



SCIENCE, TECHNOLOGY AND INNOVATION & NIGERIA'S NATIONAL ROAD SAFETY STRATEGY: **CHALLENGES AND PROSPECTS**

Senior Executive Course No. 39

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INTRODUCTION

Human mobility needs have increased significantly worldwide with associated positive and negative developments especially in the **road transportation sector.**



Many countries, especially the developed ones, have evolved measures to decentralize and de-emphasize a preferred transport mode through **effective inter-modal transportation** and new technologies such as ***Straddle bus*** and ***Hyperloop***.



These developments are focused on addressing emerging negative challenges in the transportation needs.



In developing countries the over dependence on road transport mode and the absence of an integrated transport system results in congestion and other road traffic problems such as crashes and the attendant injuries.

GLOBAL ROAD TRAFFIC PANDEMIC

**Annually,
road traffic
crashes
account for:**

**1.4
million
Deaths**

**Over 50
million
injuries**

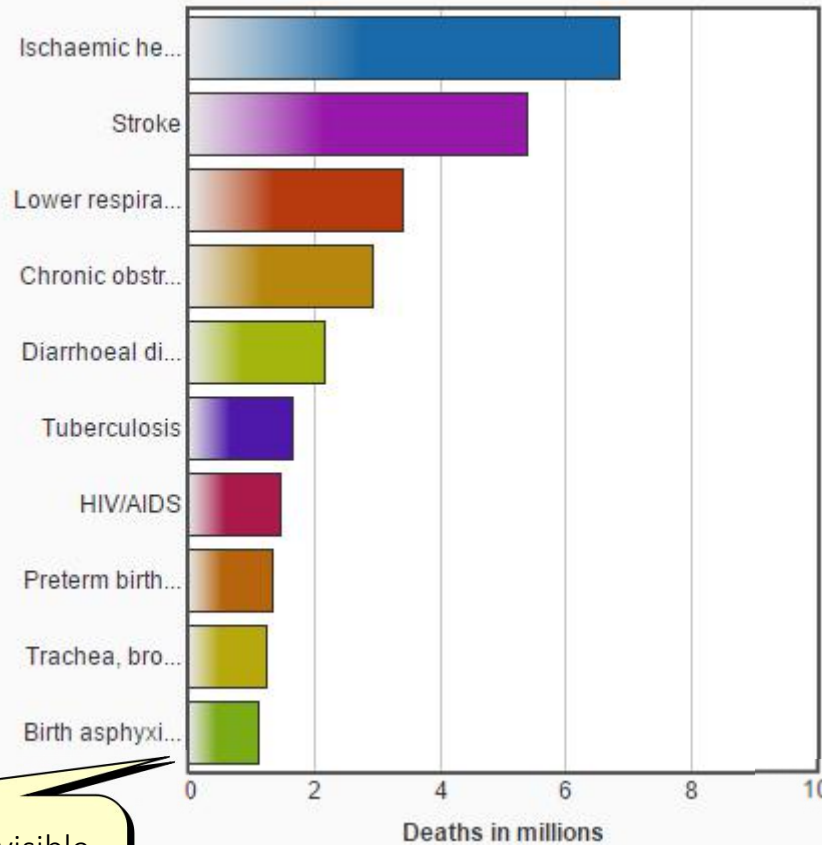


LEADING CAUSES OF HUMAN DEATHS

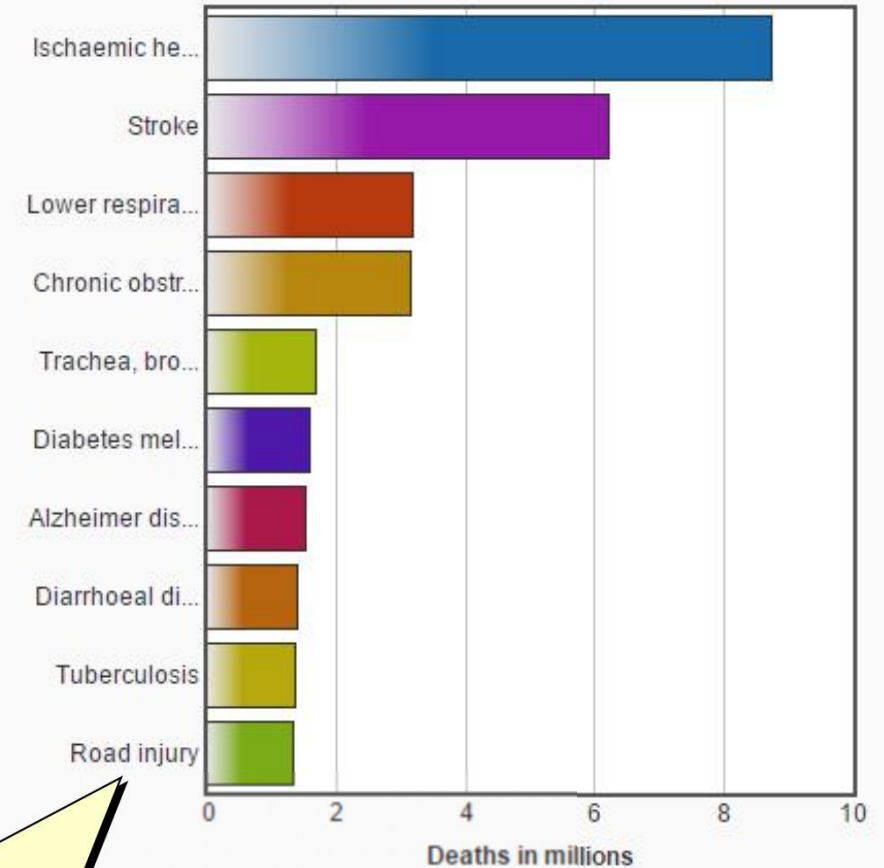
From a minor concern perspective, Road traffic injuries have emerged as a global concern in the millennium

Road Traffic Injury was not visible in the list of the causes of deaths globally

Top 10 causes of death globally 2000



Top 10 causes of death globally 2015



Road Traffic Injury visible as the 10th leading cause of deaths globally in 2015 and would be 3rd if nothing is done

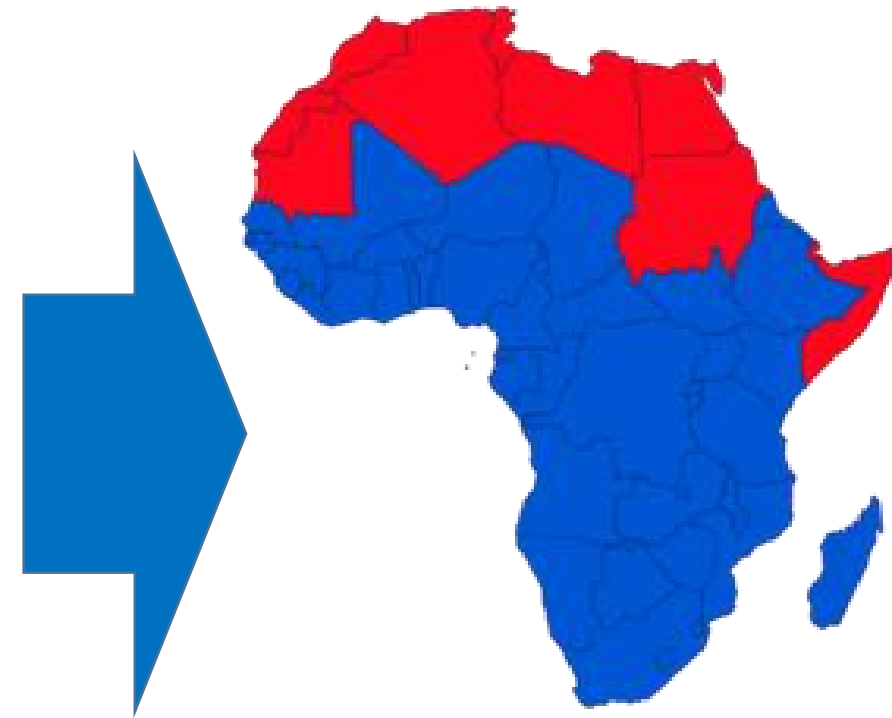
ROAD TRAFFIC SITUATION-REGIONALLY

Africa has the highest road fatality per 100,000 population. This is contributed disproportionately by member States and the situation is of serious concern in Sub-Saharan region of the continent.



