



EaP Road Safety Cooperation
Crash Data System and Crash Data Analysis
August 28st, 2018
VC meeting, **BELARUS**

The role and importance of Road safety database in the road safety management of country

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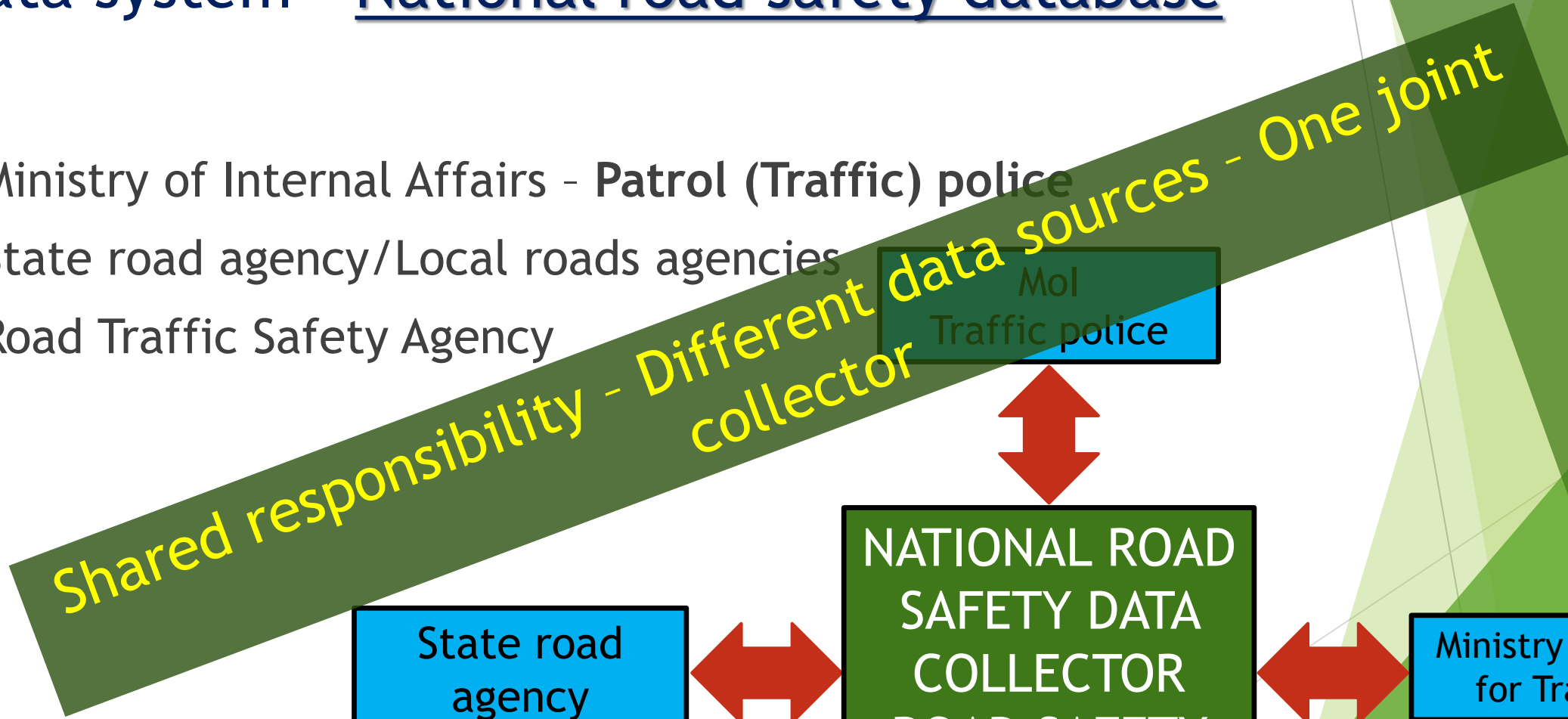
International Crash Data Specialist and Road Safety Specialist



