

Heatmap vizualizace dat v oblasti dopravy

OTEVŘENÁ DATA A OTEVŘENÝ SOFTWARE NEJEN PRO KOMERČNÍ SEKTOR
23.1.2017 Praha

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iS-practice

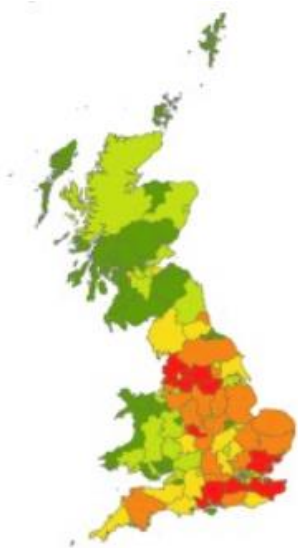
Open 
Transport Net



Visualisation of Data

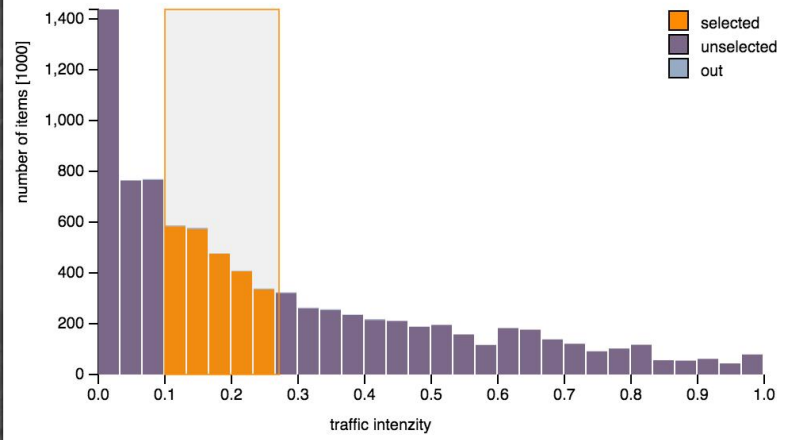
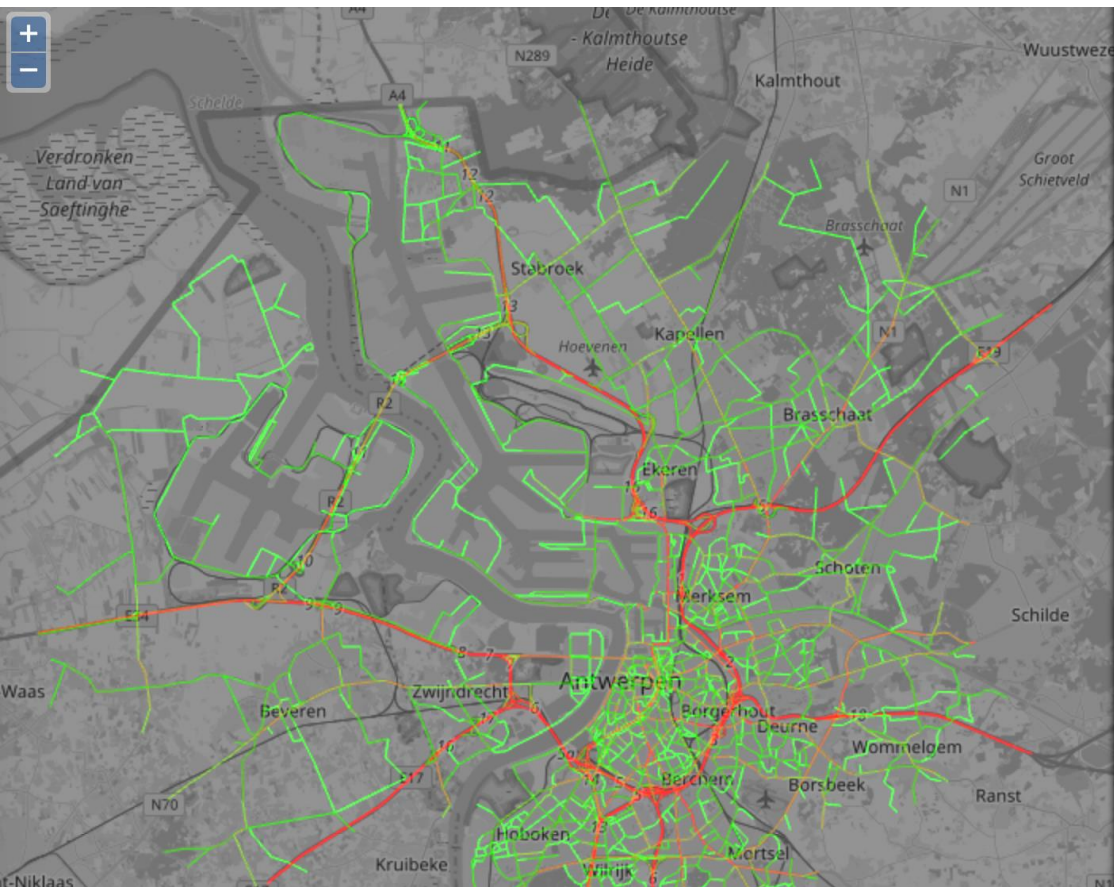
„The purpose of visualization is insight,
not picture“

