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GUIDELINES FOR CONDUCTING ROAD SAFETY DATA REVIEWS

7th IRTAD Conference

Lyon - September 27th-28th, 2022

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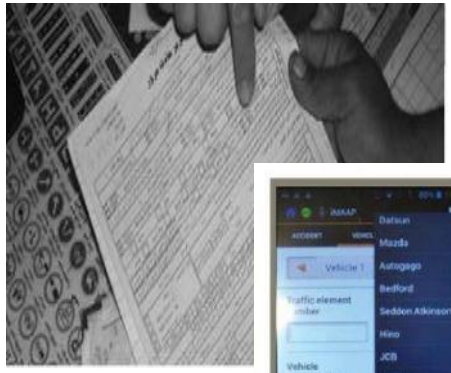
Help of Heike Martensen

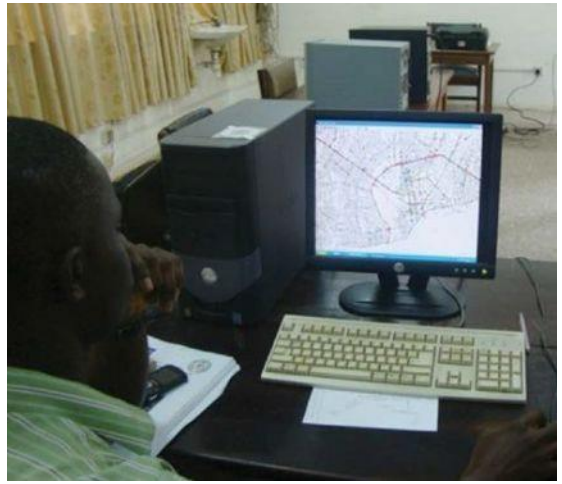
VIAS institute

WORLD BANK GROUP
GRSF Global Road Safety Facility
International Transport Forum
UKaid from the British people

Overview

- **Background**
  - Challenge
  - Objectives
- **Road Safety Data**
  - Importance
  - Crash Data
  - Other Data
- **The review**
  - Reviewer reference
  - Preparation
  - Stakeholders to meet
  - Interview
  - Reporting





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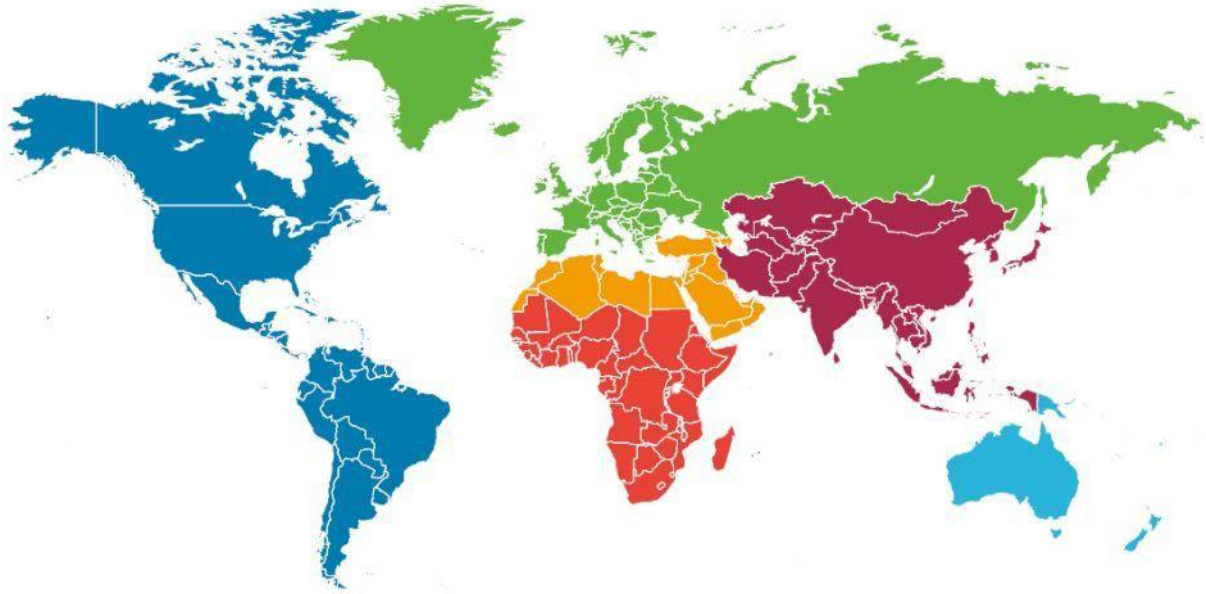
Background and objectives

Data challenge

- **Varying degrees of under-reporting, completeness and lack of meaningful analysis** for road safety interventions
- **Lack of standardization and integration** of multiple datasets, definitions, and collection methods
- **Needs**
  - streamlining of processes,
  - leveraging technology,
  - bridging gaps in capacity and resources,
  - addressing barriers in notification of fatalities and injuries
- **Road safety indicators** are not used (e.g. speed, drink-driving, safety equipment)



GLOBAL TOTALS:

Number of countries	Total population (000s)
175	7 296 943
Total reported deaths	**Total WHO estimation**
629 365	1 323 666