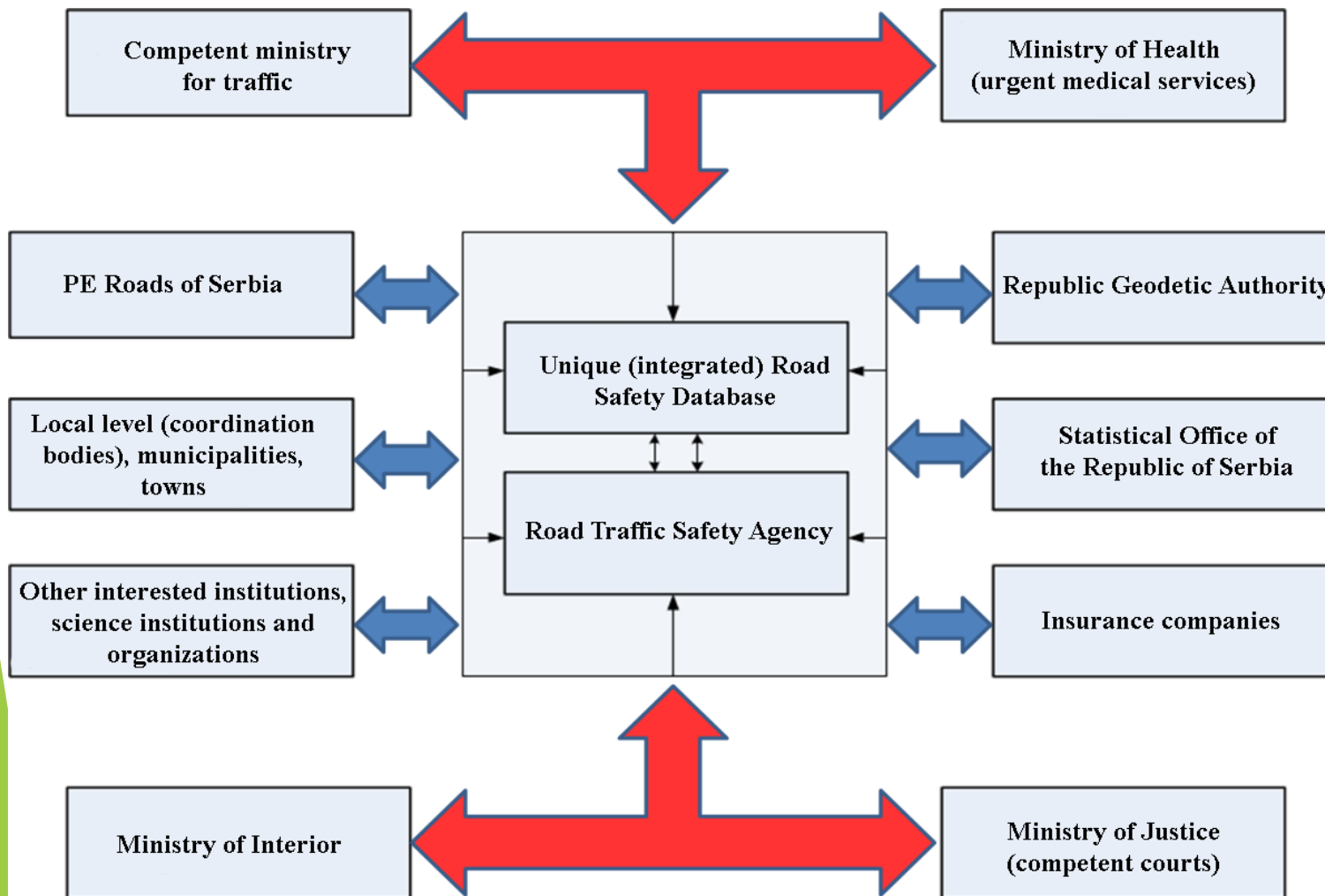
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Institutions and organizations includes in road safety data system - National road safety database

- ▶ Ministry of Internal Affairs - Patrol (Traffic) police
- ▶ State road agency/Local roads agencies
- ▶ Road Traffic Safety Agency



COORDINATION WITH OTHER STAKEHOLDERS - ESPECIALLY IN SHARING THE ROAD SAFETY DATA



Ministry of Internal Affairs - Patrol or Traffic police

- ▶ **Road accident data!!!**
- ▶ Data about traffic fines!!!
- ▶ Set of data on motor vehicle drivers???
- ▶ Set of data on registered motor vehicles???
- ▶ Set of data on driving training centers - driving schools???
- ▶ Set of data on technical inspection stations for motor vehicles???