Road traffic fatalities per 100 000 population

Source: Global Status Report on Road Safety 2013



ROAD TRAFFIC PANDEMIC-NIGERIA

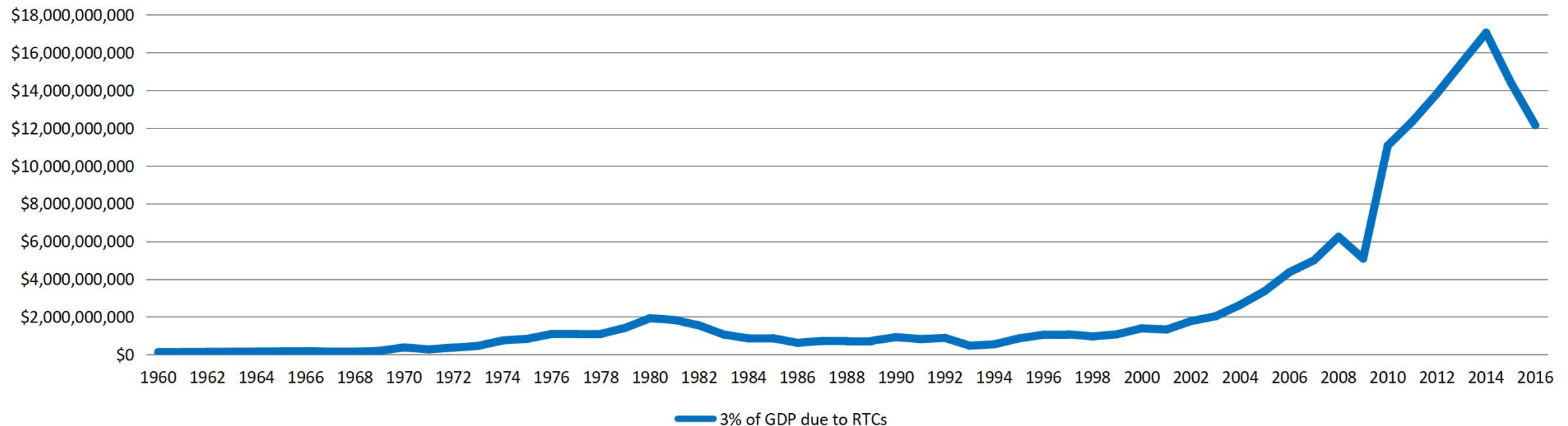
Road Traffic Injuries (RTIs) affect the country in a variety of ways especially its productive manpower



RTI-NIGERIA: EFFECTS

RTIs significantly shrinks the National Gross Domestic Product (GDP) by 3% per annum- This impedes growth and development generally.

Annual Loss of 3% of Nigeria's GDP due to RTCs from 1960-2016



As the economy is expanding, more is lost to the menace.

There are many more technological innovations targeted at enhancing vehicle occupants' safety in the world today.

Some of the include:

Intelligent Speed Adaptation (ISA)

Higher Speeds are *less forgiving* while *Lower Speeds* are *more forgiving*



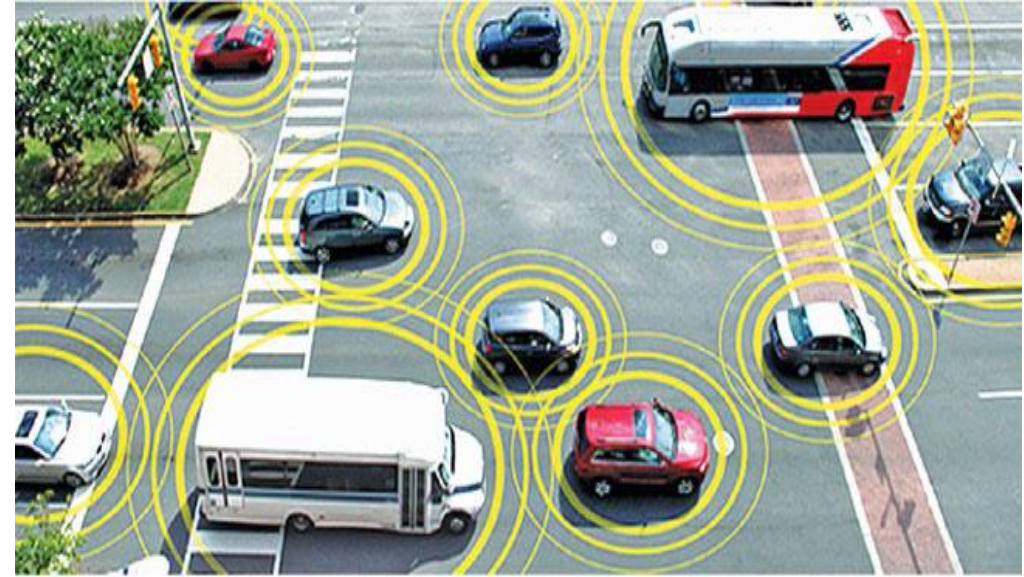
To avoid consequences arising from higher speeds, ISAs have been developed and deployed to autonomously restrict vehicles to **posted speed** using satellite communication technologies such as GPS control and other smart onboard systems.

b

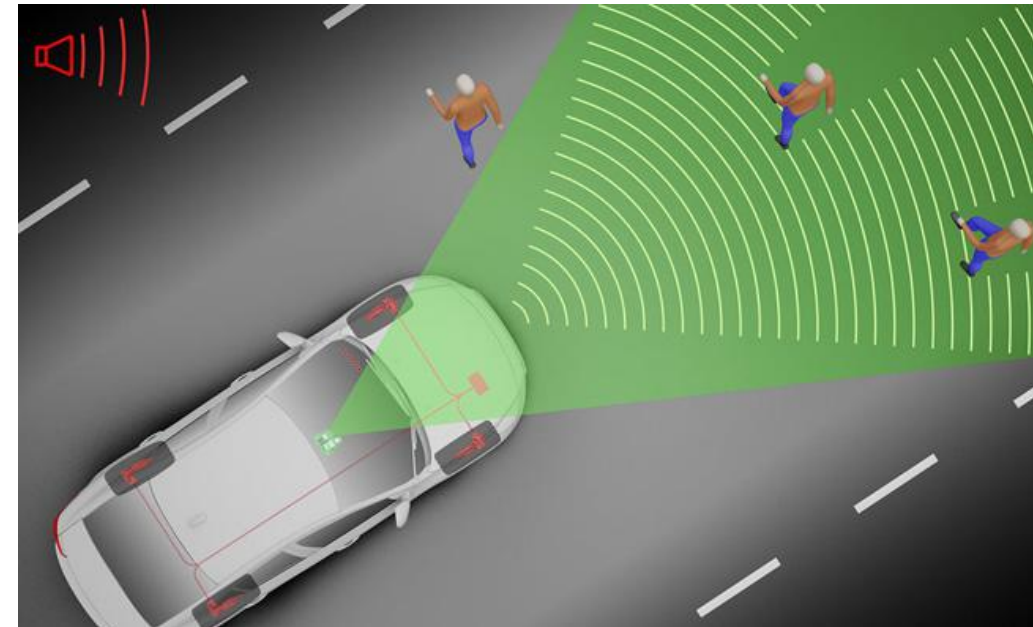
Collision Avoidance System

Intersection, blind spot and obstacle collisions occur frequently.