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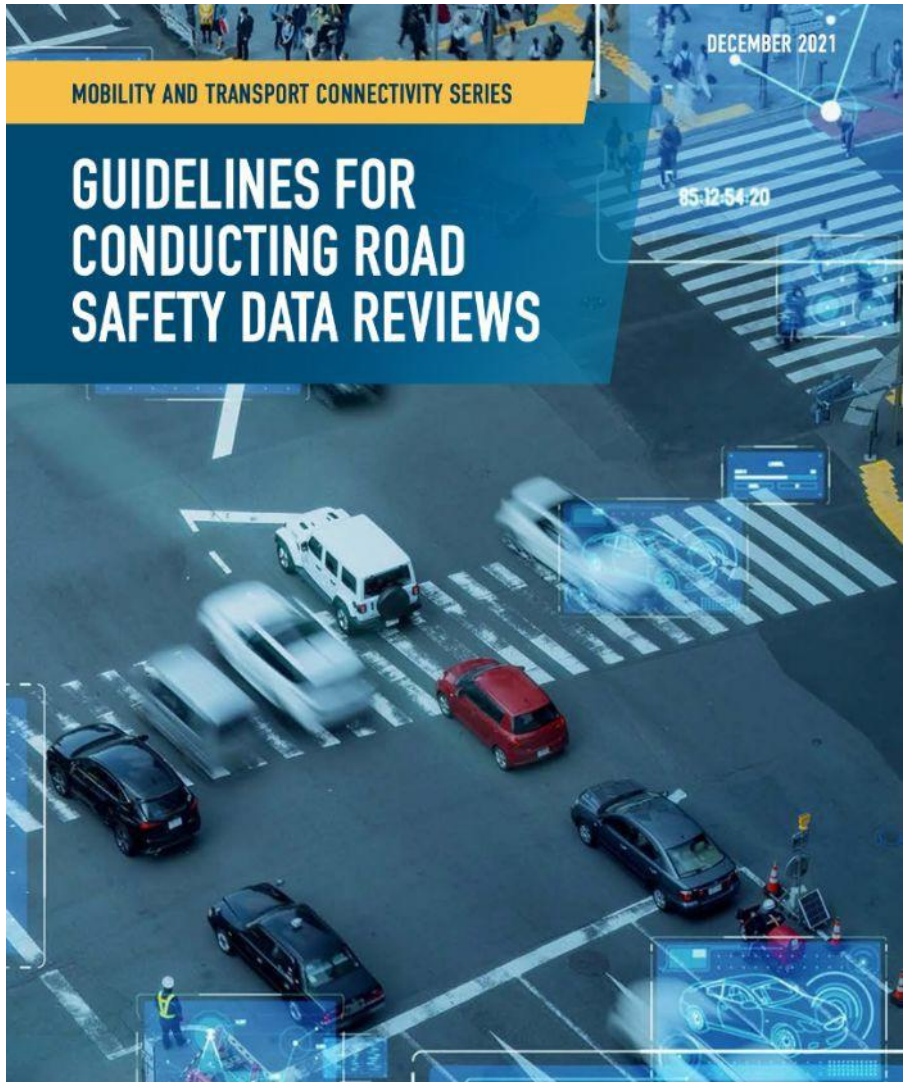
Objectives

- Support review teams in the assessment of road safety data collection (“detective work”)
- Harmonize assessments
- Identify needed preparations (stakeholders to consult, activities, documents to review)
- Identify international standards
- Self-evaluation tool for observatories

Scope

- Whole data collection process (crash investigations, reporting and registration, checking completeness and consistency, storage, analysis, use, and accessibility)
- Primary focus is crash data although other types of road safety data are considered



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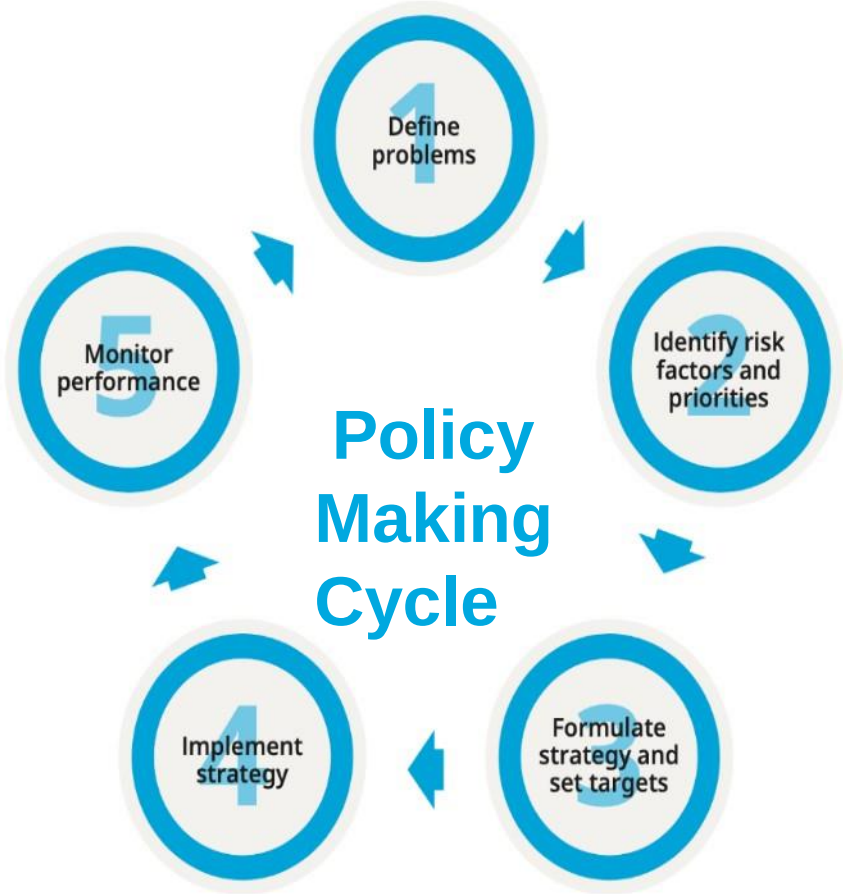
Road Safety Data