The screenshot shows a web application interface for a traffic database. The interface is divided into several sections:

- Search Form (Pretraga):** Located at the top left, it includes a dropdown menu for 'Sloj za pretragu' (Search layer) set to 'Podaci o vozačima motornih v' (Data on motor vehicle drivers). Below it are several dropdown menus: 'POLICIJSKA UPRAVA' (BEOGRAD), 'OPŠTINA PREBIVALIŠTA' (Izaberite vrednost...), 'KATEGORIJA VOZILA' (B), and 'STAROST' (18 and 25). There are 'Pretraži' (Search) and 'Ukloni' (Remove) buttons.
- Map:** A map of Bosnia and Herzegovina is displayed on the right side of the interface, showing various regions and roads.
- Search Results (Rezultati):** A table is shown below the search form, displaying the results of the search. The table has columns for 'Pretraga', 'BROJ VOZILA', 'STAROST', 'KATEGORIJA VOZILA', 'OPŠTINA PREBIVALIŠTA', 'DODATA', and 'POLICIJSKA UPRAVA'. The table contains 10 rows of data.
- Navigation and Tools:** On the left side of the map, there are several navigation icons (home, back, forward, etc.). At the bottom right, there is a scale bar and a coordinate display.

Ministry of internal affairs - Patrol (Traffic) Police

Example 1 - Structure of road accident data

Road accidents data (**ORACLE** database)

Main sets of data

The image displays four screenshots of the Oracle Developer Forms Runtime - Web interface, showing different views of road accident data. Each window has a title bar and a menu bar (Upit, Izlaz, pQmoć).

- NEZ_PRET_P - Pregled određene nezgode:** Shows details for a specific accident. Fields include Org.jed. (215), ZRENJANIN, Vr. upisnika (nr. KU 456/2015), Vrsta (Sa pog. licima), Nn Nezgoda (Ne), Rasvetljeno, Uvidjaj (OSL), Vrsta prijave (Krivična), Obavesteni (od dežurne službe), Od lica, Vid, Karakteristika, Osobine kolovoza (ASVALT - GLADAK, RAVAN), Stanje kolovoza (SUV I ČIST), Svetlosne prilike (Noć), Vremenske prilike (Vreme je bilo oblačno, bez p), Ul. rasveta (Nema uličnih svetiljki), and buttons for Služb. lice, Mere, Fiksne t., U, Obezbedili, Ost. sl. lica, Ocevici, P.
- NEZ_PRET_LICA - Pregled svih lica iz određenog vo:** Shows details for all persons involved. Fields include Reg. oznaka (RA013-SR), RBR: vozila, Vrsta lica (Nas državljani, NN lice), JMBG, Ime*, Prezime*, Pol* (Zenski), Datum rođj* (17.12.1979), Godina rođj, Drzava rođj* (SRBIJA), Ime roditelja, Adresa (Drzava preb. SRBIJA, Opština RAŠKA, Mesto RAŠKA, Ulica, Kbroj, Napomena), Vrsta isprave (Lična karta), Broj isprave, Opština izdavanja (RAŠKA), Drzava* (SRBIJA), and Telefon, Mobilni tel.
- NEZ_P_VOZ - Pretraga podataka o vozilu u:** Shows details for a vehicle. Fields include Redni br. (1), Vozilo (Domace), Vrsta vozila* (PUTNIČKO V), Za ostala: vlasnik, Reg. oznaka* (RA013-SR), Drzava reg* (SRBIJA), Tocak upravljača (Na levoj strani), Pneumatik (zimski), Pneum. napomena, Procenjena steta (400000), Bicikl (detaljnije), Manevar vozila (Prelazak u lev), Prvi kontakt (prednji središnji), Objekat na kolovozu (Vozilo nije ud), and Objekat van kolovoza (Vozilo nije ud). Podaci o vlasniku: Vlasnik, Opština (RAŠKA), Mesto (RAŠKA), Ulica (DR MIHAJLA LUKOVIĆA), and Kbroj.
- NEZ_P_MESTO - Pojedincna pretraga mesta nezgode:** Shows details for a specific location. Fields include Kategorija (Državni put IA reda), Ulica, Opština, Mesto, Ulica, Kbr, Napomena, Ako je državni put kroz naselje, Put, Deonica, Lok./nekat. put, D. (lok./nekat. put), Stac. km (162), Stac. m (500), STARI PUT, Ostali podaci o ulici/putu (obavezni): Vr. kolovoza (Fizički odvojene kolovozne trake), Razd. linije (Razdelne linije koje razdvajaju kolovoznu traku na saobraćajne), Zaust. traka (Da), Br. saob. traka (2), Sir. kol. (11.00), Vr. ogr. brzine (opste), Ogr. brzine (120), and Upravljač (Putevi Srbije). Buttons: PRETHODNAVI, SLEDECAVI, DALJE.