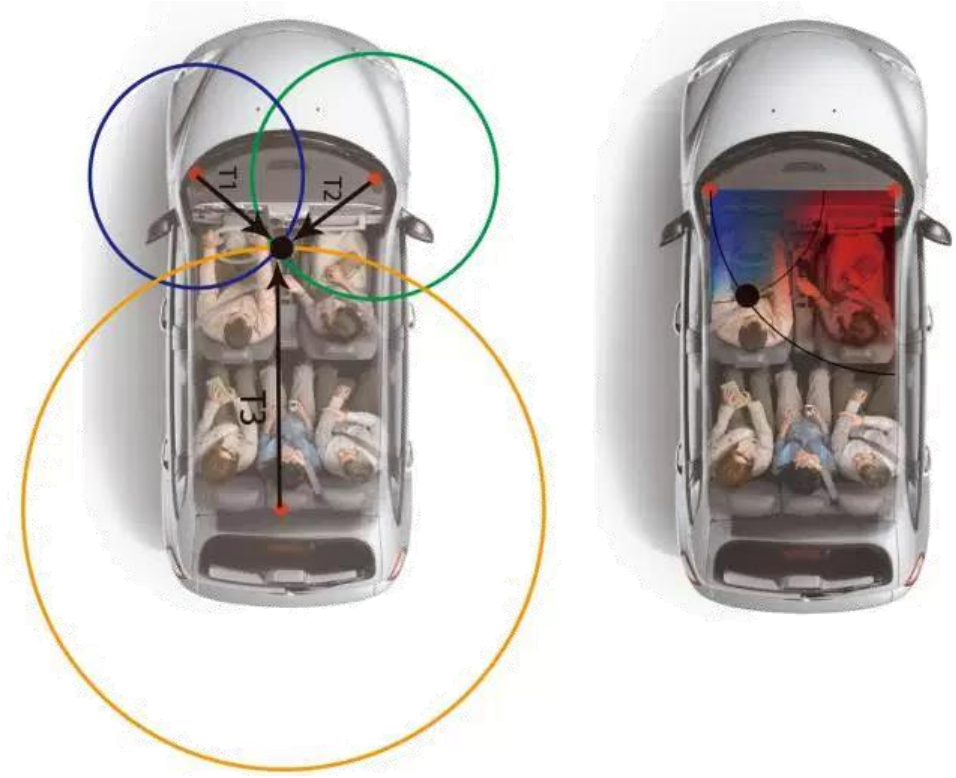
Early warnings through autonomous notification and safe distance measures are now onboard modern vehicles to avoid such collisions.



Courtesy: US DOT



Anti-Distractive Driving Systems



The technology uses simple Sound navigation ranging sonar-based system to cancel a driver's phone features using a car's existing speakers

Once a smartphone is in the vicinity of the driver's seat, a simple software manipulates to disable the most distracting of cell phone interactions in the car

Please note that in Nigeria, there is total ban on the use of phone while driving. The law does not permit any form of usage while driving

Anti-Sleep Driving Systems

Anti sleep alarm device timely detects the driver if they are falling asleep or distracted and gives alert to avoid an accident.

Some are outfitted with a seat cushion that vibrate to alert drivers of impending collisions.



Hybrid Road Transport innovations

Air Taxis are fast evolving to provide alternatives at relieving the roads of congestion and discomfort



Air Taxis are fast evolving to provide alternatives at relieving the roads of congestion and discomfort

Automated Toll system

These are embedded with Radio Frequency Identification (RFID) technology to automatically control access to certain services

The emergence of such technology has enhanced productivity with massive cost reduction for organizations



Speed Cameras

Designed primarily to enhance law enforcement agencies curtail speed related crashes



In Nigeria however, compulsory installation of speed limiting devices in commercial vehicles have commenced

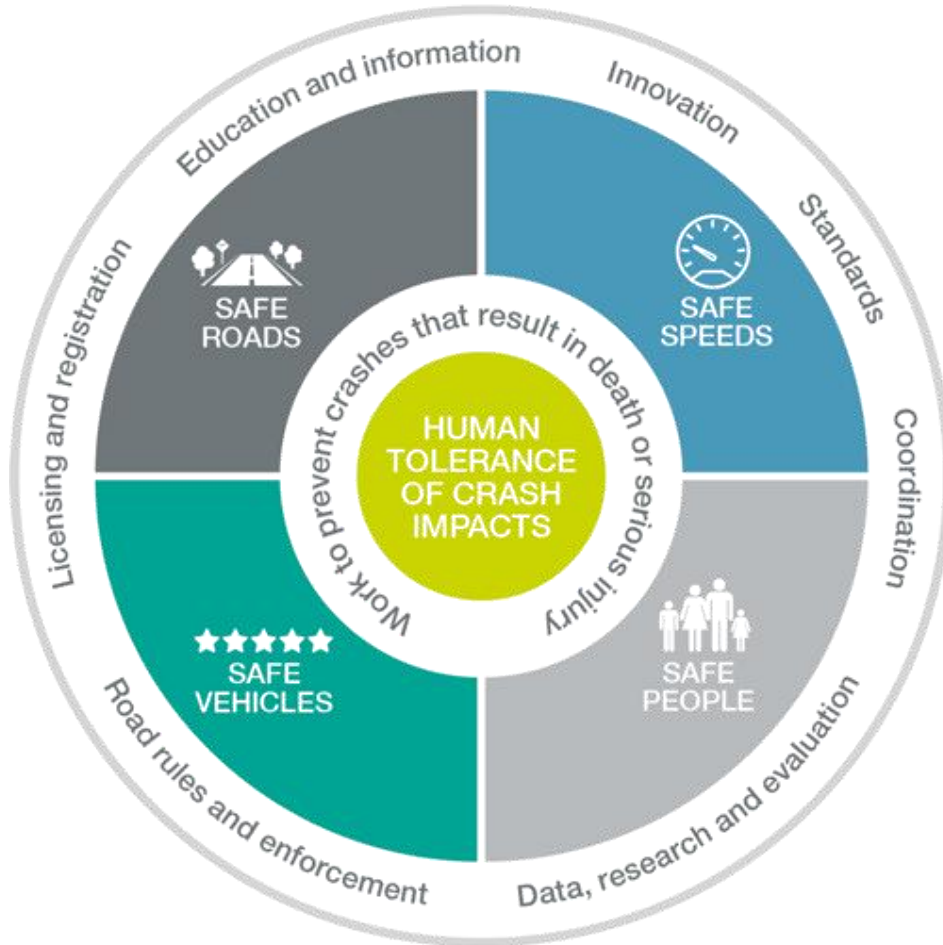
Automated Weigh Bridges

The system assist relevant government agency in enforcing axle load regulations



Safe Systems Approach and Road Safety Strategies at Global, Regional and National Levels seek to effectively manage the innovations and human safety

