDGs).
- One of the sub-goals is to improve infrastructure by enhancing and upgrading the road network.

# National Road Safety Master Plan 2030

- Road Safety Vision 2030 carries the vision of *Towards Zero Deaths* on Belize's roads and highways
- *Towards Zero Deaths* means we do not accept that fatalities and serious injuries on our roads are inevitable or acceptable
- It is modeled on successful strategies in other countries and also the recommendations of the World Report on Road Traffic Injury Prevention and takes into consideration the lessons learned during the demonstration corridor project
- This long-term road safety plan is divided into short-, medium-, and long term time frames in order for the specific activities to have sufficient policy and regulation in place to ensure that planning and budgeting lead to successful execution of the plan
- Road Safety Vision 2030 uses the five pillars approach, as recommended in international good practice in the Decade of Action for Road Safety (2010-2020), consisting of road safety management, safe roads, safe vehicles, safe conduct of road users and post-collision care
- 5yr Operational Plans 2016-2021 in place to support the long term plan: developed for the key line Ministries of Works, Transport, Health, Education/Youth and Sports; Belize Press Office; Belize Police; and the National Road Safety Committee, in addition to the Nine Municipalities: Punta Gorda, Dangriga, Benque, San Ignacio and San Elena, Belmopan, Corozal, Orange Walk, Similar to the Road Safety Vision 2030 Master Plan, each Municipal Road Safety Plan uses the five pillars approach
- Government of Belize and Caribbean Development Bank Road Safety Project committed to a Phase 2 investment

# Sustainable Development Goals (SDGs)

- SDGs road safety project contributes to:
  - **SDG target 3.6:** by 2020, halve the number of global deaths and injuries from road traffic accidents
  - **SDG target 11.2:** by 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, people with disabilities and older people.

# Keys risk factors, Project interventions and Expected results in a Road Safety Phase !! Project on Phillip Goldson highway

Key Risk Factor	Project Intervention	Expected Result
1. <b>Speeding/Careless Conduct.</b> Over the period 2013- 2017 this risk factor accounted for 33% of all RTA fatalities in Belize.	<b>Safe Road Users Support:</b> The project provides speed enforcement equipment, vehicles and training.	The World Report on Road Traffic Injury Prevention (2004) revealed that a decrease of 1 km/h in mean traffic speed will result in a decrease of 4–5% in the number of fatalities. A 5% p.a. reduction in death is assumed.
2. <b>Drunk Driving</b> Over the period 2013- 2017 this risk factor accounted for 31% of all RTA fatalities in Belize.	<b>Drunk-Driving Enforcement.</b> The project provides alcohol enforcement equipment and training to key stakeholders so that drunk driving on the corridors can be better controlled.	Research shows that the number of fatalities can be reduced by 5% to 40% by stopping driving with blood alcohol levels in excess of 0.50 g/l <sup>6</sup> . A 3% p.a. reduction in death is assumed.
3. <b>Unsafe Vehicle</b> – such as braking system; steering; tires; and lights	<b>Vehicle Roadworthiness/Safe Vehicles:</b> The project provides consultancy services to support improved road user awareness, traffic law enforcement and road safety management capacity.	Studies carried out in developed countries have indicated that between 2% to 8.5% of accidents resulting in road fatalities are directly caused by faulty vehicles. <sup>7</sup> A 2% p.a. reduction in death is assumed.
4. <b>Negligent Pedestrian/Cyclist</b> some of who are children from the communities along the highway	<b>Road Safety Education:</b> The Project provides for a public education campaign	The main benefits of road safety education programmes are expected to be realized in later years, consequently, a 1% p.a. reduction in death is assumed for these interventions.
5. <b>Limited post-crash care support</b>	<b>Emergency Medical Services.</b> The project provides for Ambulances, Post-Crash Care Consultant	An analysis of road crash fatalities in selected OECD countries over the period 1970–1996 revealed that a reduction of fatalities in the range of 5% to 25% as a result of the improvements in post-crash support <sup>8</sup> . A 2%

<sup>6</sup> Positive blood alcohol concentration and road accidents. A prospective study in an Italian emergency department, A Fabbri, G Marchesini, A M Morselli-Labate, F Rossi, A Cicognani, M Dente, T Iervese, S Ruggeri, U Mengozzi, A Vandelli, 2002, Emergency Medical Journal

<sup>7</sup> Involvement of vehicle factors in road accidents, Rafiqul Hasan, Bangladesh University of Engineering and Technology, 2013

<sup>8</sup> Medical treatment and traffic fatality reductions in industrialized countries written by R.B. Noland, Accident Analysis & Prevention Volume 35, Issue 6, November 2003



CONCLUSION



# Where is Belize in Road Safety?



FIRM STEPS  
PROGRESSING  
POSITIVELY TO  
PROSPERITY  
(3 P's)

## Belize Road Safety Project

Events	Contribution
Child Road Safety in the Americas	BYRS & CDB invited to present best practice experience to engage youth May 2015
Recipients of 2015 IRF Road Safety Award	GOB received award in Jamaica on May 2015
iRAP Innovation Workshop, London - UK	Belize's best practice experience presented by TRL of UK -Sept 2015
25th World Road Congress in Seoul, Korea	CDB invited to present Belize Road Safety Initiative as example of good practice – Nov 2015
World Road Association Road Safety Manual	New Manual launched Nov 2015 - the Belize Road Safety Project is highlighted in several case studies to illustrate international best practice
2nd Global High Level Conference on Road Safety, Brasilia	Belize's Road Safety Project was highlighted for the multidisciplinary approach used to address road safety - Nov 2015
iRAP Innovation Workshop, Washington DC, USA	Belize's Road Safety Project was highlighted for the Safe System in Action to address road safety measures – Sept 2016
Recipients of 2016 Prince Michael International Road Safety Award	GOB received award in London on December 2016
UN High Level Political Forum - Side event information (SDG target 3.6)	Belize's Road Safety Project was highlighted in the context of "The Role of Safe and Sustainable Mobility in Eradicating Poverty and Improving Health", UN Headquarters, New York – Jul 2017
Special visit of the UN Special Envoy for Road Safety, Mr. Jean Todt	Belize's Road Safety Project was highlighted during the UN Special Envoy visit in Belize – Aug 2017
Delft Road Safety Course, Netherlands	Belize Road Safety Delegation shared experiences obtained from ongoing road safety initiative with other low and middle income countries – September 2018



Source: Vision Zero Network, 2017

Thank you!!!

