ROAD SAFETY STATISTICS AND INDICATORS
CASE STUDY - SERBIA

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International Road Safety Centre (www.irscreadsafety.org) is a platform for RS activities, transfer and cooperation in all 5 RS pillars.
CURRENT STATE

ROAD SAFETY MANAGEMENT (ISO 39001)

TARGET STATE

ROAD SAFETY MEASURES

CONTEXT?
WHY DO WE COLLECT DATA?

Prepare and implement **RS STRATEGY**
– Define the **current state** / to quantify/
– Define the **wanted (target) state** / to quantify/
– Evaluate the **RS countermeasures** / to measure effects/
– **Monitor** implementation of RS Strategy

– “BENCHMARKING” …
WHAT DATA TO COLLECT? (1/2)

TRADITIONAL/ MODERN APPROACH?
WHAT DATA TO COLLECT? (2/2)

- **Final outcomes** / Fatalities, injuries, road crashes/

- **RSPI** / RS performance indicators
- **Capacity and integrity** of individuals and institutions,
- **Organization** of RS activities
- **RS Activities**
- **Environment** / Legislation and other Circumstances/
- **Awareness, Attitudes, Knowledge** about risks in traffic,
- **Total socio-economic costs** of Road crashes
HOW TO COLLECT DATA
- Serbian experience - (1/5)

- Capacity and integrity of individuals and institutions,
- Organization of RS activities
- RS Activities
- Environment / Legislation and other Circumstances/

Expert’s REVIEW (WB projects, EBRD ...)
- Twining project Sweden-Serbia, SweRoad, 2002-2004
- Tony Bliss, ...
- Breen, Howard, ...
- Louis Berger, 2015...
Some data we collected by EU projects …

- Awareness, Attitudes and Knowledge

SARTRE:

- Social Attitudes to Road Traffic Risk in Europe
Police collect data about final outcomes …

- Final outcomes /Fatalities, injuries, road crashes/

**CADaS – Common Accident Data Set, (2016)**

1. Data about road accidents
2. Data about road
3. Data about road users
4. Data about persons
Data about costs collect by ad-hoc survey ...

• **Total socio-economic costs** of Road crashes

Belgrade university, Economic institute ...

• **Total socio-economic costs of road crashes**

*Use literature -existing results* of international (WB, PIARC, ...) and national surveys from similar countries
PROBLEM

RS Strategy and Act. plan

RS countermeasures

What is between ????

RC&C

Total RC&C Costs

(2000)
Today – in the future

PROBLEM

RS Strategy and Act. plan

RS countermeasures

RSPI – Road Safety Performance Indicators

RC&C

Total RC&C Costs

(2005)
HOW TO COLLECT DATA
- Serbian experience -

Data about RSPI collect by regular survey twice per year …

RSPI – Road Safety Performance Indicators

RTSA and Belgrade university - FTTE

• **Spring survey**: April, May 2013, 2015, 2016, 2017.
• **Autumn survey**, September 2013, 2015, 2016, 2017
Many RS performance indicators

- Organization and management
- Behaviour of road users
- Safe Vehicle
- Safe Roads
- Post crash care and activities
% of SEAT BELT USE – FRONT SEATS (AROUND THE WORLD)
% of SEAT BELT USE – FRONT SEATS
(AROUND REGIONS IN SERBIA)
RS DATABASE HAS TO BE ...

- Accessible (Web portal),
- Comprehensive,
- Optimal data coverage
- Accurate,
- Updated
- Harmonized with other countries,
- Integrated data from different sources,
THE MAIN PROBLEM
IACCESSIBILITY (WEB PORTAL)

– (NON-SENSITIVE) DATA OF PUBLIC INTEREST HAS TO BE ACCESSIBLE and
– PERSONAL (SENSITIVE) DATA MUST NOT to be visible for public
CASE STUDY - SERBIA
INTEGRATED ROAD SAFETY DATABASE

- **INTERFACE** - Every institutions send depersonalized data to Road Traffic Safety Agency
- RTSA has established **Integrated Road Safety Database**
- RTSA create different **reports**,
- IRS Database is open and free for everyone on the Internet (abs.gov.rs)
MAIN SOURCES OF DATA
(CASE STUDY – SERBIA)

Ministry of Interior Affairs /POLICE/

- Road Crashes Data (crashes, vehicles and persons involved in the crashes),
- Driving schools,
- Stations for vehicle inspections,
- Registered vehicle,
- Traffic offences (2016),
- Driver’s licences (2016).
MAIN SOURCES OF DATA
(CASE STUDY – SERBIA)

Road Traffic Safety Agency (RTSA)

- RS Performance Indicators
- Public and Traffic Risks
- Laboratories for tachographs,
- Drivers whose driving license suspended
- Theory Lecturers, instructors and examiners at driving schools,
- Tram drivers and professional drivers,
- Coordination bodies for RS at local communities (Local RS councils)
MAIN SOURCES OF DATA
(CASE STUDY – SERBIA)

Public Enterprise “Roads of Serbia” (PERS)