SAFE SYSTEMS APPROACH TO ROAD SAFETY

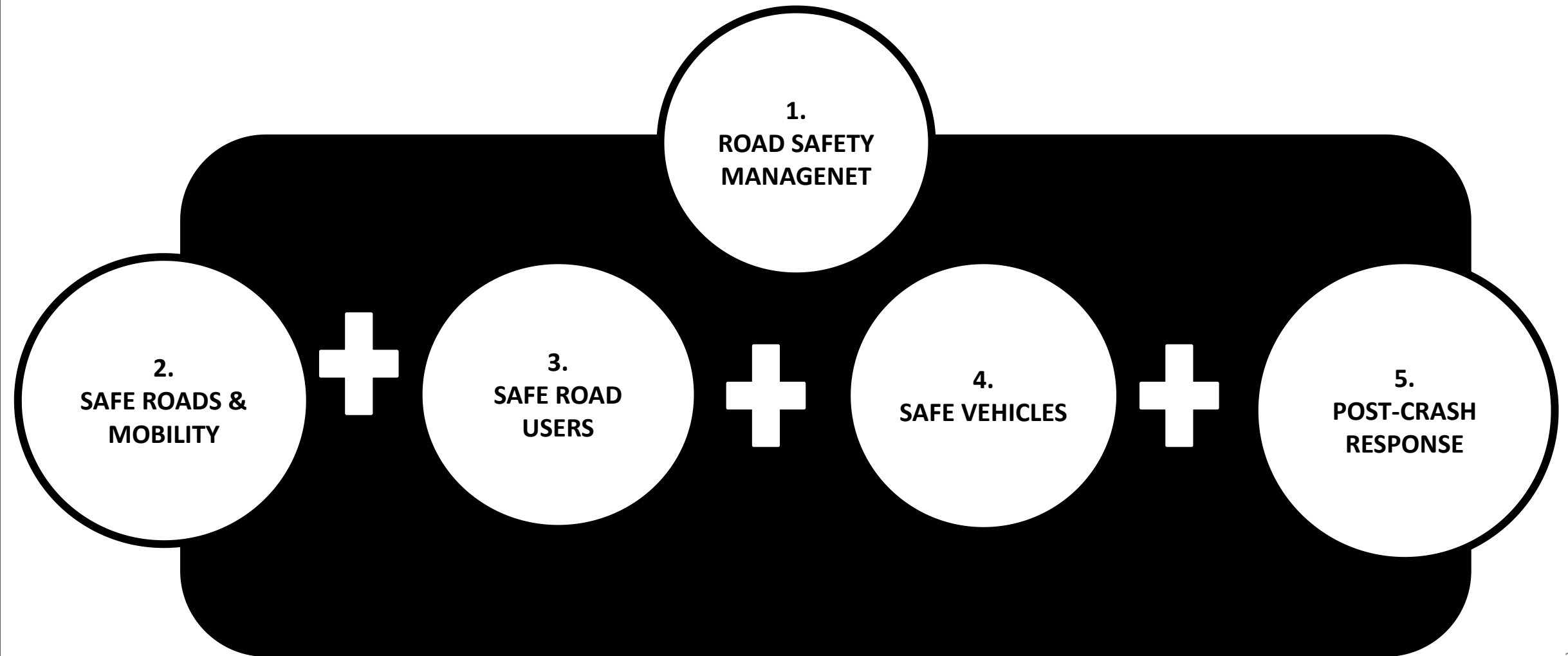


The goal of the safe systems approach is to ensure that when crashes occur, they do not result in serious human injury or death

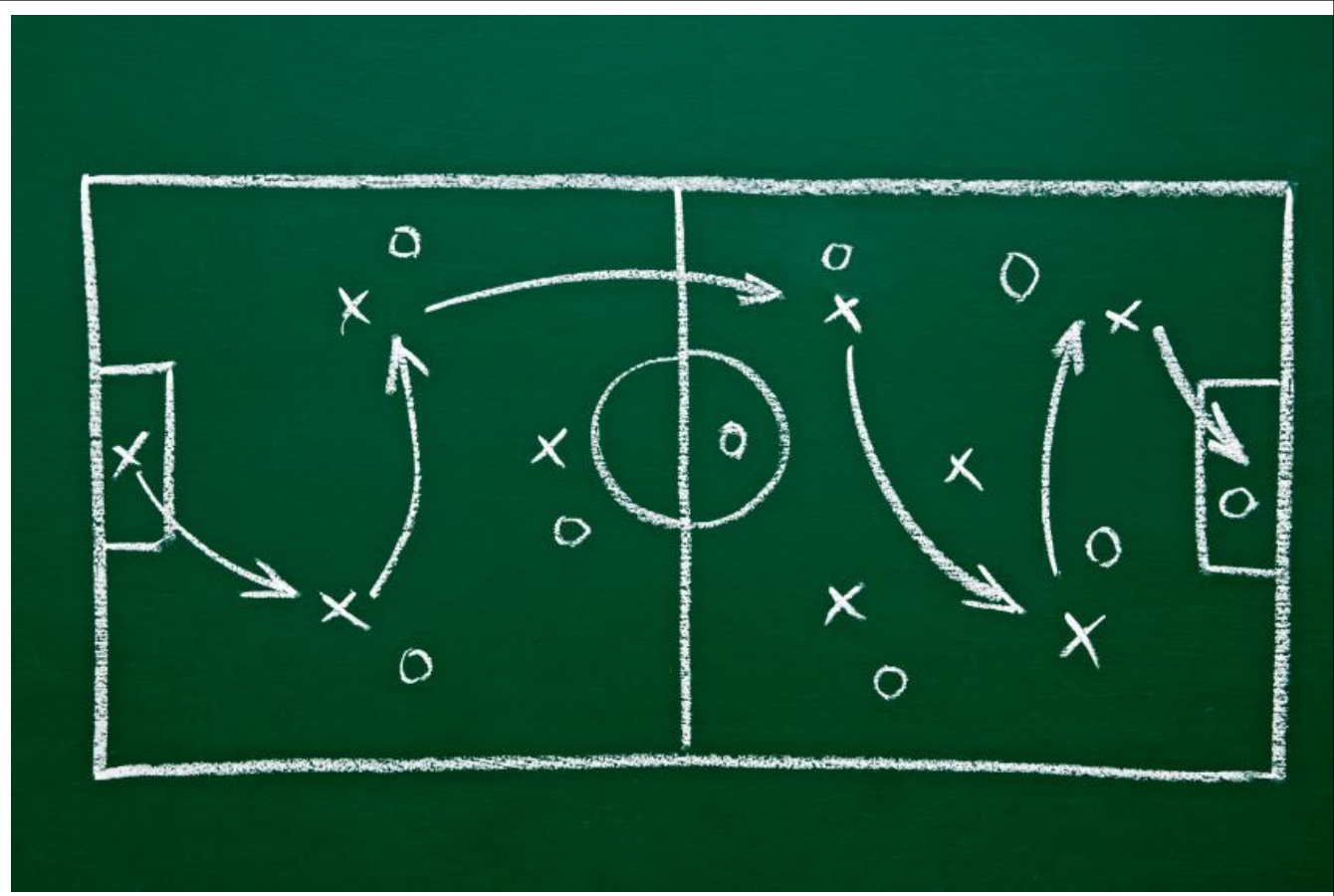
It is an inclusive approach that caters for all groups using the road system, including drivers, motorcyclists, passengers, pedestrians, cyclists, and commercial/heavy vehicle drivers