Road Safety Data: they are essential

- To prioritize road safety among other public health issues
- To assess the full nature of the road safety problem (who is at risk ? When ? Why ?)
- To assess the real economic costs associated with road crashes
- To receive the right level of investment, and then avoid under-reporting
- To design the most (cost) effective road safety interventions
- To monitor progress and adjust work plan
- To develop and implement a systematic approach to road safety



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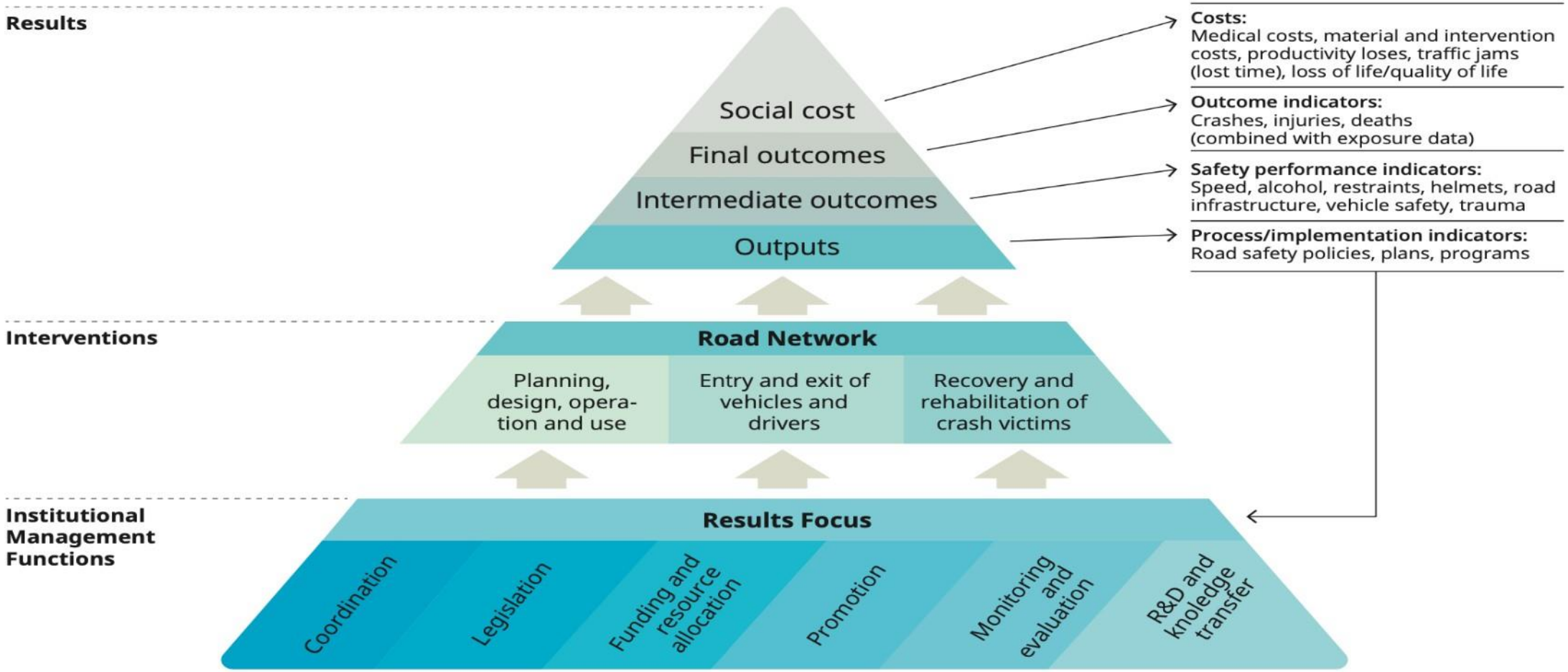
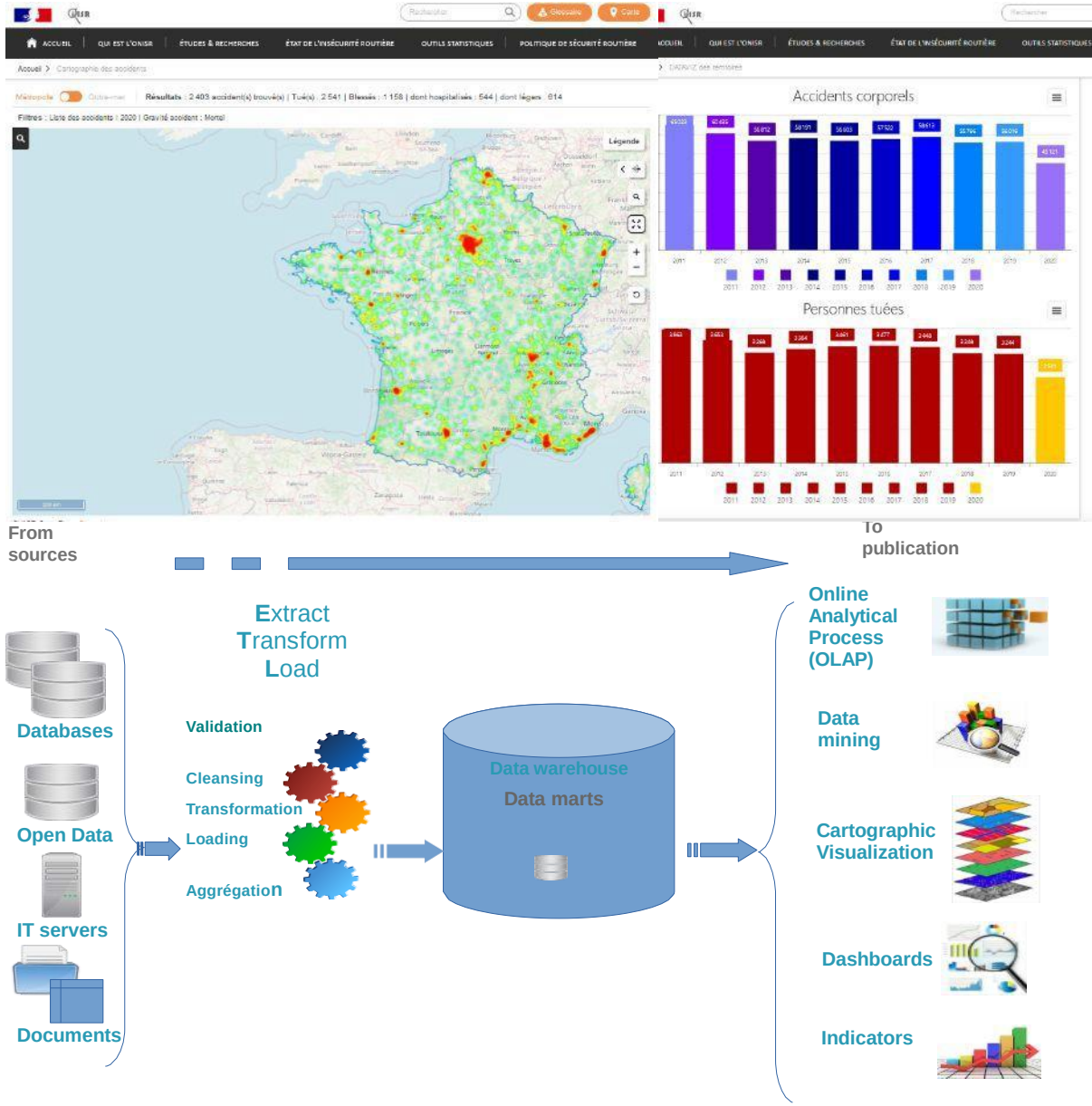
Road Safety Data: highly linked with Road Safety Management