- *Ben Shneiderman, 1994*



Big Data Visualisation with WebGLayer

- JavaScript library (open source)
- Big data visualisation through web browser



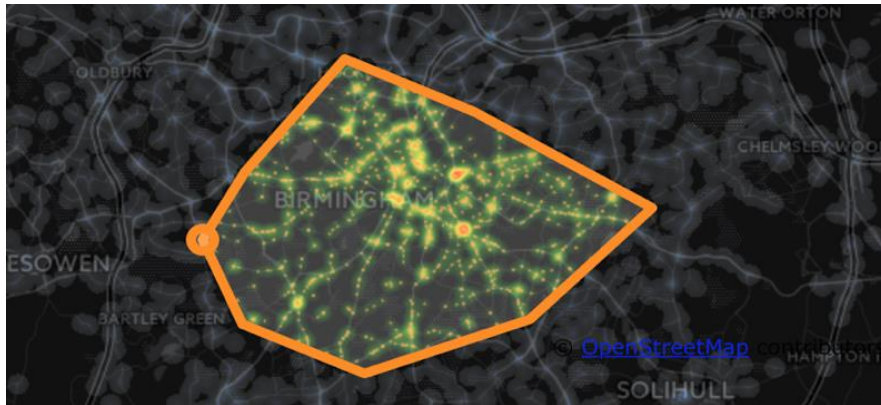
Features

- Interactive visualisation of up to 1.5 mil data records
- Response time below 100ms
- Compatible with 3rd party map API (Leaflet, Google maps)

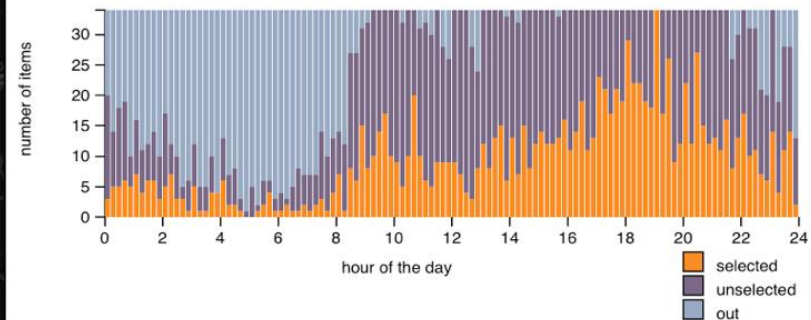
- 
- ✓ **Interactivity**
 - ✓ **Scalability**
 - ✓ **Responsiveness**
 - ✓ **Web-based, no specific GIS software**

