

KINGDOM OF MOROCCO



Ministry of Transport and Logistics

THE USE OF DATA FOR A BETTER ROAD CONTROL POLICY

THE CASE OF THE KINGDOM OF MOROCCO

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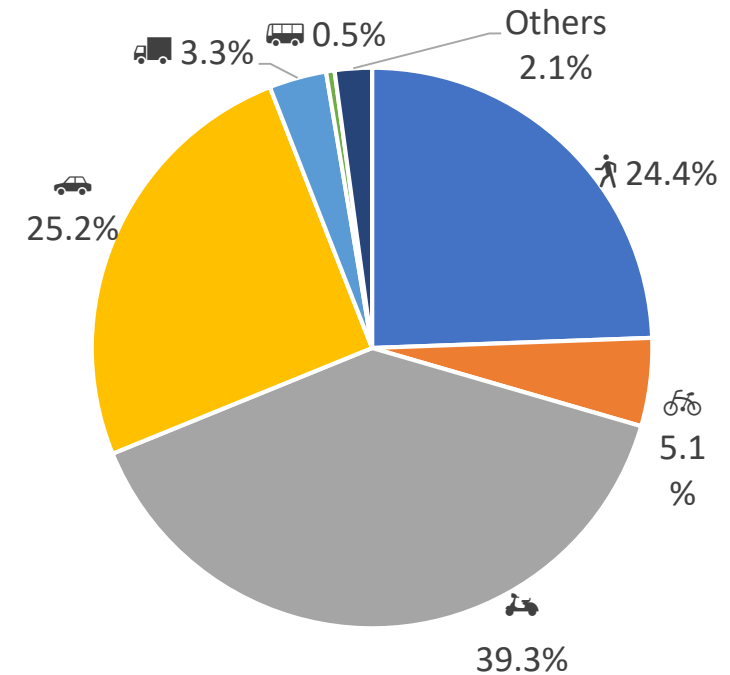
Road traffic crashes in the Kingdom of Morocco, 2021

Kingdom of Morocco

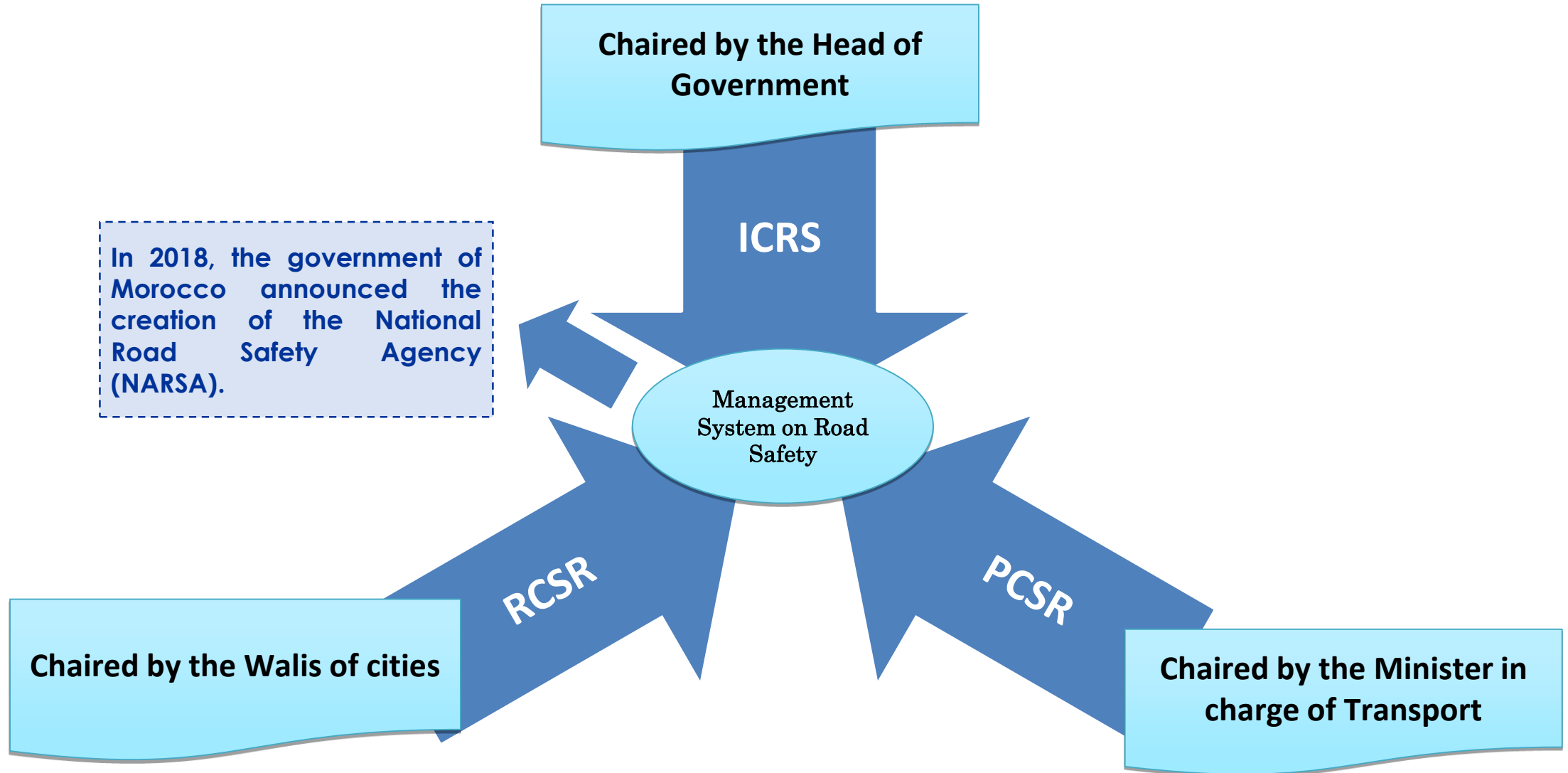
- **Population in 2019: 35.6 million**
- **Cost of road crashes: 2% of GDP (2019)**
- **Registered motor vehicles in 2019: 4.6 million (cars 68%, goods vehicles 27%, motorcycles 5%)**
- **Speed limits: 60 km/h on urban roads; 100 km/h on rural roads; 120 km/h on motorways (highways)**