Crash and Casualty Data

- Should provide full picture of road risk, fatal and serious injury most important
- Completeness and notification
- Uniformity of definitions and collection
- Crash location
- Registration, transmission, and sharing
- Data storage
- Data querying, visualization, and analysis
- Leveraging other datasets, augmenting data



Mobility Data: Measure of Exposure to Risk

$$Risk = \frac{Stake\,(eg: number\ of\ crashes, casualties)}{Measure\ of\ Exposure\,(eg: population, km\ travelled, road\ lengh)}$$

- Modal share importance
- Travel distances as a gold standard
  - Ideal: surveys
  - Alternative: traffic counts
  - Surrogate: Fuel Consumption, Road Length, Vehicle Fleet, Driver Population, etc.

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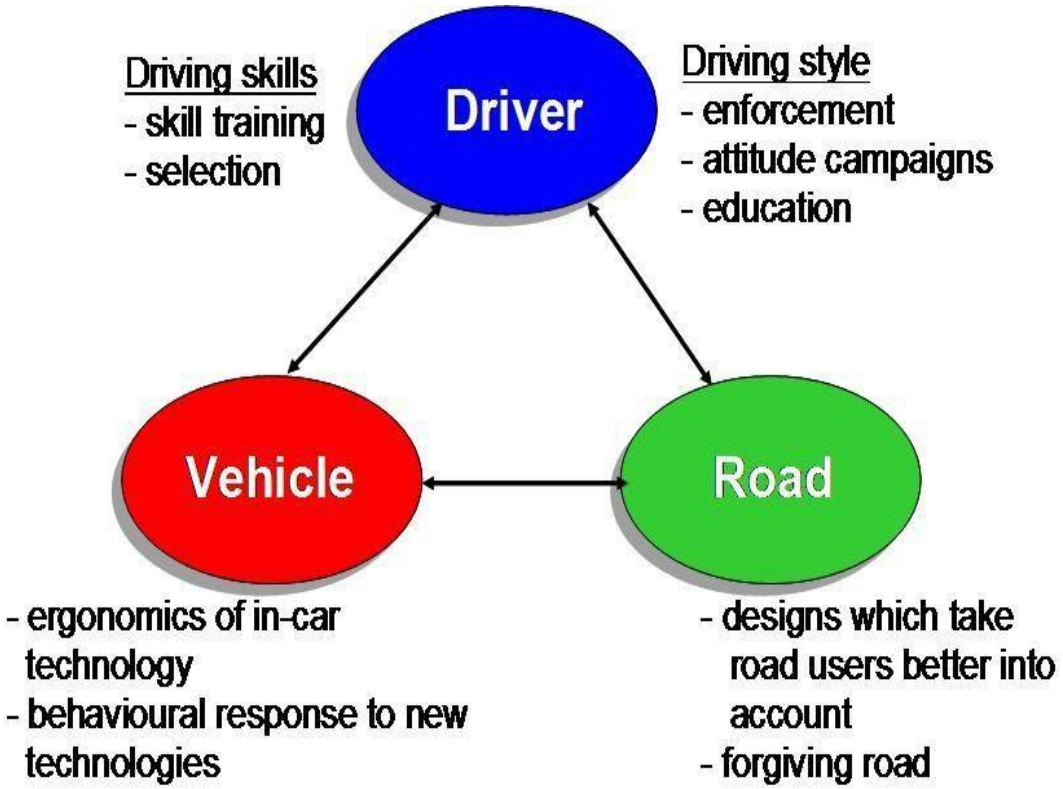
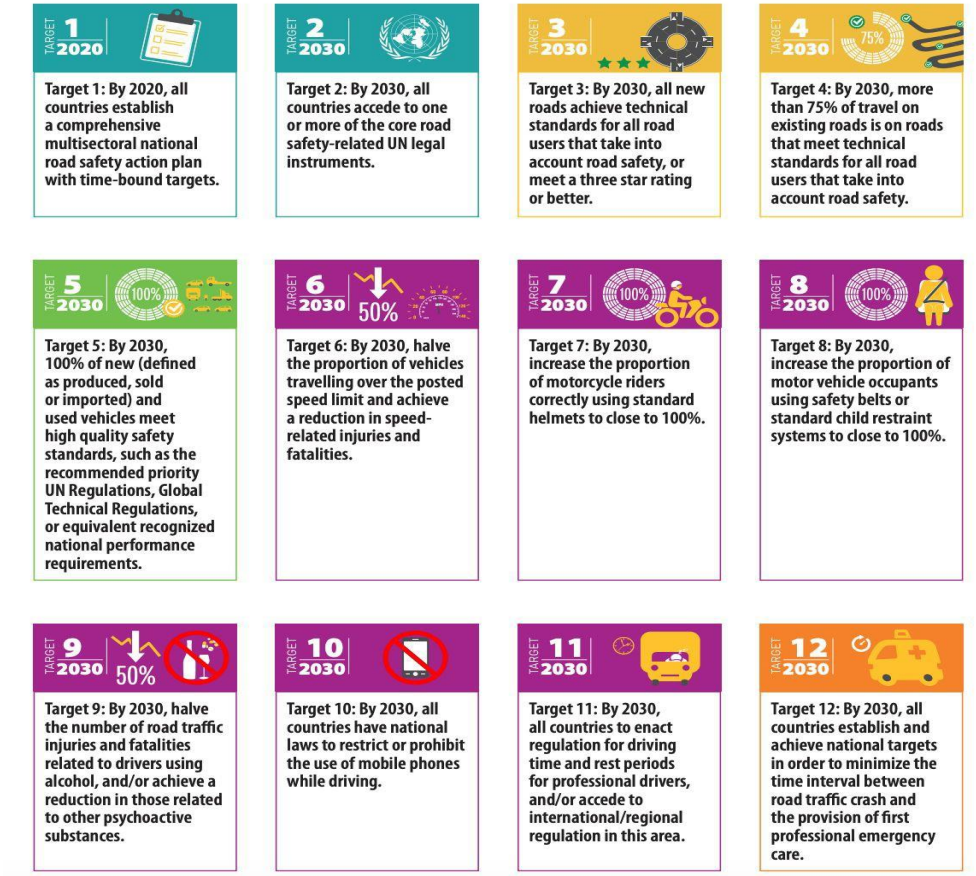
Safety Performance Indicators