Linked Views and Filters

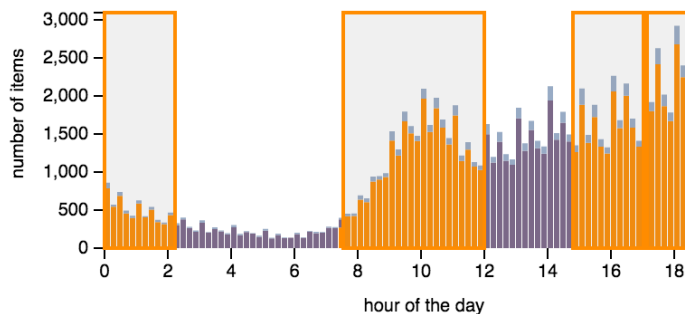
- interactive filtering and zooming



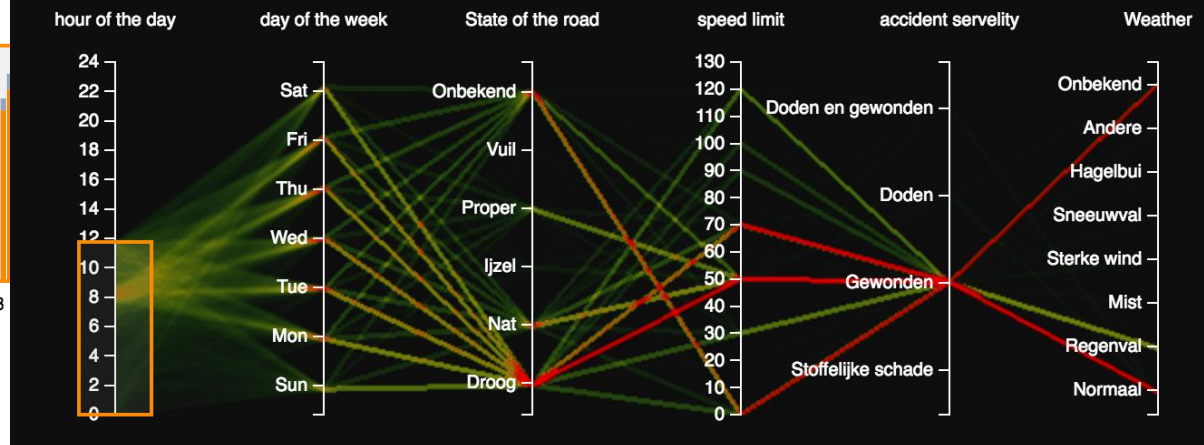
▼ Hour of the day



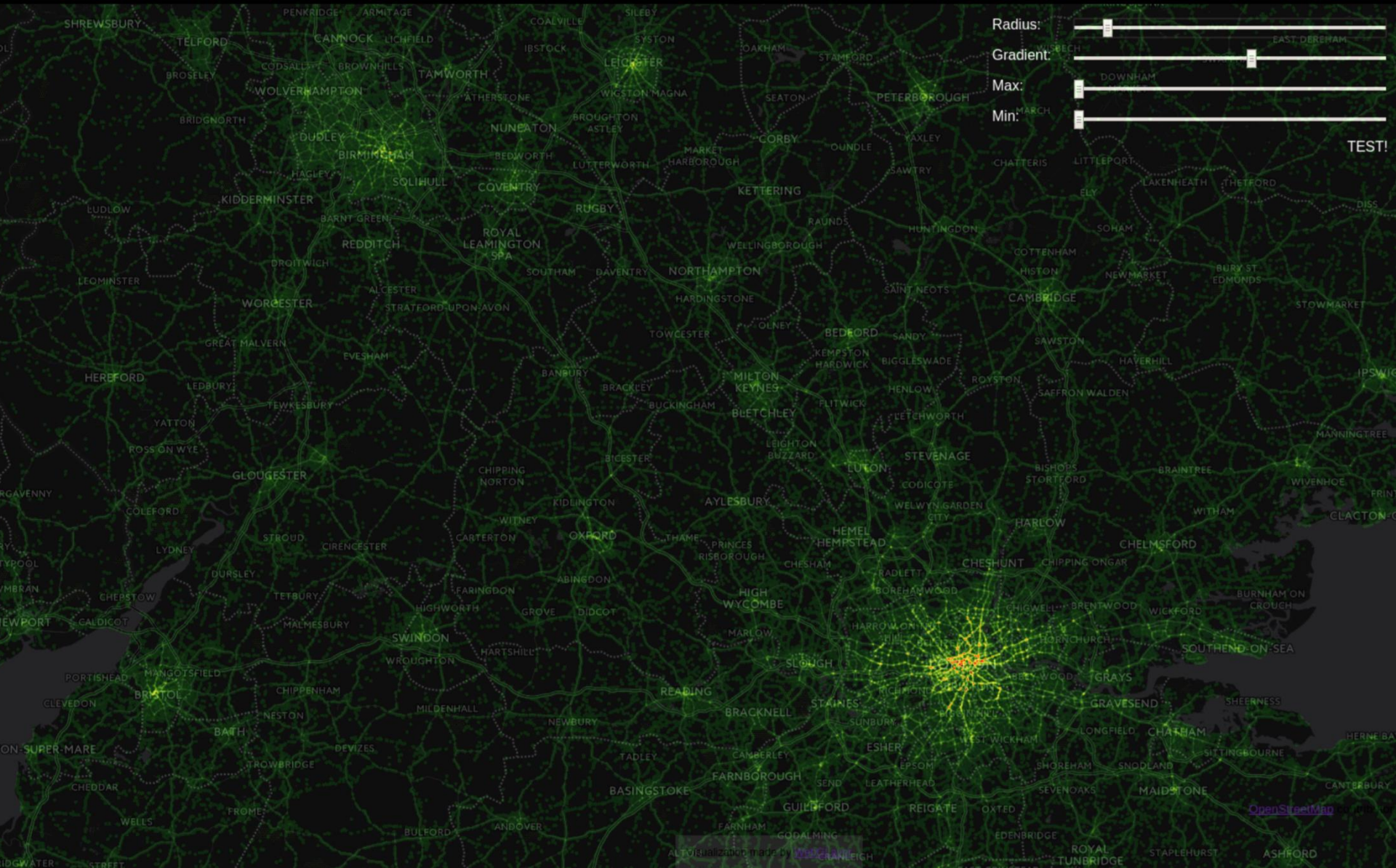