	Injury crashes	Fatalities	killed	Serious Injuries	Minor injuries
2021	114 626	3 318	3 685	10 743	154 411
2021 % change over 2020	35,52%	21,63%	22,63%	30,68%	37,72%
2021 % change over 2019	12,77%	2,19%	1,74%	7,40%	10,82%

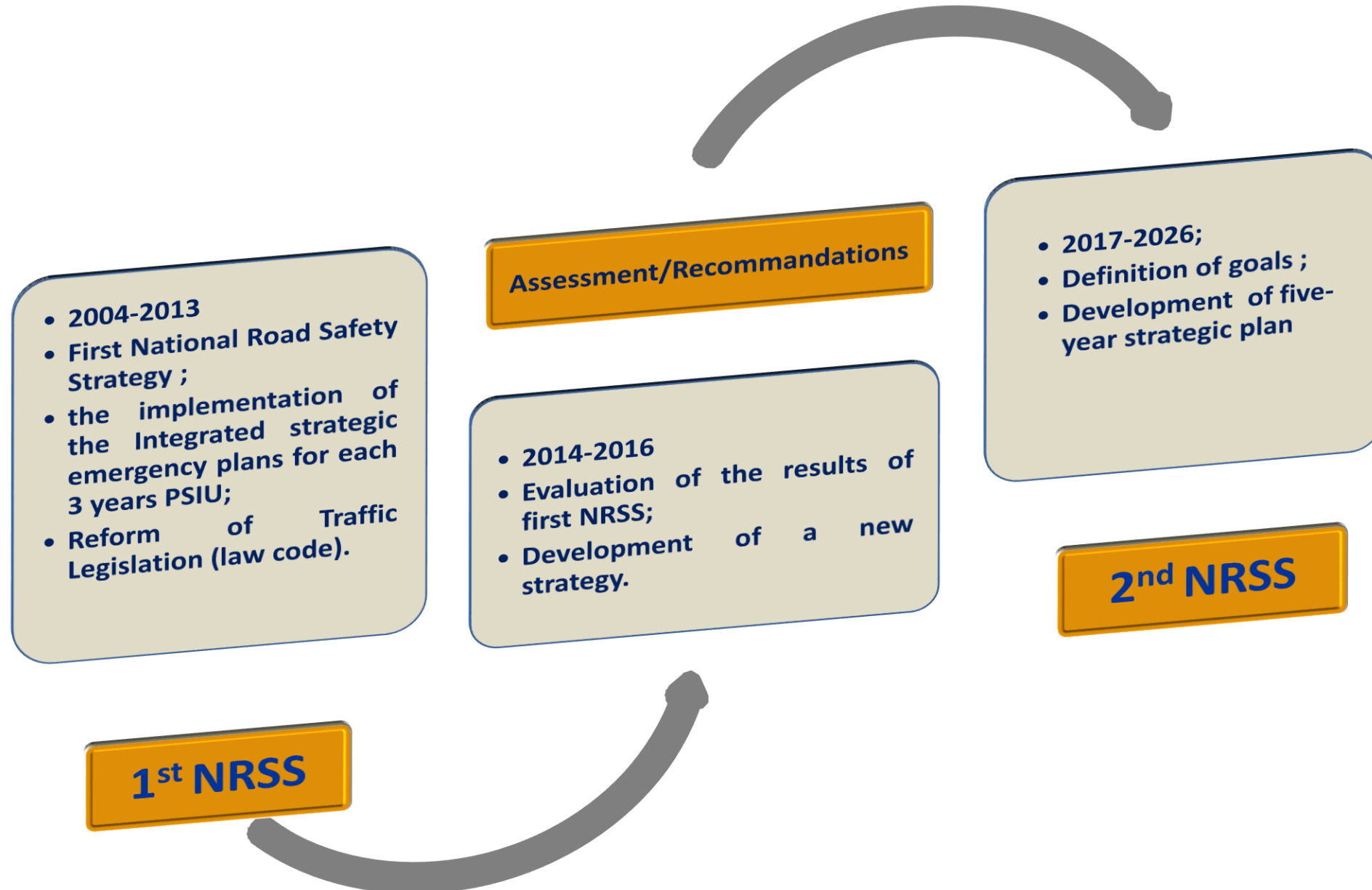
Road Fatalities by road user group, 2021