WHO: a set of 12 performance targets

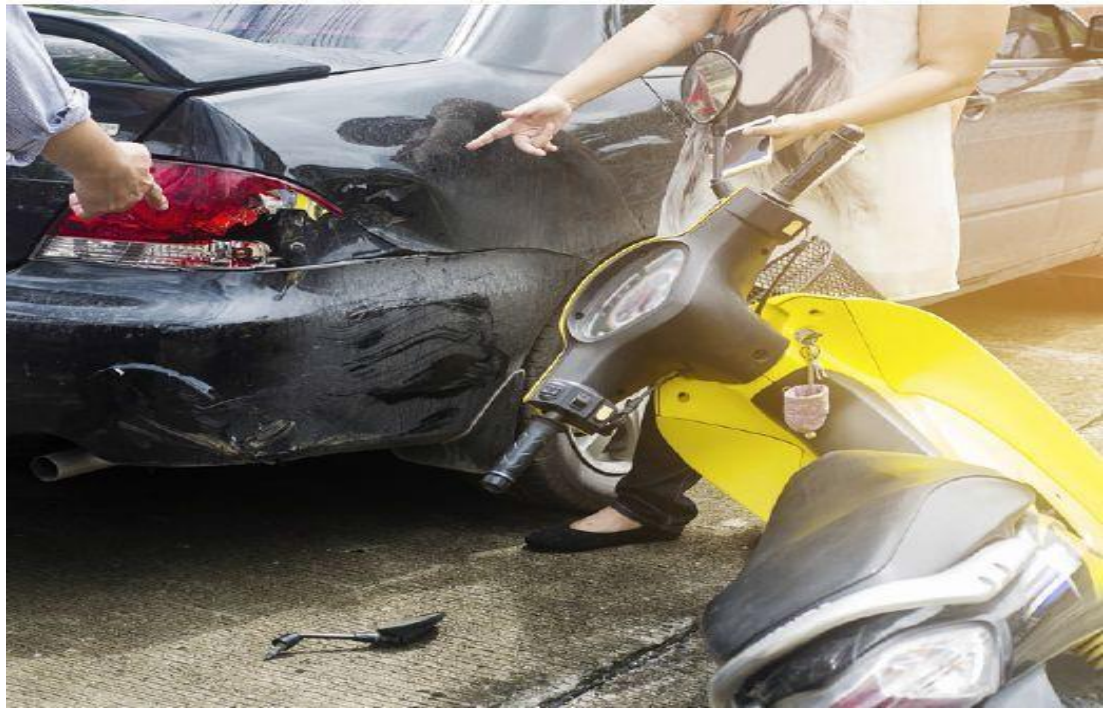


Other Data

Road Safety Interventions

Safety engineering	• Road sections with improved iRAP star rating • Number of intersections improved • Number of speed cameras operational • Length of road with section control for speeding
Enforcement	• Number of tickets delivered • Number of drivers checked • Hours spent on checks
Education	• Number of downloads for educational material • Number of children taught a course
Promotional activities	• Number of clicks on promotional video • Minutes of air time for a spot
Driver training	• Driving lessons taken by students • Exams attempted/ exams passed
Vehicle testing	• Vehicles checked • Vehicles admitted after improvements
Emergency medical services	• Crash scenes attended • Average time to arrive at scene

Regional Road Safety Observatories : Reports and Outputs



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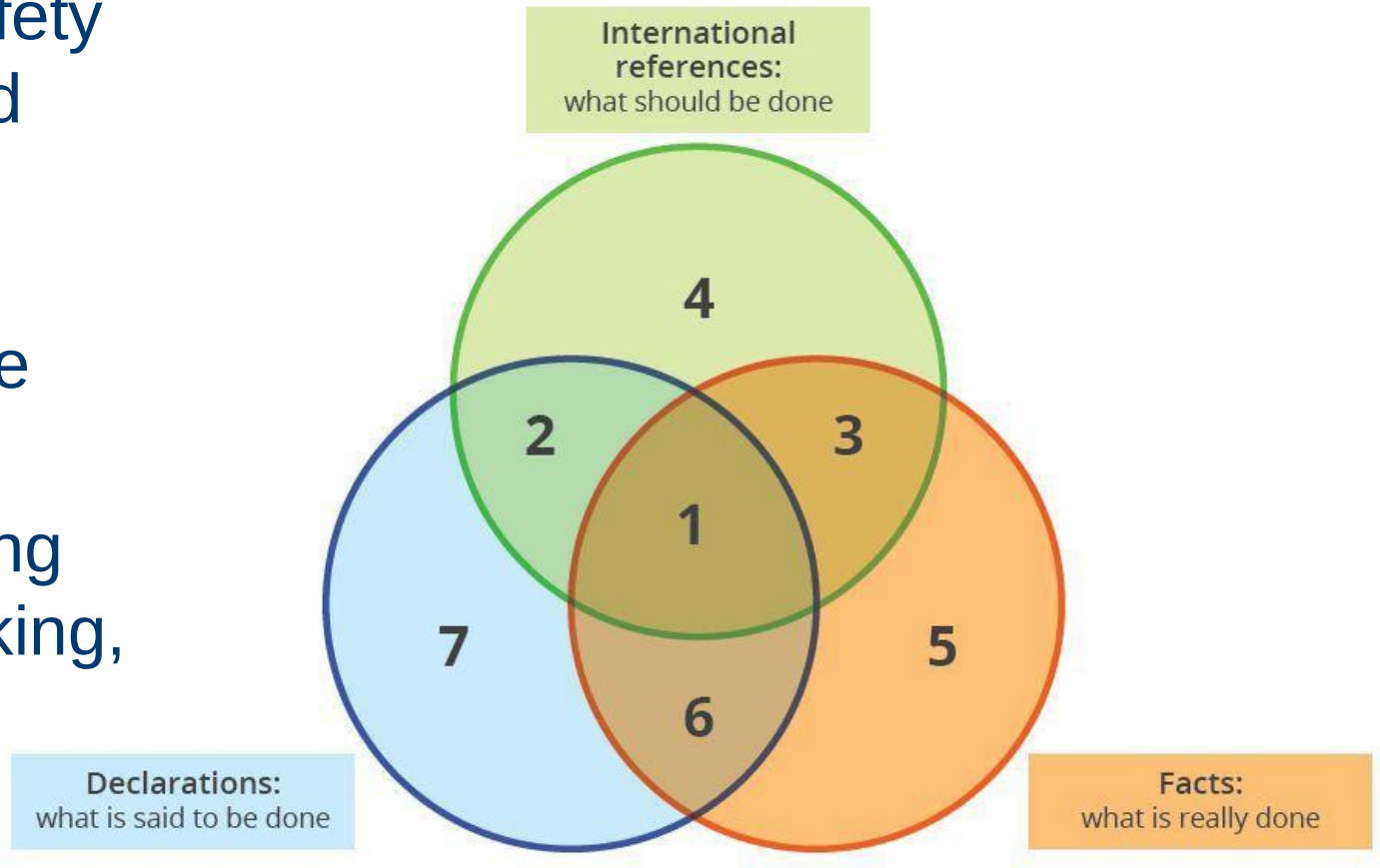
The review