▼ Hour of the day



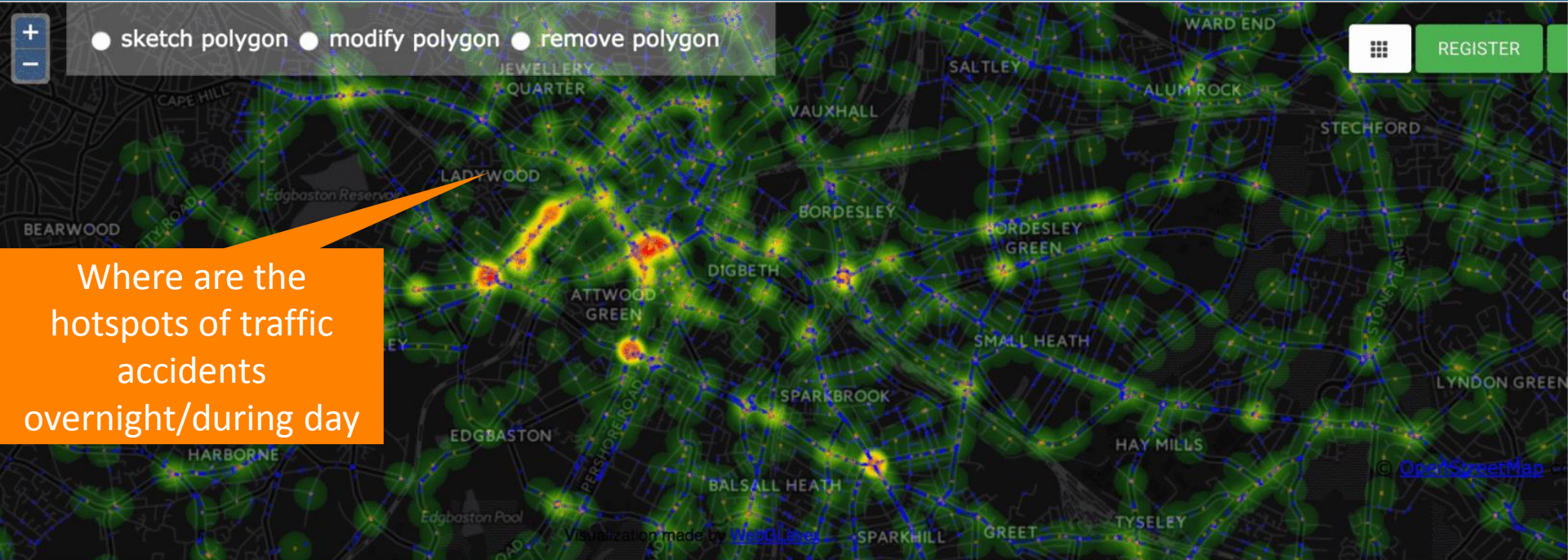
▼ Parallel Coordinates



UK 1.5 million traffic accidents



UK Traffic Accidents Analysis



Parallel Coordinates

hour of the day