Road traffic safety agency - RTSA

Example - Structure of road accident data

From Mol **ORACLE** to RTSA **SQL Server**, **txt** input files

Structure of road accidents data is defined by Traffic Police and recommendation of European Commission

Accident ID
Traffic police unit ID
Year
RA severity
Type of RA
GPS X coordinate
GPS Y coordinate
Contributory factors
Accident date
Accident time
Accident day
HIT and run accident
Investigation time (start)
Investigation time (end)
Municipality
Settlement (Yes/No)
Intersection type

The screenshot displays the Microsoft SQL Server Management Studio interface. The main window shows a query window with the following SQL code:

```
SELECT TOP (1000) [OBJECTID]
,[PU_ID]
,[PU_Name]
,[Godina]
,[Broj_testiranih]
,[Alkohol_do_03]
,[Alkohol_preko_03]
,[Radnim_danima]
,[Vikendom]
,[Dan]
,[Noc]
,[Naselje]
,[Van_naselja]
,[Ukupno]
,[KlasaNaselje]
,[KlasaVanNaselja]
,[KlasaUkupno]
FROM [GIS_ABS].[sde].[INDIKATORI_ALKOHOL]
```

The Results pane shows the following data:

| OBJECTID | PU_ID | PU_Name | Godina | Broj_testiranih | Alkohol_do_03 | Alkohol_preko_03 | Radnim_danima | Vikendom | Dan | Noc | Naselje | Van_naselja | Ukupno | KlasaNaselje | KlasaVanNaselja | KI |
|----------|-------|------------|--------|-----------------|---------------|------------------|---------------|------------|------------|------------|------------|-------------|--------|--------------|-----------------|----|
| 1 | 100 | Sibija | 2013 | 36876 | 1.74000000 | 0.95000000 | 0.88000000 | 1.08000000 | NULL | NULL | 1.08000000 | 0.84000000 | NULL | 5 | 5 | N |
| 2 | 2 | Beograd | 2013 | 2521 | 1.35000000 | 0.67000000 | 1.29000000 | 0.31000000 | 0.31000000 | 1.29000000 | 0.58000000 | 0.87000000 | NULL | 5 | 5 | N |
| 3 | 3 | Kragujevac | 2013 | 2798 | 2.04000000 | 1.22000000 | 1.20000000 | 1.41000000 | 0.97000000 | 1.68000000 | 1.20000000 | 1.23000000 | NULL | 5 | 5 | N |
| 4 | 4 | Jagodina | 2013 | 1093 | 2.01000000 | 1.28000000 | 0.61000000 | 2.29000000 | 0.49000000 | 2.28000000 | 1.97000000 | 0.68000000 | NULL | 5 | 5 | N |
| 5 | 5 | Naš | 2013 | 1284 | 3.27000000 | 2.02000000 | 1.40000000 | 2.94000000 | 0.79000000 | 3.82000000 | 2.41000000 | 1.62000000 | NULL | 5 | 5 | N |
| 6 | 6 | Piroć | 2013 | 951 | 2.00000000 | 0.63000000 | 0.35000000 | 1.04000000 | 0.67000000 | 0.57000000 | 0.39000000 | 0.92000000 | NULL | 5 | 5 | N |
| 7 | 7 | Prkoplje | 2013 | 699 | 1.00000000 | 0.43000000 | 0.24000000 | 0.73000000 | 0.37000000 | 0.65000000 | NULL | 0.43000000 | NULL | NULL | 5 | N |
| 8 | 8 | Leskovac | 2013 | 1061 | 0.75000000 | 0.47000000 | 0.64000000 | 0.23000000 | 0.16000000 | 0.91000000 | 0.38000000 | 0.63000000 | NULL | 5 | 5 | N |
| 9 | 9 | Vranje | 2013 | 1109 | 1.80000000 | 0.63000000 | 0.88000000 | 0.23000000 | 0.16000000 | 1.24000000 | 0.00000000 | 0.95000000 | NULL | 1 | 5 | N |
| 10 | 10 | Zaječar | 2013 | 1360 | 1.69000000 | 1.03000000 | 0.70000000 | 1.60000000 | 0.50000000 | 1.78000000 | 1.37000000 | 0.82000000 | NULL | 5 | 5 | N |
| 11 | 11 | Bor | 2013 | 1023 | 1.27000000 | 0.59000000 | 0.83000000 | 0.22000000 | 0.00000000 | 1.81000000 | 1.00000000 | 0.25000000 | NULL | 5 | 4 | N |
| 12 | 12 | Smederevo | 2013 | 863 | 3.01000000 | 0.93000000 | 1.42000000 | 0.00000000 | 0.00000000 | 1.46000000 | 1.47000000 | 0.26000000 | NULL | 5 | 4 | N |
| 13 | 13 | Pažnjevac | 2013 | 1108 | 2.17000000 | 1.44000000 | 2.10000000 | 0.45000000 | 0.98000000 | 2.02000000 | 1.39000000 | 1.52000000 | NULL | 5 | 5 | N |

The Properties pane on the right shows connection details for the current connection.