Reviewer: Situation Assessment Process

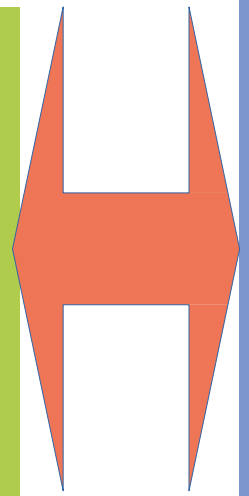
- Situate each aspect of road safety data system in the diagram and adapt recommendations accordingly
- Therefore, the review can serve several purposes:
  - From initiating a good starting point of a system in the making,
  - ...to improving an already existing system



Preparing: a key cooperation step

By the Host Team

- Table of relevant road safety data
- Documentation
- Key partners in data collection, analysis, use
- Relevant outputs: reports, maps, analysis
- Registration form
- Definitions of crach data
- Description of database(s)
- Actual crash data
- Visit preparation: meetings, appointments



By the Review Team

- Determine scope and objectives of the review
- Request relevant data and documentation from the host country
- Organize meetings ahead of the visit
- Identify stakeholders and government organization structure
- Undertake a literature review of published studies and reports
- Review existing documentation, forms, and reports
- Inspect crash data
- Assess SPIs and mobility data
- Develop a preliminary assessment and insight
- Prepare interview questions and presentations

Meeting Stakeholders

- Ministries and Government Departments
- Police
- Hospitals
- Statistics Office
- Coroners
- Insurance Companies
- Road Safety Advocacy Groups and Journalists
- Research and Academia

Interviewing

- Topics to address
  - Organization of data collection (crash and others)
  - Resources: quality and capacity
  - Data storage, integration and quality control
  - Data use
- How?
  - Trace the whole data chain
  - Look for tangible evidence
  - Check for consistency