day of the week

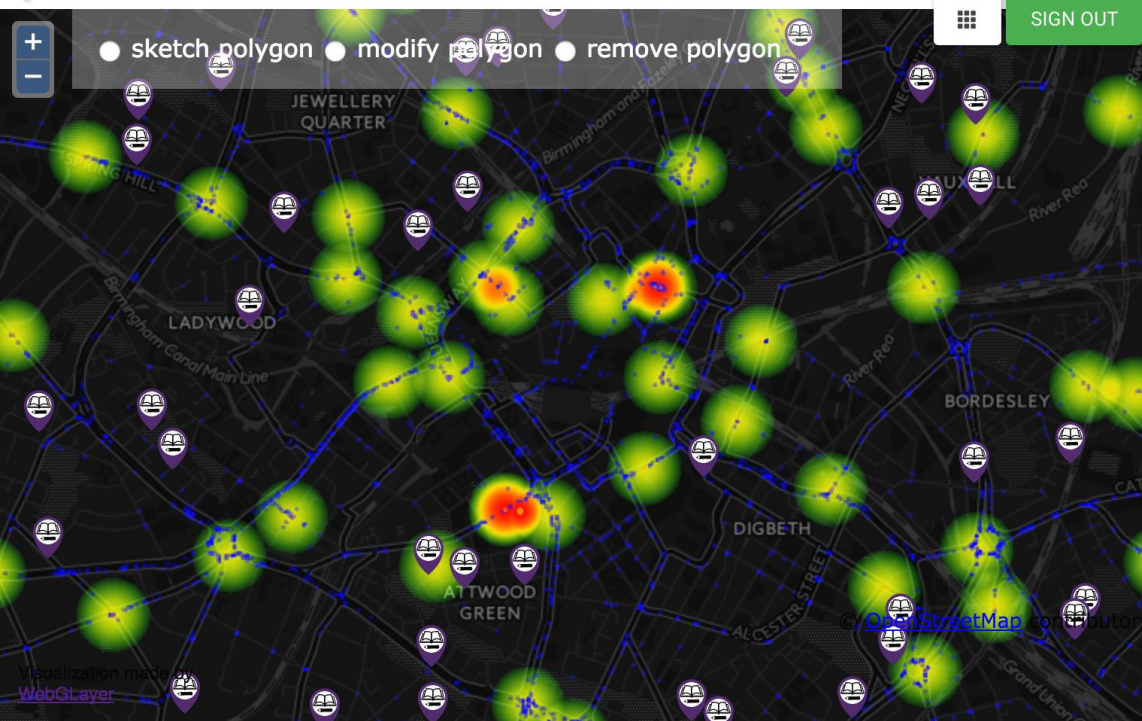
road type

Speed limit

accident severity



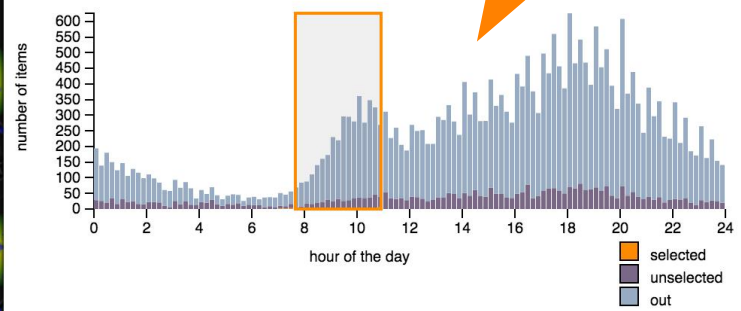
Serious accidents around schools at 8-10 AM on weekdays