Holistic framework for implementing Safe Systems Approach on road safety is based on the entire five Pillars of the United Nations Decade of Action on Road Safety (2011-2020)



Implementing safe systems approach requires a strategy which lays the foundation for strategic implementation and evaluation



Thus, many nations of the world including Nigeria have developed their respective [National Road Safety Strategy](#), inline with the requirement of the UN Decade of Action for Road Safety (2011-2020)

COUNTRIES WITH ROAD SAFETY STRATEGY IN THE WORLD



It is proven that countries with Road Safety Strategy have better road safety records than those without a strategy

National Road Safety Strategies and targets of selected countries

Country/Strategy/timeframe	Vision	Targets
Argentina National road safety strategy	Based on the UN Road Safety Plan for the Decade of Action for Road Safety	-50% fatalities by 2014 Base year 2009 Specific targets for
Australia National road safety strategy 2011-2020	Safe System No-one should be killed or seriously injured on Australia's roads	-30% (at least) fatalities by 2020 -30% (at least) severely injured by 2020 Base year 2008-2010
Austria Austrian road safety programme 2011-2020	Safe system "Become one of the five safest countries in Europe"	-50% fatalities by 2020, based on the average for the years 2008-10 (Interim target: -25% by 2015) -40% serious injuries by 2020, based on the average for the years 2008-10 (Interim target: -20% by 2015) -20% injury accidents by 2020, based on the average for the years 2008- 2010 (Interim targets: -10% by 2015)
Czech Republic Strategic Road Safety Plan 2011-2020	Vision Zero	Reduce fatality rate to EU 27 average. No more than 360 fatalities in 2020 (-60%) No more than 2 100 seriously injured in 2020 (-40%)

Country/Strategy/timeframe	Vision	Targets
Japan 9th Traffic Safety Programme 2011-2015	Make Japan the safest country for road traffic	Less than 3 000 deaths by 2015 Less than 700 000 casualties by 2015
Korea 7th National transport safety plan 2012-2016	Reach the average safety level of OECD countries	Less than 1.3 fatalities/10 000 vehicles by 2016 (This represents a 40% reduction in fatalities compared to 2010 level (2010: 5 505 -> 2016: 3 000 fatalities) Less than 0.5 fatalities/10 000 vehicles by 2020
Sweden Management by Objectives for Road Safety Work, Towards the 2020 Interim targets	Vision Zero	-50% fatalities between 2007 and 2020 (the average for 2006-2008 is used as the base figure), i.e. max. 220 deaths by 2020. -25% severely injured between 2007 and 2020.
Norway Road Safety Strategy 2014- 2024	Vision Zero	Reduction by 50% of the number of fatalities by 2024. No more than 500 fatalities and serious injuries by 2024.

Country/Strategy/timeframe	Vision	Targets
Netherlands Road safety strategic plan 2008–2020	Sustainable safety	No more than 500 fatalities by 2020 No more than 10 600 serious road injuries (MAIS2+) by 2020
Greece National strategic road safety plan 2011 – 2020	Developing a road safety culture	-50 % fatalities by 2020 (based on EU Road Safety target); base year: 2010 interim targets: reduction by 90 road fatalities per year between 2010-2014 and 50 road fatalities per year between 2014-2020
United Kingdom (Great Britain) Strategic framework for road safety A 5 year road safety strategy for 2011-2015	To ensure that Britain remains a world leader on road safety.	-• Action plan has not set quantitative targets as such, but a modelling exercise has been conducted to assess the expected casualty reduction • outcomes framework to monitor progress on road safety, including six key, and a range of other, indicators
United States		Performance targets set through Less than 1.02 fatalities per 100 million vehicle miles travelled in 2014

COUNTRIES WITH ROAD SAFETY STRATEGY IN AFRICA

A number of countries in Africa have funded national road safety strategy that set targets for reduction of deaths & injuries



Sources: http://www.who.int/violence_injury_prevention/road_safety_status/2013/report/factsheet_afro.pdf

AFRICAN COUNTRIES WITH WELL DEFINED ROAD SAFETY STRATEGY

Ghana	Burkina Faso	Central African Republic,	Côte d'Ivoire
Guinea	Kenya	Lesotho	Mauritania
Mauritius	Namibia	Rwanda	Zambia

& Nigeria.....

THE NIGERIA ROAD SAFETY STRATEGY (NRSS)



*NIGERIA ROAD SAFETY STRATEGY
(NRSS)
2014 - 2018*



**The Nigeria Road
Safety Strategy
(NRSS) 2014-2018
is a medium-term
plan on Road
Safety
Management in
Nigeria.**

WHY NIGERIA ROAD SAFETY STRATEGY (NRSS)?

The NRSS was developed as a response to the recommendations of :

1

The UN Decade of Action Declaration for Road Safety (2011-2020) which demands that member countries should develop a strategy to provide a direction towards achieving the vision for road safety using the Safe System's Approach.

2

The Country Capacity Review (CCR) conducted by the World Bank in 2010 to measure Nigeria's capacity to deliver on road safety.

OBJECTIVES OF NRSS

1

To engender higher road safety standard

2

To harmonize the different road safety efforts by emphasising the vision, goal, purpose, output, outcomes as well as the initiatives for road safety in Nigeria

3

To provide a 5-year plan of action towards the achievement of established targets