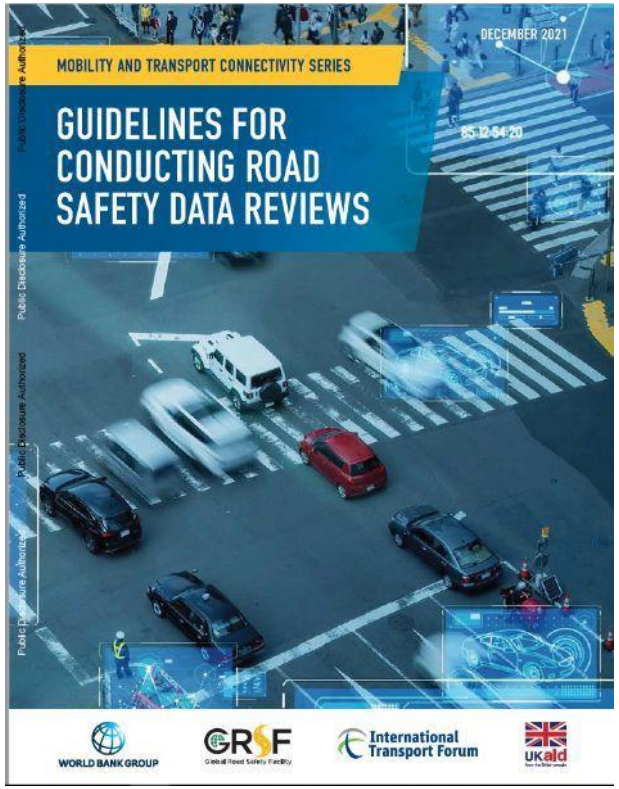
Reporting

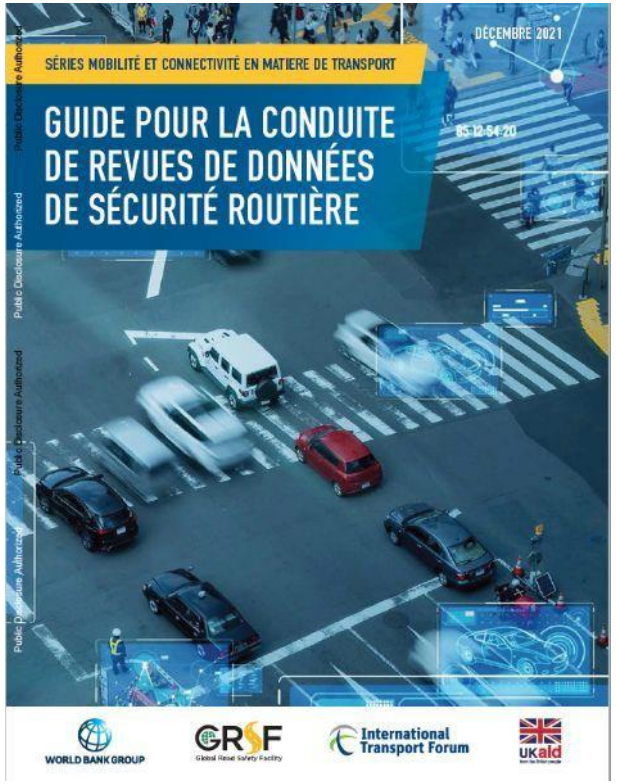
- Context, key stakeholders
- Safety Data Evaluation
  - Collection, storage
  - Completeness
  - Quality
  - Links with other data
  - Uses
- Recommendations
  - Organization of data collection
  - Methods, training, communication
  - Use of existing road safety data
  - Additional data to collect

The guide

Versions

English and French versions available