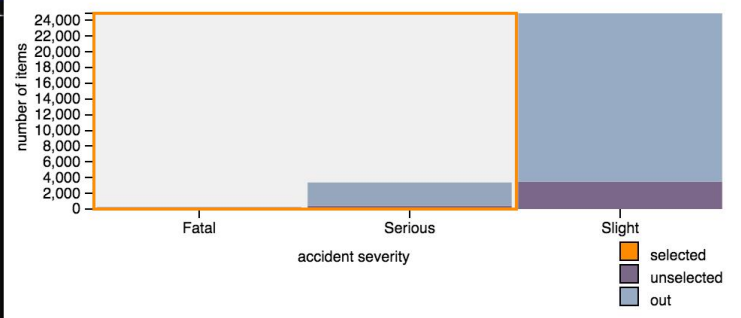
Select data through the charts

- accidents
- schools
- Reset

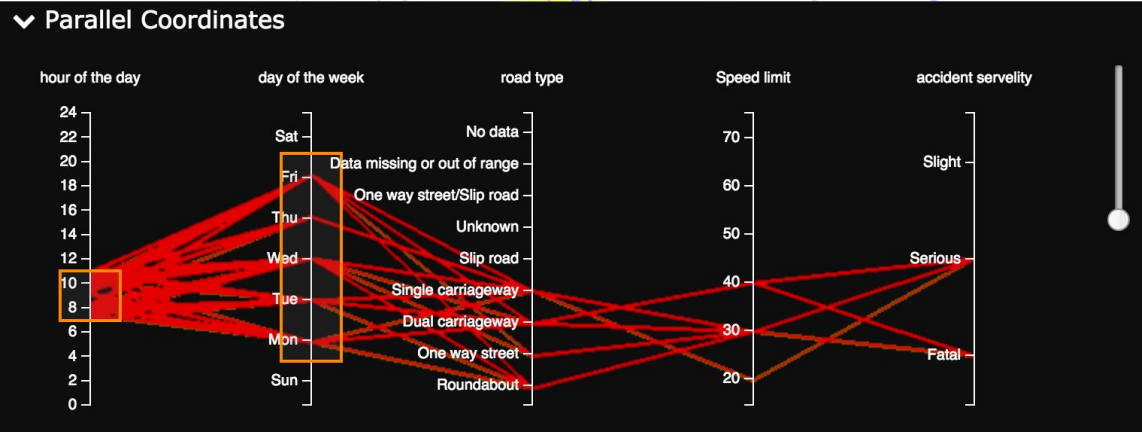
- > Heat map
- > Day of the week
- ▼ Hour of the day