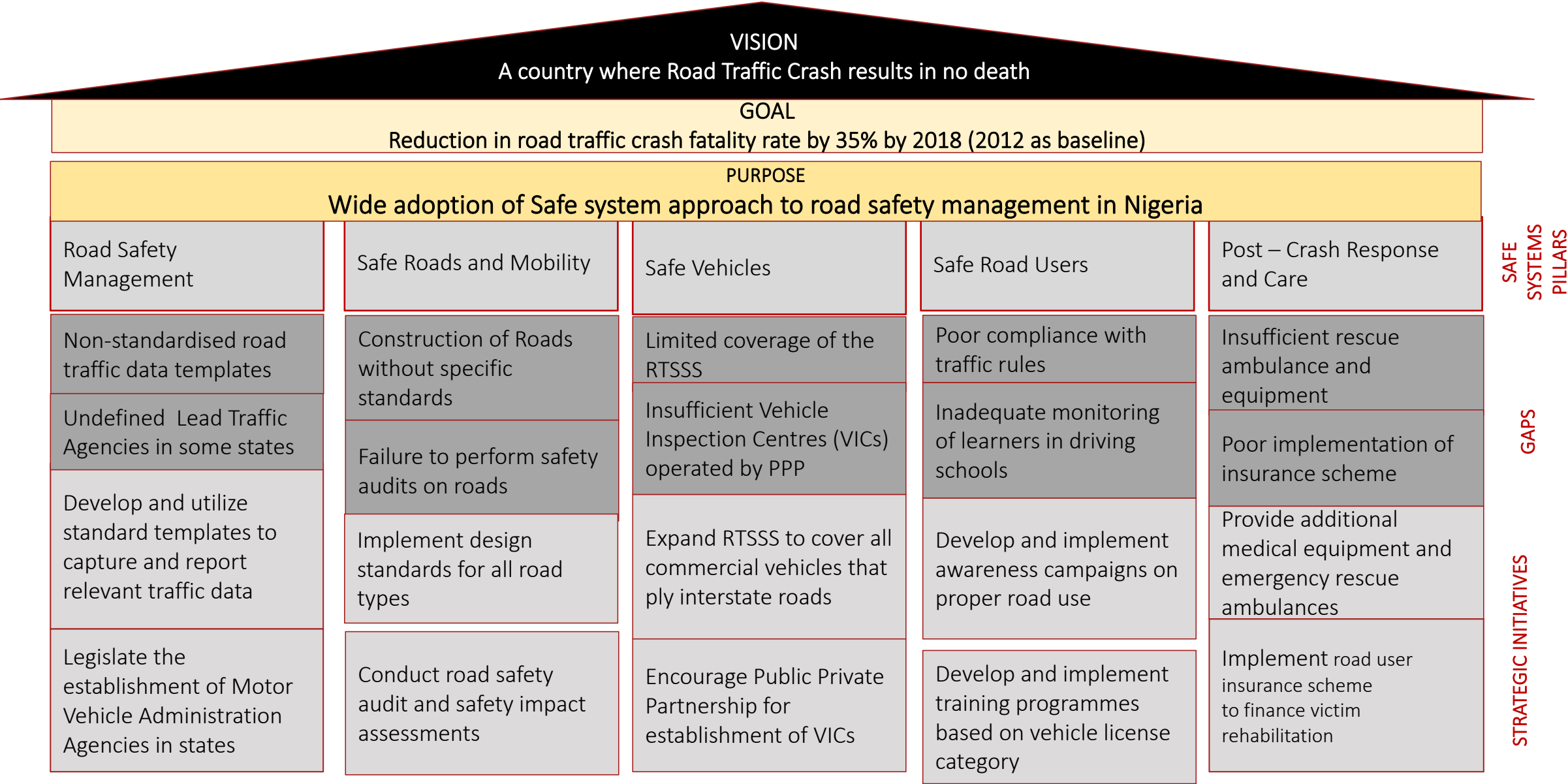
DEVELOPMENT OF THE NRSS

The process adopted for the development of the NRSS was participatory and inclusive

All relevant stakeholders at the Federal and State levels were actively involved in the process

The “Safe Systems Approach” was adopted in developing the NRSS and is consistent with the UN Decade of Action for Road Safety

KEY ELEMENTS OF THE NRSS IN RELATION TO THE 5 PILLARS OF THE DECADE OF ACTION ON ROAD SAFETY



NRSS INSTITUTIONAL ARRANGEMENT

Following approval of the NRSS by FEC in 2013 and endorsement by NEC on 21 April 2016 a National Road Safety Advisory Council (NaRSAC)

was inaugurated (16 Feb 2017) to oversee the implementation of the NRSS under the Chairmanship of the Vice President of the Federal Republic of Nigeria.



Similarly, a Technical Working Group (TWG) which is the implementation arm of NaRSAC has been inaugurated (3 Aug 2017) as well.

NaRSAC MEMBERSHIP

1. Vice President, Federal Republic of Nigeria – Council Chairman
2. One Governor each from the six geo-political zones – Members* ([Lagos\(SW\)](#), [Anambra\(SE\)](#), [Delta\(SS\)](#), [Kaduna\(NE\)](#), [Gombe\(NW\)](#), [Kwara\(NC\)](#))
3. Secretary to the Government of the Federation – Member
4. Honourable Minister of Transport – Member
5. Honourable Minister of Works – Member
6. Honourable Minister of Health – Member
7. Honourable Minister of Justice – Member
8. Honourable Minister of Education – Member
9. Honourable Minister of Finance – Member
10. Honourable Minister of Environment - Member
11. Honourable Minister of Labour and Productivity – Member

12. Honourable Minister of Police Affairs – Member
13. Honourable Minister of Interior – Member
14. Honourable Minister of National Planning Commission - Member
15. Honourable Minister of the Federal Capital Territory - Member
16. National Security Adviser – Member
17. President, Association of Local Governments of Nigeria (ALGON)- member
18. President – The Nigerian Association of Chambers of Commerce, Industry, Mines and Agriculture (NACCIMA) – Member
19. President, Nigerian Society of Engineers - Member
20. Chairman, Federal Road Safety Commission - Member
21. [Corps Marshal, Federal Road Safety Corps– Member/Secretary](#)

NaRSAC Key Responsibilities

1. Set National Road Safety Strategy target(s)
2. Ensure co-ordination between Federal, States and Local Governments in achieving Road Safety targets
3. Drive the implementation of the NRSS via:
 - a. Requests for progress reports from relevant agencies
 - b. Invitation of relevant agencies to defend proposed activities and road safety efforts on a quarterly basis
 - c. Evaluation of outcomes of National road safety initiatives
 - d. Development of a funding plan for strategic initiatives
 - e. Fund sourcing for implementation of strategic initiatives
 - f. Endorsement of disbursement of pre-approved funds for strategic initiatives
 - g. Monitoring of funds disbursement for strategic initiatives
4. Review monitoring and evaluation reports (as submitted by FRSC) for effective coordination of road safety programmes
5. Report to the FEC on progress made on the NRSS
6. Perform annual review of the NRSS
7. Oversee aspects that relate to road safety enforcement of 10 per cent of the National Road Fund
8. Endorse subsequent NRSS prior to submission to the FEC

MEMBERSHIP OF TWG

The TWG shall comprise mainly of:

1. FRSC - NaRSAC Secretariat
2. Federal Ministry of Works
3. Federal Ministry of Health (Focal Point on the UN Decade of Action)
4. Ministry of Interior
5. Ministry of Transportation
6. National Planning Commission
7. National Security Adviser (NSA)*
8. National Bureau of Statistics (NBS)
9. National Environmental Standard Regulatory and Enforcement Agency (NESREA)
10. Nigeria Police Force
11. State Governments/States Motor Vehicle Administration Agencies constituting State Traffic Management Agencies and Vehicle Inspection Offices

Associate members may be drawn from relevant professional institutions to include:

1. Nigerian Medical Association (NMA)
2. Nigeria Society of Engineers (NSE)
3. Nigeria Bar Association (NBA)
4. Guild of Editors
5. National Council of Women Societies (NCWS)
6. Standards Organisation of Nigeria (SON)
7. The Nigeria Institute of Town Planners (NITP)
8. Human Rights Organisations
9. Chartered Institute of Logistics and Transport (CILT)
10. The Nigeria Institute of Safety Professionals (NISF)
11. National Association of Road Transport Owners (NARTO)

TWG Key Responsibilities

1. Adopt for implementation, uniform standards on :
 - a) Traffic enforcement
 - b) Vehicle inspection
 - c) Road signs and markings
 - d) Personnel training
 - e) Rescue administration
2. Make recommendations to FRSC on issues that require national regulation and standards
3. Prepare annual budget for the Nigeria Road Safety Fund
4. Submit proposals for specific intervention funding
5. Perform assigned strategic activities
6. Prepare and present progress reports on assigned strategic activities for NaRSAC's consideration
7. Conduct annual review of the NRSS
8. Mainstream assigned strategic activities into operational processes and procedures
9. Review and adopt future NRSS documents