Road traffic safety agency - RTSA or???

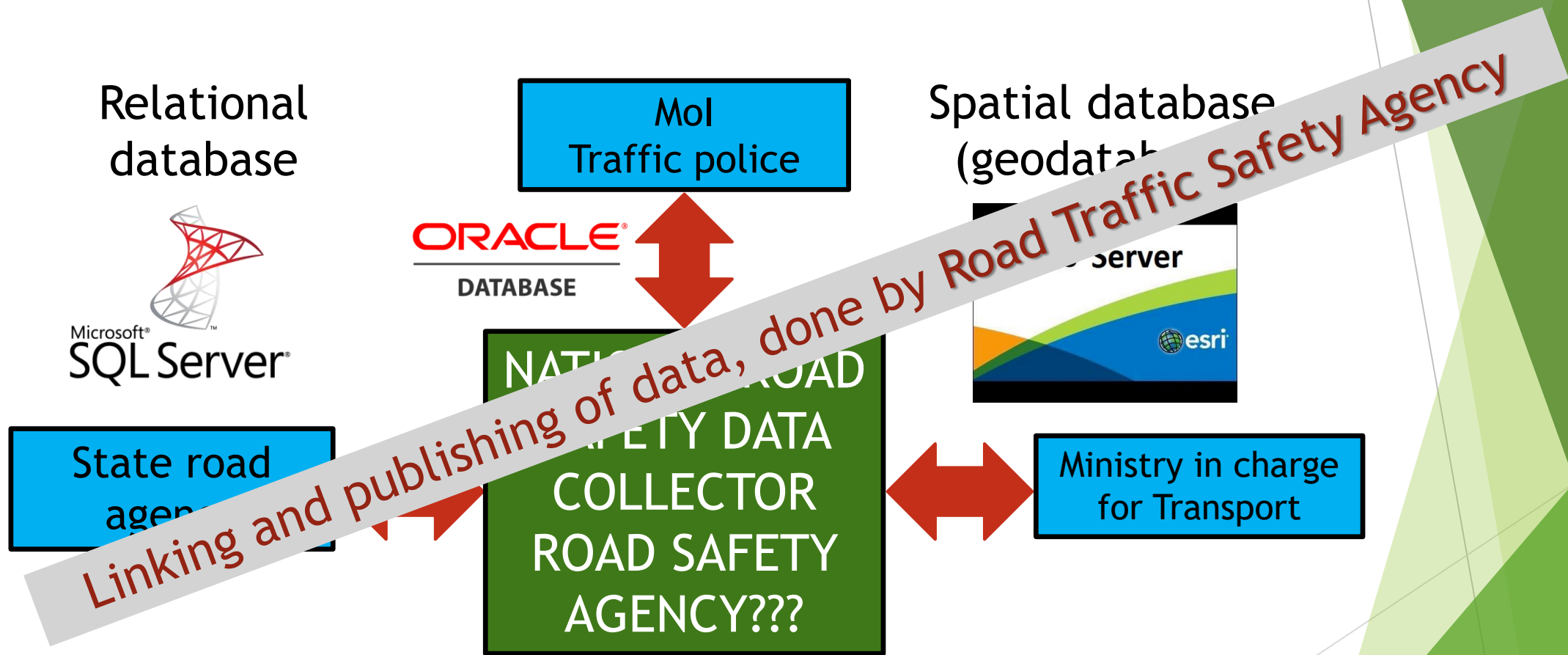
- ▶ **SPI - road users behavior (seat belt use, mobile phone use, helmet use, speed measurement, child seats use...)**
- ▶ Social attitudes (important for road safety campaigns)
- ▶ Road safety casualties risks (risk analysis)
- ▶ Negligent drivers - with confiscated driver licenses
- ▶ Set of data on: lecturers, examiners, instructors (for driving schools), professional drivers - CPC...
- ▶ Tachograph workshops for buses and heavy goods vehicles
- ▶ Technicians in tachograph workshops
- ▶ The Number of licensees of technicians in tachograph workshop by municipalities
- ▶ Local road safety bodies

State Road Agency and Local Road Agencies

- ▶ **Data about state roads - state reference system (input format - .gdb (ArcGIS geodatabase file))**
- ▶ Set of data on AADT by sections (.gdb file)
- ▶ Locations of traffic counters (.gdb file)
- ▶ Traffic signs data set (.gdb file)
- ▶ Set of data on “Black spots” (.gdb file)
- ▶ Bridges (.gdb file)
- ▶ Tunnels (.gdb file)
- ▶ Landslides (.gdb file)
- ▶ ITS devices (.gdb file)
- ▶ International E roads (.gdb file)

All data sets are for state and local roads!!!