- “Reference system of state roads”
- Average annual daily traffic – AADT (2015).
- Automated traffic counters on the roads (2016).
- Bridges (2016).
- Tunnels (2014).
- ITS equipment on the state roads (2015).
- International E roads (2016).
Road Traffic Safety Agency Serbia
INTEGRATED ROAD SAFETY DATABASE

ABS.gov.rs
DATA
Tables, Graphics, Maps, Reports

ABS.gov.rs

USERS MANUAL
USE DATA FOR Road Safety Management
To define TARGET STATE

MISSION

VISION

GOALS
QUALITATIVE AND QUANTITATIVE GOALS

- Improve RS System
- Improve capacity and integrity of individuals and institutions;
- Improve coordination and cooperation;
- Improve knowledge, awareness and attitudes about road safety;
- Improve RS Performance Indicators;
- Reduce number of road crashes, fatalities and injuries;
- Reduce total socio-economic costs of Road Crashes.
<table>
<thead>
<tr>
<th>QUANTITATIVE GOALS</th>
<th>INTERMEDIATE GOALS</th>
<th>FINAL GOALS (2020)</th>
<th>FINAL GOALS (2020)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes (speed)</td>
<td>0%</td>
<td>25%</td>
<td>30%</td>
</tr>
<tr>
<td>Awareness (RS)</td>
<td>45%</td>
<td>47%</td>
<td>50%</td>
</tr>
<tr>
<td>RSPI (% seat belt use)</td>
<td>67%</td>
<td>78%</td>
<td>83%</td>
</tr>
<tr>
<td>Crashes</td>
<td>63,000</td>
<td>64,000</td>
<td>65,000</td>
</tr>
<tr>
<td>Fatalities</td>
<td>510</td>
<td>460</td>
<td>425</td>
</tr>
<tr>
<td>Serious Injuries</td>
<td>3,448</td>
<td>3,363</td>
<td>2,470</td>
</tr>
<tr>
<td>Costs (mil $)</td>
<td>950</td>
<td>880</td>
<td>790</td>
</tr>
</tbody>
</table>
## RS GOALS in Serbia /RSP NDICATORS/

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>% HELMETS USE</td>
<td>93,7</td>
<td>90,6</td>
<td>99</td>
</tr>
<tr>
<td>2</td>
<td>% SEAT BELT - DRIVER</td>
<td>69,9</td>
<td>77</td>
<td>95</td>
</tr>
<tr>
<td>3</td>
<td>% SEAT BELT – IN THE FRONT</td>
<td>68,1</td>
<td>75,1</td>
<td>95</td>
</tr>
<tr>
<td>4</td>
<td>% SEAT BELT – REAR SEATS</td>
<td>3,1</td>
<td>10,1</td>
<td>85</td>
</tr>
<tr>
<td>5</td>
<td>% CHILD SEAT-CHILDREN UNDER 3 Y.EARS</td>
<td>32</td>
<td>40,2</td>
<td>95</td>
</tr>
<tr>
<td>6</td>
<td>% DRIVERS OVERSPEEDING MORE THEN 10 km/h – URBAN STREETS</td>
<td>22,3*</td>
<td>17,9</td>
<td>4,9</td>
</tr>
<tr>
<td>7</td>
<td>% DRIVERS OVERSPEEDING – URBAN STREETS</td>
<td>57,6*</td>
<td>53,8</td>
<td>19</td>
</tr>
<tr>
<td>8</td>
<td>% DRIVERS OVERSPEEDING RURAL ROADS</td>
<td>39,5*</td>
<td>34,2</td>
<td>19</td>
</tr>
<tr>
<td>9</td>
<td>% DRIVERS UNDER ALCOHOL INFLUENCE – URBAN STREETS</td>
<td>1,08</td>
<td>0,67</td>
<td>0,1</td>
</tr>
<tr>
<td>10</td>
<td>% DRIVERS UNDER ALCOHOL INFLUENCE – RURAL ROADS</td>
<td>0,84</td>
<td>0,75</td>
<td>0,1</td>
</tr>
</tbody>
</table>
Use data for MONITORING IMPLEMENTATION

RS Strategy in Serbia

% seat belt use at front seats

Real

Strategy

Final goal
Use data for MONITORING IMPLEMENTATION RS Strategy in Serbia

% DRIVERS OVER SPEEDING MORE THAN 10 KM/H

Real Strategy
Use data for MONITORING IMPLEMENTATION RS Strategy in Serbia

NUMBER OF FATALITIES

Broj погинулих у Србији

Real

Strategy


Year

650 607 599 536 510 460 425 400 380 365 336

Number of lost lives 236
Use data for MONITORING IMPLEMENTATION RS Strategy in Serbia

NUMBER OF SERIOUS INJURIES

- Real
- Strategy

More serious injuries 1.153
After that analyze we improve our activities and almost achieved Strategy goals!
RS INTEGRATED DATABASE – PRECONDITION FOR RS MANAGEMENT

IMPROVE DATABASE?

Improve RS System