Management System on Road Safety in the Kingdom of Morocco



Management System on Road Safety in the Kingdom of Morocco



National Road Safety Strategy 2017-2026

Vision

For a Civic Behavior and a Safe Road System

Goals

Less than 2800 fatalities
in 2021

Reduction by 25% in 2021

3776 fatalities
(in 2015)

Reduction by 50% in 2026

Less than 1900
fatalities in 2026

Road control policy in the Kingdom of Morocco

Context of the development of the road control policy in the Kingdom of Morocco :

- The national road safety strategy 2017 – 2026 in Morocco has given particular importance to the road control policy to achieve its goals ;
- The National Road Safety Agency has developed the National Road Control Plan 2022-2024 in full coordination with all stakeholders, with the objective of improving road safety by contributing to the favorable evolution of road users' behavior.

Road control policy in the Kingdom of Morocco

Methodology for developing the road control policy in the Kingdom of Morocco :

- The methodology for developing this national road control policy was guided by the following considerations:
 - The National Road Safety Strategy Guidelines and Goals;
 - The achievements and the capacity of action of the various road control components as General Directorate of National Security, Royal Gendarmerie, Ministry road controllers ;
 - The evolution of road safety indicators ;
 - The road accidents causes' analysis ;
 - The behavioral indicators of road users;
 - The objectives to be reached, the performance and result indicators;
 - Ensure governance and synergy between the different stakeholders at the central and regional levels.

Road control policy in the Kingdom of Morocco

How the data contributed to the development of the road control policy ?

- The development of the road control policy was based on the exploitation of the following data sources :