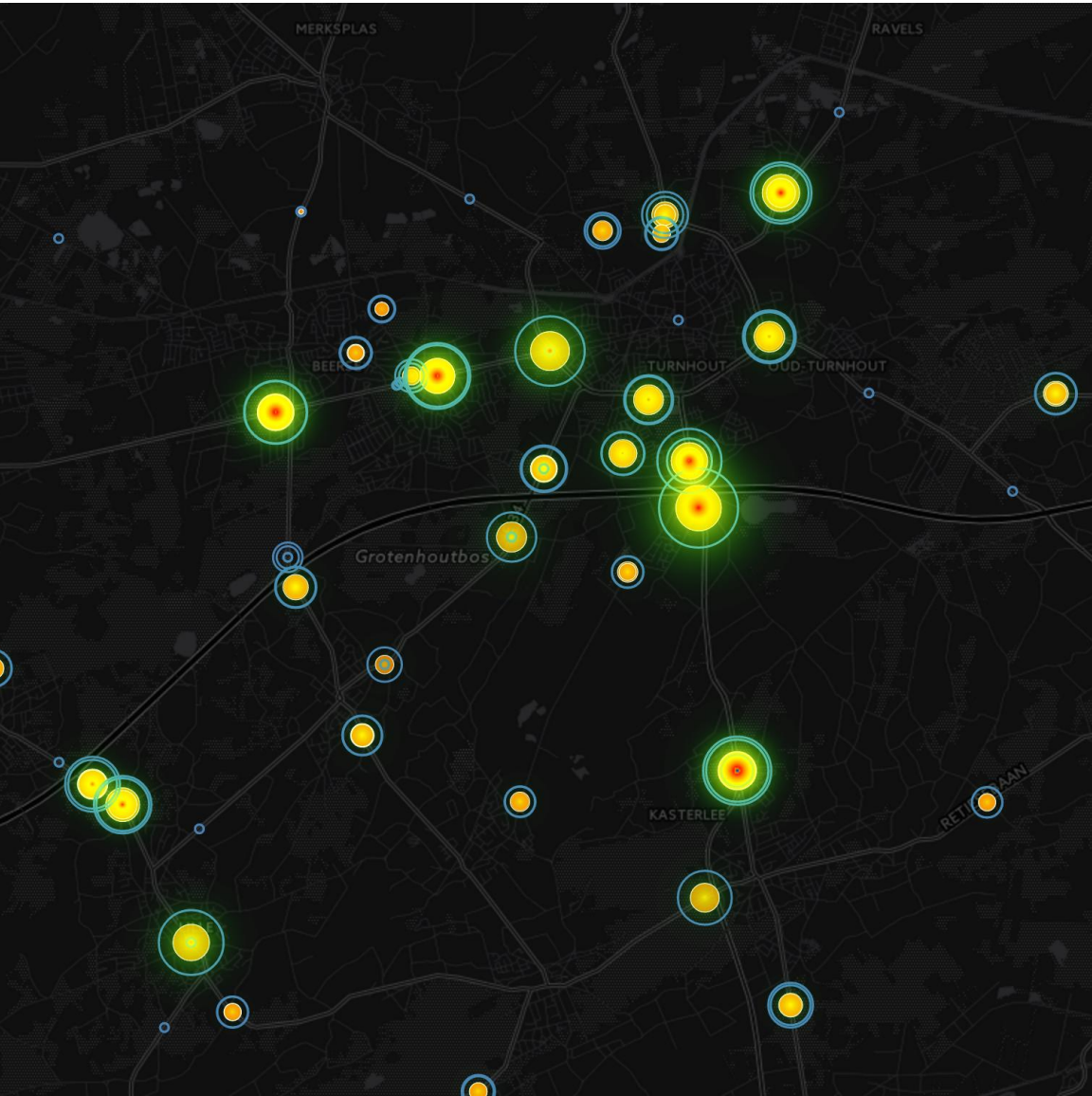
- ▼ Accident severity



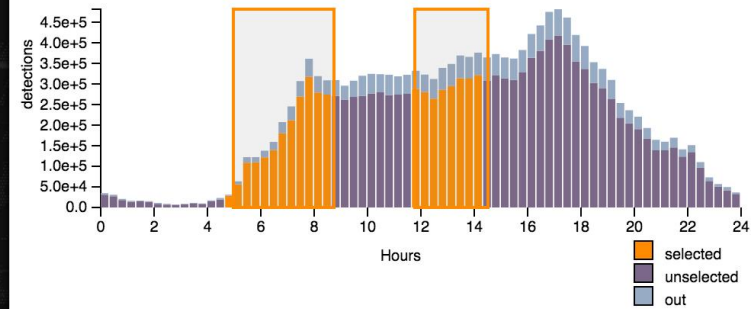
- > Speed Limit
- > Date



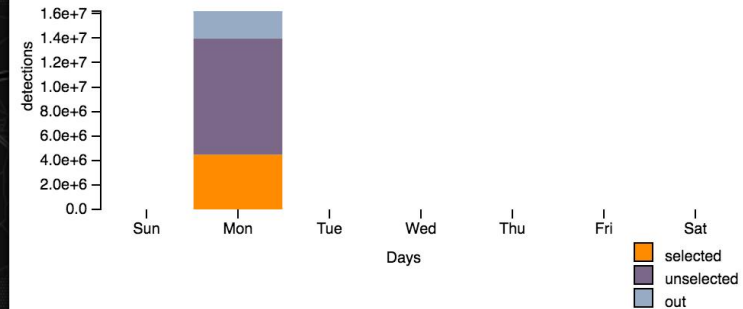
Belgium: Road Sensor Data Analysis



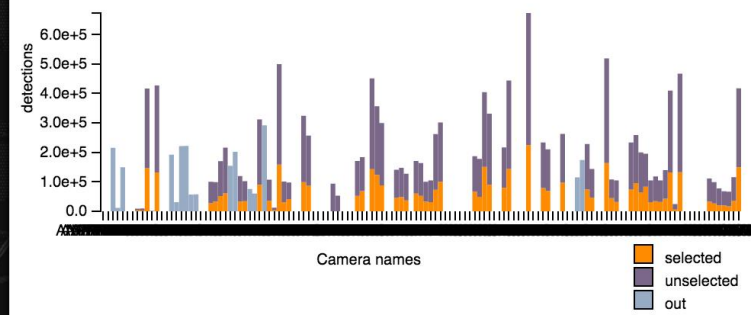
▼ Detection by hours



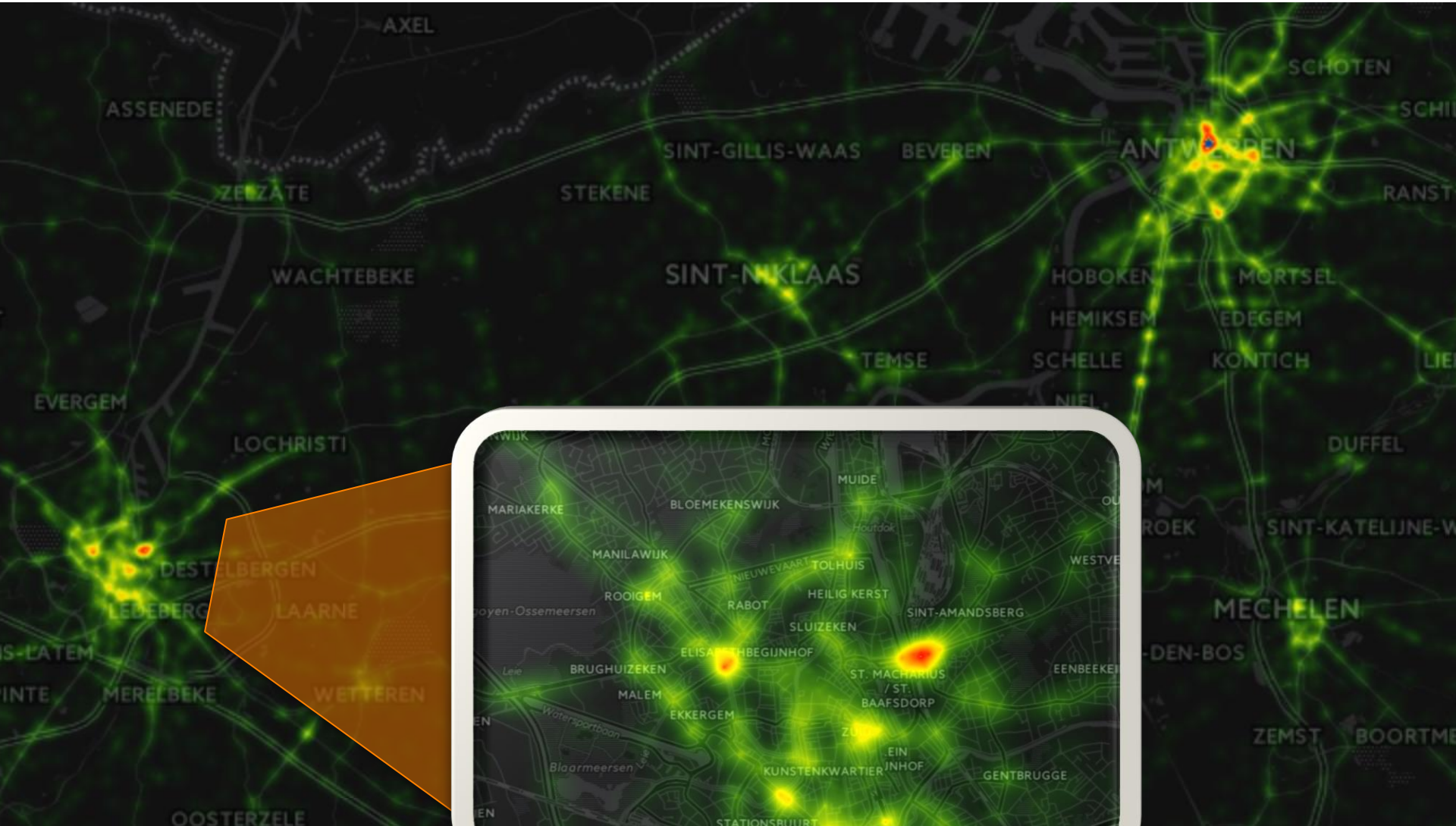
▼ Detection by days



▼ Cameras detections



Flanders: 63.000+ Traffic Accidents



Try It Yourself!

The screenshot shows the Open Transport Net website interface. At the top, there is a navigation bar with a large 'A' logo and several menu items: Apps and services, City Hubs, Business Support, Developer Tools, Developer Challenges, and FAQ. To the right of these are links for Register, Sign In, and Contact us. Below the navigation bar is a banner image of a city skyline with an 'Explore Maps' button. The main content area features the 'Open Transport Net' logo and a secondary navigation bar with icons for Apps, City Hubs, Business Support, Developer Tools, Developer Challenges, FAQ, Services, and My Contributions. Below this is a large image of a crowd of people with an 'Explore Maps' button overlaid. The featured article is titled 'TRAFFIC ACCIDENTS IN FLANDERS' and includes an abstract and a URL. At the bottom left of the article, there are social media sharing icons for Facebook, Twitter, LinkedIn, Email, and a plus sign for more options.

Test the Hub and the apps

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