National road safety database



WEB GIS application public available: <http://bazabs.abs.gov.rs/>

Sharing the road safety data - Examples

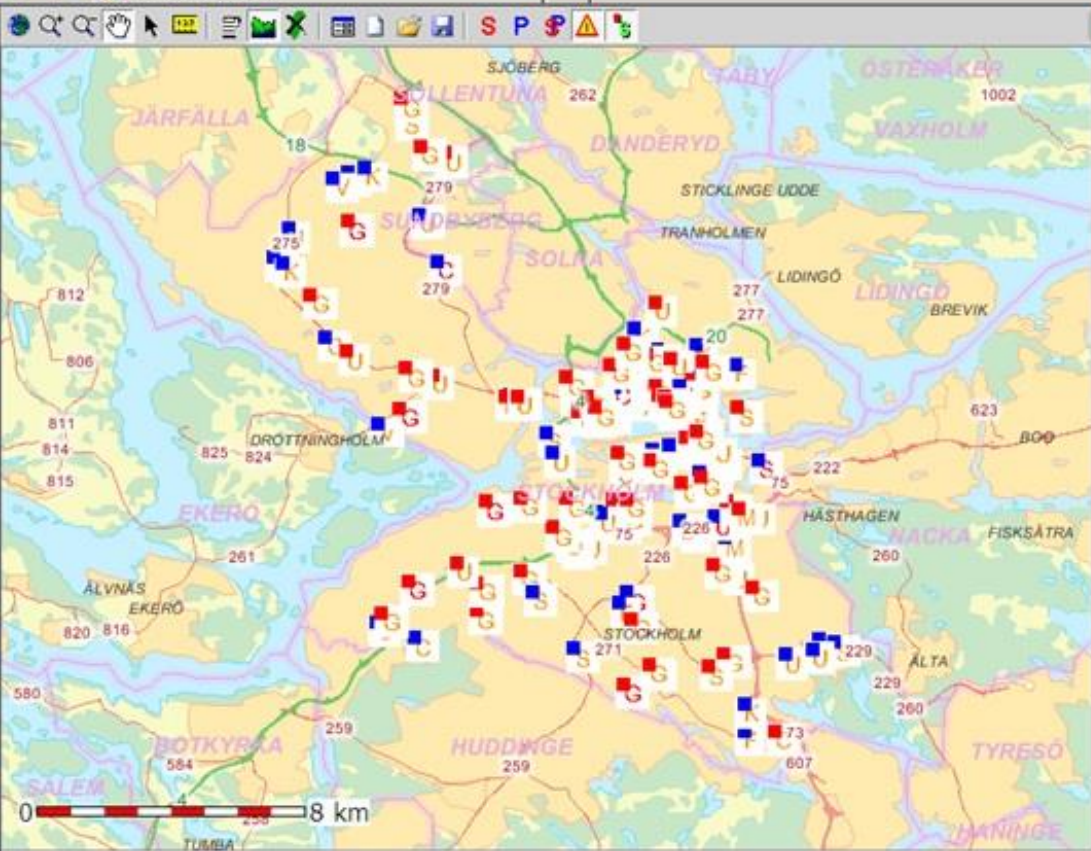
SWEDEN

TRAFIKVERKET - Swedish Transport Administration

STRADA Uttagsswebb - Windows Internet Explorer

https://strada.vv.se/stradauttag/index.aspx

STRADA Uttagsswebb



Antal olyckor: 150, varav 17 med osäker position och 6 utan position

| Olyckskod | Q | X |
|-----------|-------|---|
| 901064 | Q:0 | X |
| 901145 | Q:0 | X |
| 901261 | Q:0 | X |
| 901423 | Q:99 | X |
| 901460 | Q:100 | X |
| 901467 | Q:0 | X |
| 901563 | Q:100 | X |
| 901571 | Q:0 | X |
| 901576 | Q:0 | X |
| 901586 | Q:0 | X |
| 901646 | Q:100 | X |
| 901651 | Q:97 | X |
| 901654 | Q:68 | X |
| 901699 | Q:100 | X |
| 901705 | Q:0 | X |
| 901849 | Q:100 | X |
| 901850 | Q:0 | X |
| 901851 | Q:99 | X |
| 901855 | Q:0 | X |
| 901923 | Q:0 | X |
| 902015 | Q:0 | X |
| 902022 | Q:100 | X |
| 902030 | Q:0 | X |
| 902039 | Q:0 | X |