Road traffic accidents' data



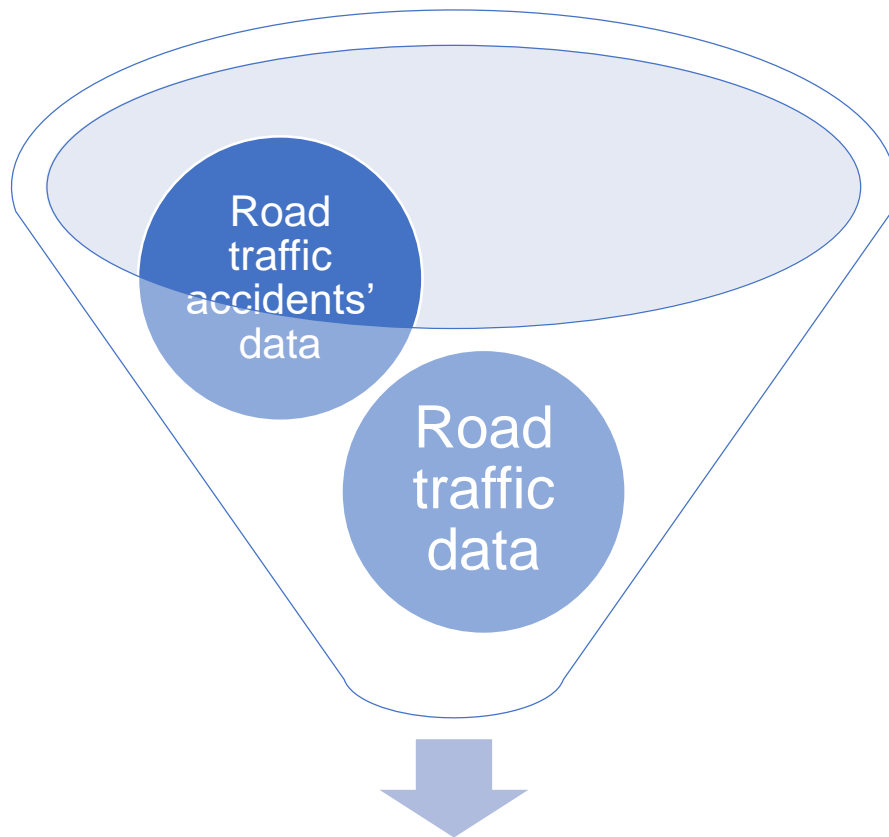
Traffic violations' data



Road traffic data

Road control policy in the Kingdom of Morocco

How the data contributed to the development of the Road risk mapping ?



Road risk mapping

The individual risk per billion vehicle-kilometers is calculated as follows:

with:

$$\frac{\text{Fatalities} + \text{Serious Injuries}}{\text{Billion vehicle} - \text{kilometers}}$$

And the collective risk:

$$\text{Billion vehicle} - \text{kilometers} = \frac{\text{length} * \text{AADT} * 365 * \text{number of days}}{10^9}$$

AADT : Annual Average Daily Traffic

Indicator measuring the collective risk for the road manager (the density) =

$$\frac{\text{Fatalities} + \text{Serious Injuries}}{\text{length}}$$

Road control policy in the Kingdom of Morocco

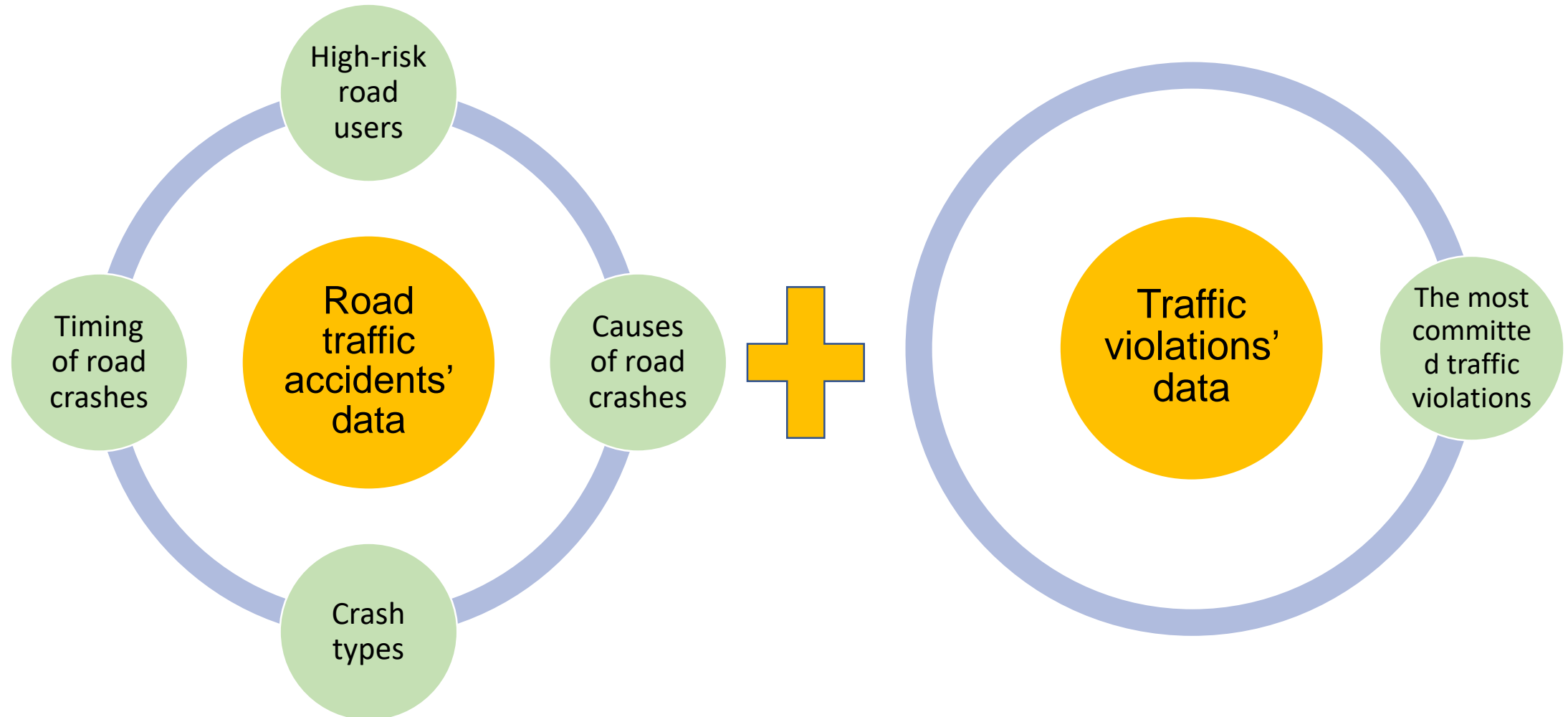
How the data contributed to the development of the Road risk mapping ?