As a Strategy based on the Safe System Approach, there are specific and defined implementation roles for States and MDAs in the country

THE ROLE OF STATES IN NRSS IMPLEMENTATION

State Governments are required to:

- *Mobilise support for the successful implementation of the NRSS country-wide;*
- *Cascade the NRSS to the Local Government level, by institutionalising the process in their respective States;*
- *Make adequate budgetary provision for the NRSS as it concerns their implementing Agencies from 2014;*
-
- *Liaise with FRSC to organise workshops to validate the targets set for them in the NRSS document;*
- *Reposition their States Bureau of Statistics to facilitate the collation of all relevant data*
- *Establish the state Motor Vehicle Administration Authority to carry out the administration of all motor vehicle activities in the State*

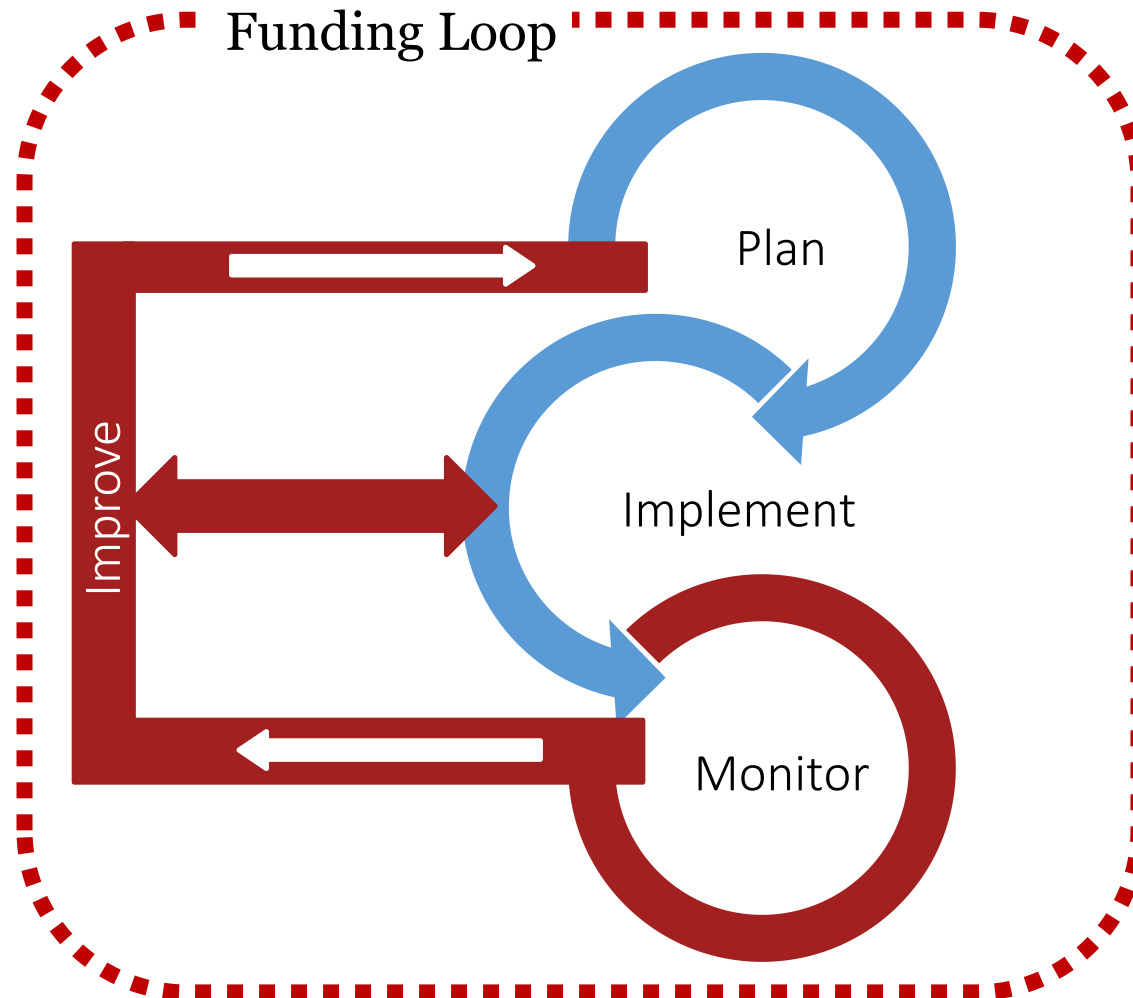
THE ROLE OF MDAs IN NRSS IMPLEMENTATION

Ministries Departments and Agencies are required to:

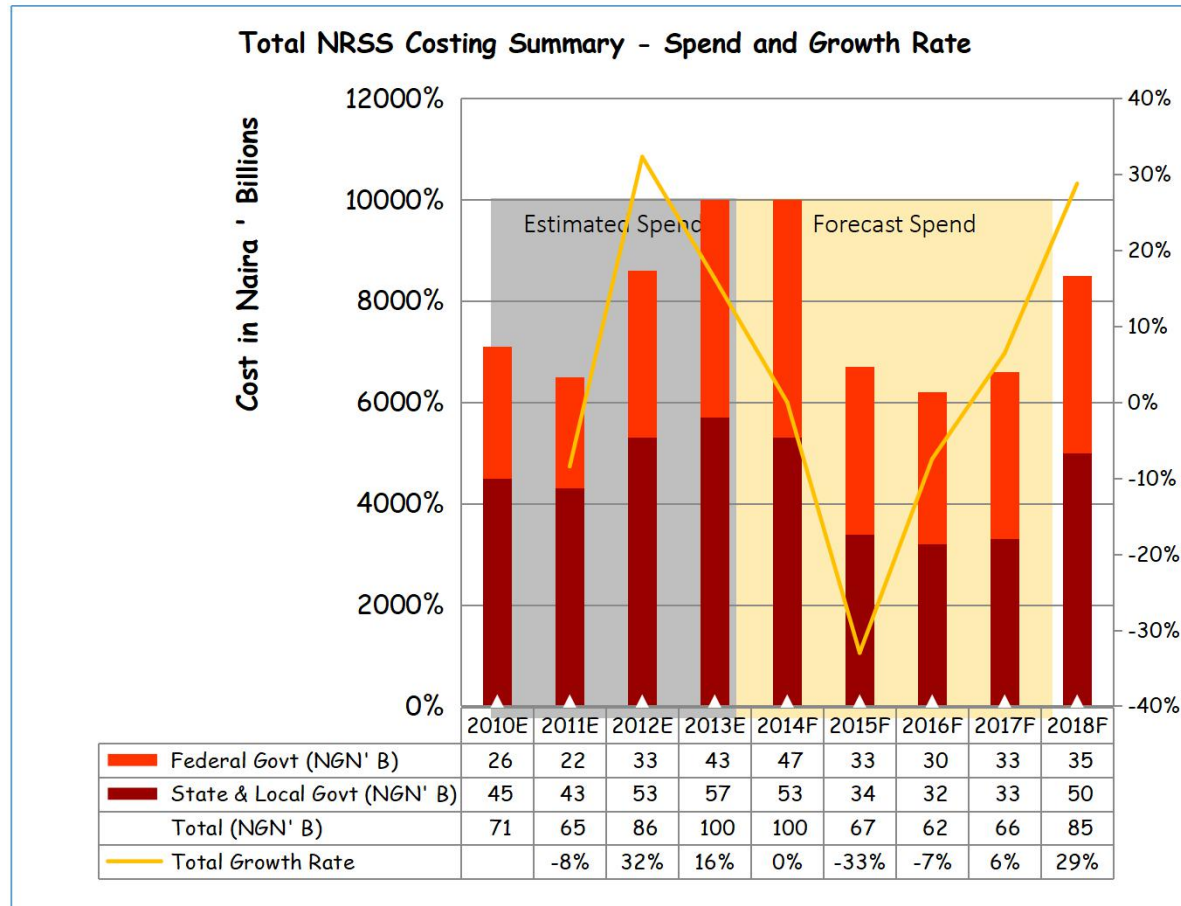
- ☐ *Mobilise support for the successful implementation of the NRSS at the National level;*
- ☐ *Cascade the NRSS to the Directorate, Section and Unit level, by institutionalising the process in their respective MDAs;*
- ☐ *Make adequate budgetary provision for the NRSS as it concerns their implementing Directorates and sub Units from 2014;*
- ☐
- ☐ *Liaise with FRSC to organise workshops to validate the targets set for them in the NRSS document;*
- ☐ *Reposition their Directorate of Policy, Research and Statistics to facilitate the collation of all relevant data*