| 902081 | Q:99 | X |
| 902084 | Q:0 | X |
| 902085 | Q:0 | X |
| 902212 | Q:0 | X |
| 902218 | Q:0 | X |

STRADA

Inloggad som Marie Skyving

Kontrollera till

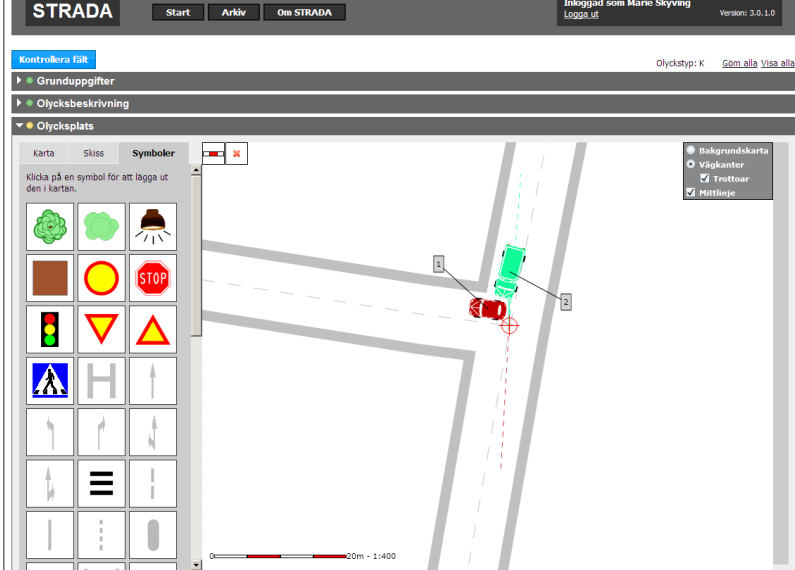
Grunduppgifter

Olycksbeskrivning

Olycksplats

Karta Skiss Symboler

Klicka på en symbol för att lägga ut den i kartan.



0 20m - 1:400

Stadad Osadlad Skada okänd

Snabbmätning (AIS-kod)

Whole area
Vessels
Injury
Muscles tendons ligaments
Skeletal
External

740099.9 - Muscle, tendon or ligament injury NFS
740400.0 - Muscle tear; avulsion NFS
740200.1 - Tendon tear; avulsion

740401.1 - partial disruption
740402.2 - complete disruption
740402.1 - contusion; strain

ICD kod
T11.5 - Skada på övre extremitet

Lägg till

| AIS-kod | ICD-kod | Beskrivning | Ta bort |
|----------|---------|---|---------|
| 771010.1 | S43.4 | Joints - Shoulder (glenohumeral) joint NFS - sprain | X |
| 854111.2 | S82.10 | Skeletal - Tibia fracture NFS - Proximal Tibia fracture NFS | X |