	Risk level	Control point (Number of sections)	Length of sections	Percentage of fatalities	Percentage of serious injuries
1	Very poor safety / High to very high risk	1 063	1 to 4 kms	50%	52%
2	Poor safety / Medium to high risk	561		30%	28%
3	Low safety / Low risk	802		21%	20%
	Total	2 426		100%	100%

The road control will be carried out mainly in the sections of roads belonging to classes one and two (1 624 sections generating 80% of the fatalities).

Road control policy in the Kingdom of Morocco

How the data contributed to identify enforcement priorities ?





Road control policy in the Kingdom of Morocco

How the data contributed to identify enforcement priorities in urban areas ?

Mean of transport

78% of those killed are vulnerable users:

- Pedestrians (34.06%); 
- Bicycles (5.67%); 
- Motorized 2-3 wheels (37.93%).

Type de collision

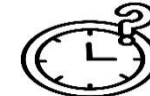
Two types of collision account for almost half of urban mortality:

- Vehicle accidents with a pedestrian (34%);
- Single-vehicle accidents (12%).



Temporality

- A peak is recorded in August;
- Mondays and Thursdays are the deadliest days;
- The highest numbers of people killed are recorded in the hours :08:00 pm, 07:00 pm, 06:00 pm, 09:00 pm, 10:00 pm and Midday.



Road control policy in the Kingdom of Morocco

The priorities of road control in urban areas:

Priority 1 :

1. Over Speeding ;
2. Using a mobile phone whilst driving (Distraction to Driver) ;
3. No seat belt use in the front seats of vehicles ;
4. No helmet use ;
5. Driving under the influence.

Priorité 2 :

6. Red Light jumping ;
7. Stop signal jumping ;
8. Using the direction indicators before changing direction ;
9. Improper passing ;
10. Non-respect of the priority ;
11. Control of Pedestrian Crossings ;
12. Counter-inspections of vehicles with mechanical defects.

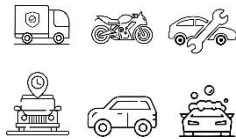
Road control policy in the Kingdom of Morocco

How the data contributed to identify enforcement priorities in rural roads ?

Mean of transport

Motorized 2-3 wheelers and passenger vehicles account for the largest proportion of fatalities:

- Motorized 2-3 wheels (26,83%)
- Passenger vehicles (37,26%)



Type de collision

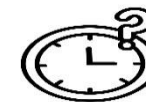
52% of the mortality is related to:

- Single-vehicle accidents (22%)
- Two-vehicles collisions (30%)



Temporalité

- A peak is recorded in August ;
- Wednesdays and Sundays are the deadliest days ;
- The highest numbers of people killed are recorded in the hours : 08:00 pm, 07:00 pm, 09:00 pm and Midday.



Road control policy in the Kingdom of Morocco

The priorities of road control in rural roads :

Priority1 :

1. Over Speeding ;
 2. Control of professionals: Over Speeding , respect of driving time and rest periods...;
 3. Using a mobile phone whilst driving (Distracted driving) ;
 4. No seat belt use ;
 5. No helmet use ;
- Driving under the influence.

Priority 2 :

6. Improper passing ;
7. Counter-inspections of vehicles with mechanical defects.

Challenges

Before concluding, I wanna give a brief summury about the challenges we face to improve our road control policy :

- ❖ The first challenge is to set up a collecting data system based on new technologies. The implementation of that system is an ongoing project;
- ❖ The second challenge is to regionalize the road control policy, which is an ongoing project ;
- ❖ The third challenge is to make the Road Risk Mapping in urban areas.



THANK YOU