PROPOSED IMPLEMENTATION STRUCTURE

To ensure successful implementation of the NRSS, the hybrid approach on *Planning*, *Implementation* and *Monitoring* is adopted



THE COST OF FINANCING THE STRATEGY



The cost of financing the strategy will not be pooled together at the centre but the expected funding provisions at different levels

Total cost of implementing the road safety strategy for the 5 year period (2014 to 2018) is estimated at ~~~N~~382Billion (~~N~~381,974,018,199)

PROSPECTS OF THE NRSS

1

Attainment of UN
Decade of Action goals

2

Road safety as a top
priority of government

3

Increased citizens
responsibility and
ownership

4

Speedy realization of SDGs in Nigeria - Goals {3⁶
and 11²}

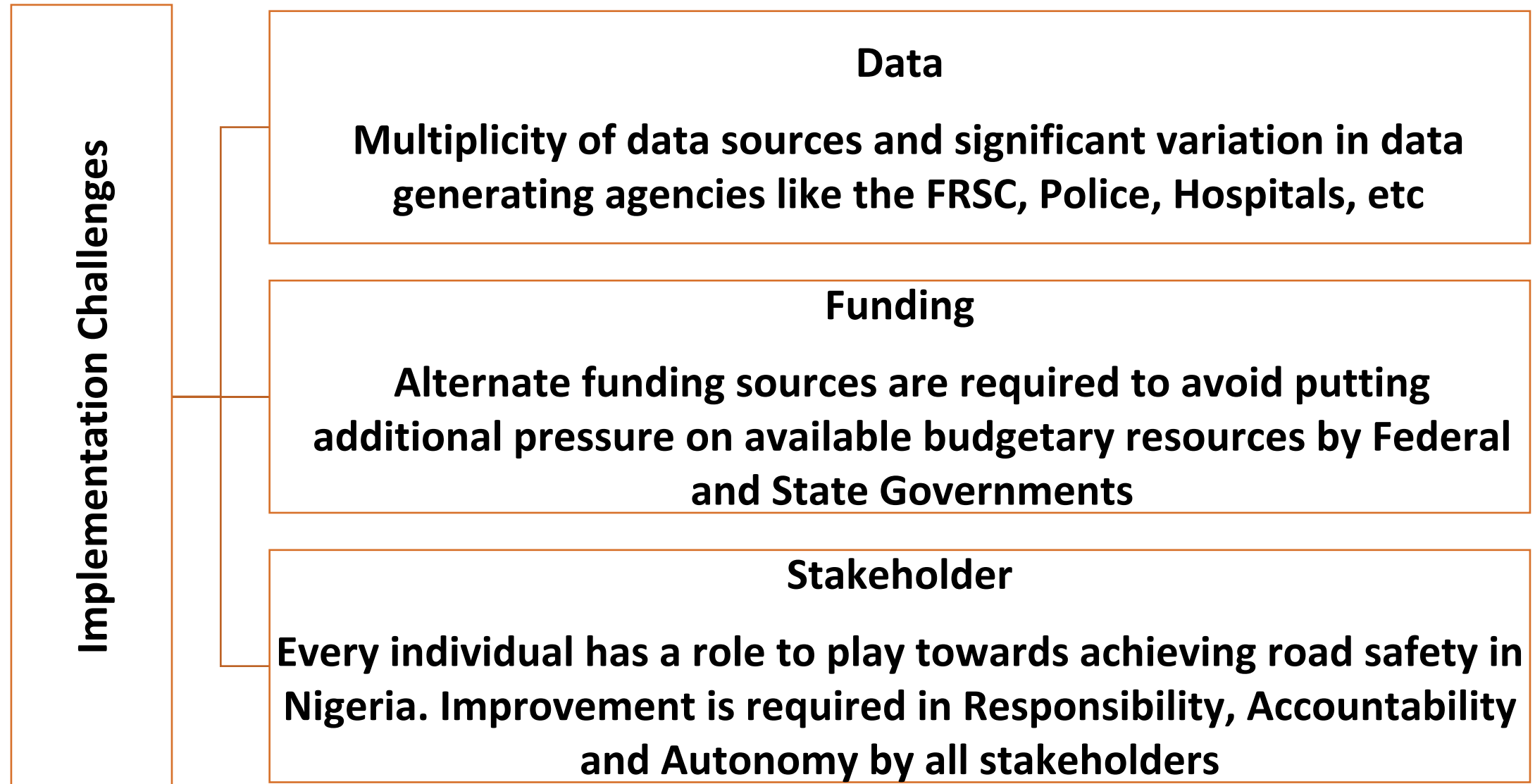
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Nigeria being in the
top 20 safest roads in
the world by year 2020

6

Enhanced road safety environment that will attract
Foreign Direct Investment

CHALLENGES



CONCLUSION

The prevailing traffic and road safety needs in our country require diversification through innovative technologies in the transport sector as one of the best practices globally

These innovations have brought about the visible difference in the transport system management and administration in many countries

The effective implementation of the NRSS therefore, at the grass-root level will facilitate achievement of the national goal of having a country where road traffic crash results in zero deaths

Muzzling the **Political will at all levels to
implement the NRSS and massive
Stakeholders' buy-in will go a long way
at solving the road safety issues facing
our country**

Let all, including **YOU join the efforts.**



Safety starts with
you

THANK YOU

Phone Only



**Call toll free on: 122
0700 - CALL - FRSC
0700 - 2255 - 3772**



SMS Only



+23480 7769 0362

www.frsc.gov.ng

References



WHO Report on Road Traffic Injury Prevention 2004



WHO Global Status Report-2013



Road Safety In the WHO African Region-the Facts 2013



Nigeria Road Safety Strategy (2014-2018)



WHO Global Status Report-2015



Irtad Road Safety Annual Report-2015



FRSC Annual Report-2016