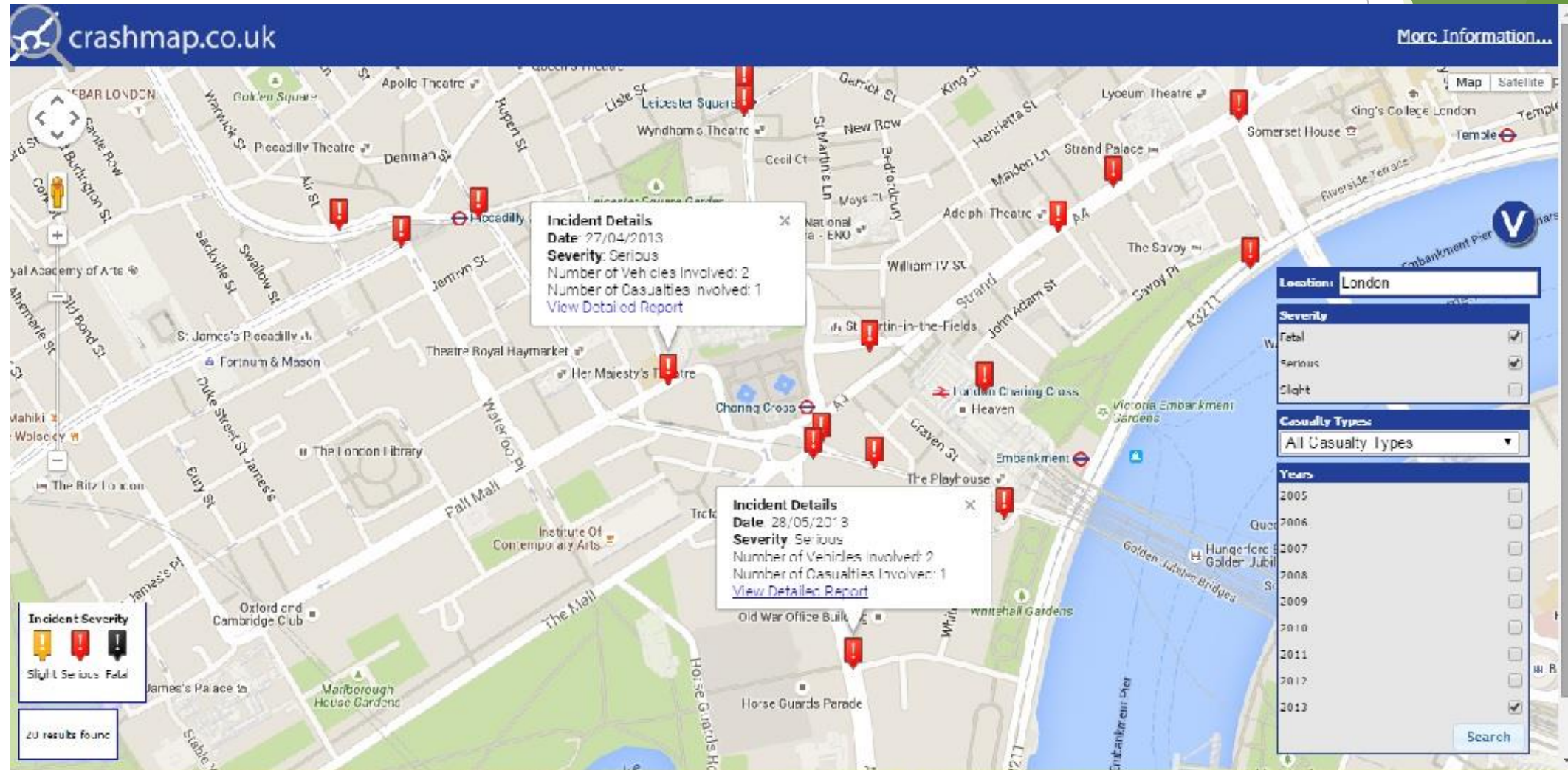
ISS: 4 Max AIS: 2

Sharing the road safety data - Examples

Great Britain



Department of Transport and others ...
„Crash Map Community“



Sharing the road safety data - Examples

Slovenija



Traffic Police and
Road Traffic Safety Agency

Nesreče

Čas in prostor

Datum
od: 1.1.2012
do: 31.12.2012

Statistična regija
vse
Gorenjska
Goriška

Občina
Brezovica
Cankova
Cele

Mesec
7 - julij
8 - avgust
9 - september

Dan v tednu
4 - četrtek
5 - petek
6 - sobota

Dan/noč
vse
dan
noč

Urni interval
vse
00-01
01-02

Prometne nezgode (pojasnila)

| key | regija | občina | datum | dan | dan/noč | ura | vreme | vozišče | promet | klasifikacija | tip | vzrok | dc | vrsta ceste | naselje | kraj | ime ceste | oznaka ceste | ime odseka | o: | o: |
|---------|-----------|--------|------------|-----|---------|-------|-------|---------|--------|---------------|-----|-------|----|-------------|---------|------|-----------|--------------|---------------|----|----|
| 0746887 | SAVINJSKA | Celje | 17.08.2012 | 5 | dan | 12-13 | J | AZ | N | B | OP | PV | LC | N | D | PC | CELJE 11 | | DEEKOVA CESTA | | |

Merilo 1 : 7500

Št. nesreč, ki ustreza nastavljenim kriterijem: 147

[Navodila in informacije](#)

Success in the monitoring of the state of road safety

THE QUALITY ROAD SAFETY DATA

DEVELOPMENT OF ROAD SAFETY DATABASE

DEFINING THE STANDARD FOR MONITORING THE STATE OF ROAD SAFETY



Thank You



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