Spanish version to come





Martensen, Heike; Duchamp, Gilles; Feypell, Veronique; Raffo, Veronica Ines; Burlacu, F. Alina; Turner, Blair; Paala, Mirick. 2022. Guidelines for Conducting Road Safety Data Reviews. Mobility and Transport Connectivity;. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/36835 License: CC BY 3.0 IGO

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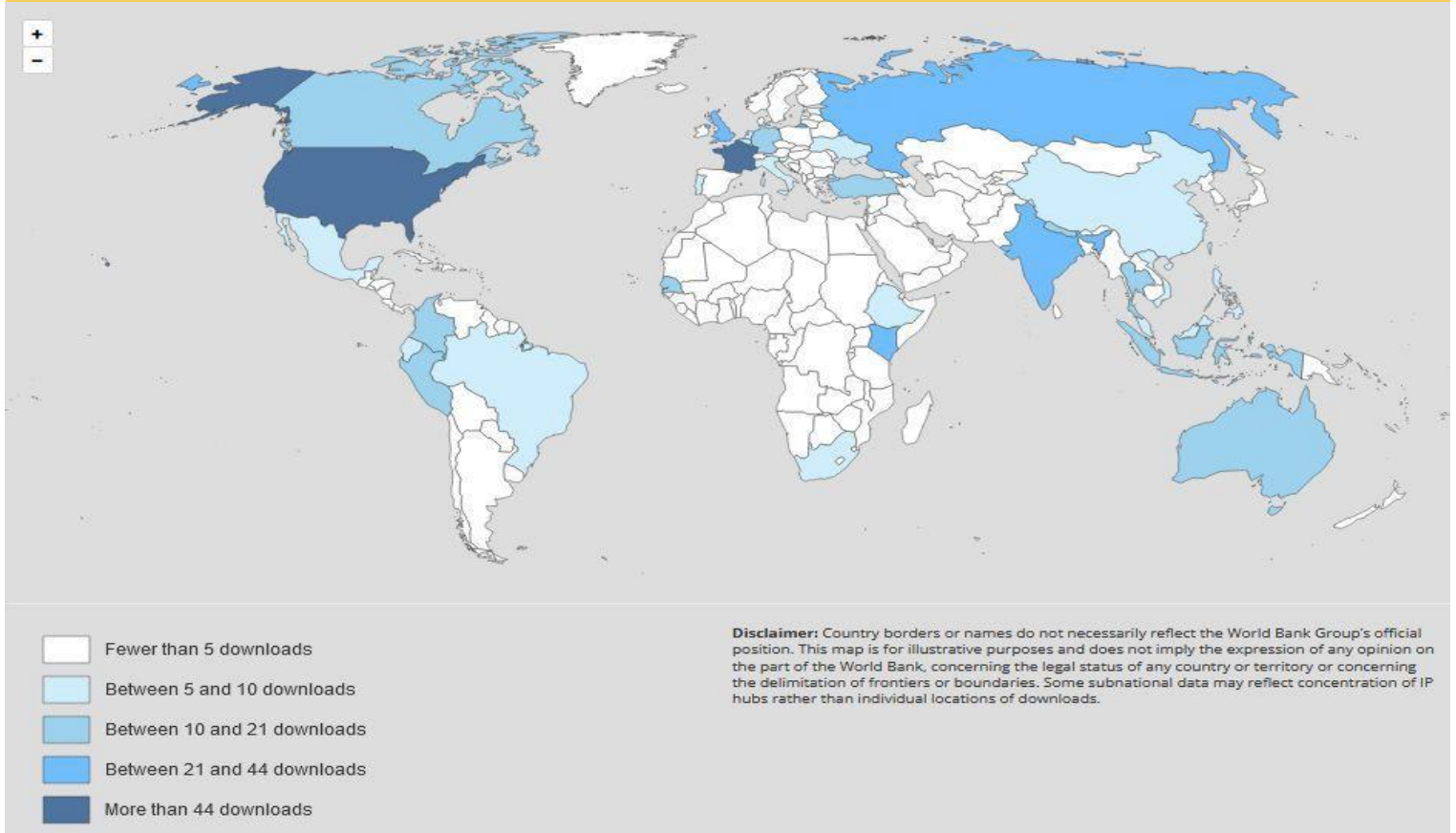

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