

A nighttime photograph of Aalborg University buildings. The central building is brightly lit, with its lights reflecting in a pond in the foreground. To the right, another building with a glass facade is also lit. The sky is dark, and the overall scene is a mix of warm artificial light and cool natural light.

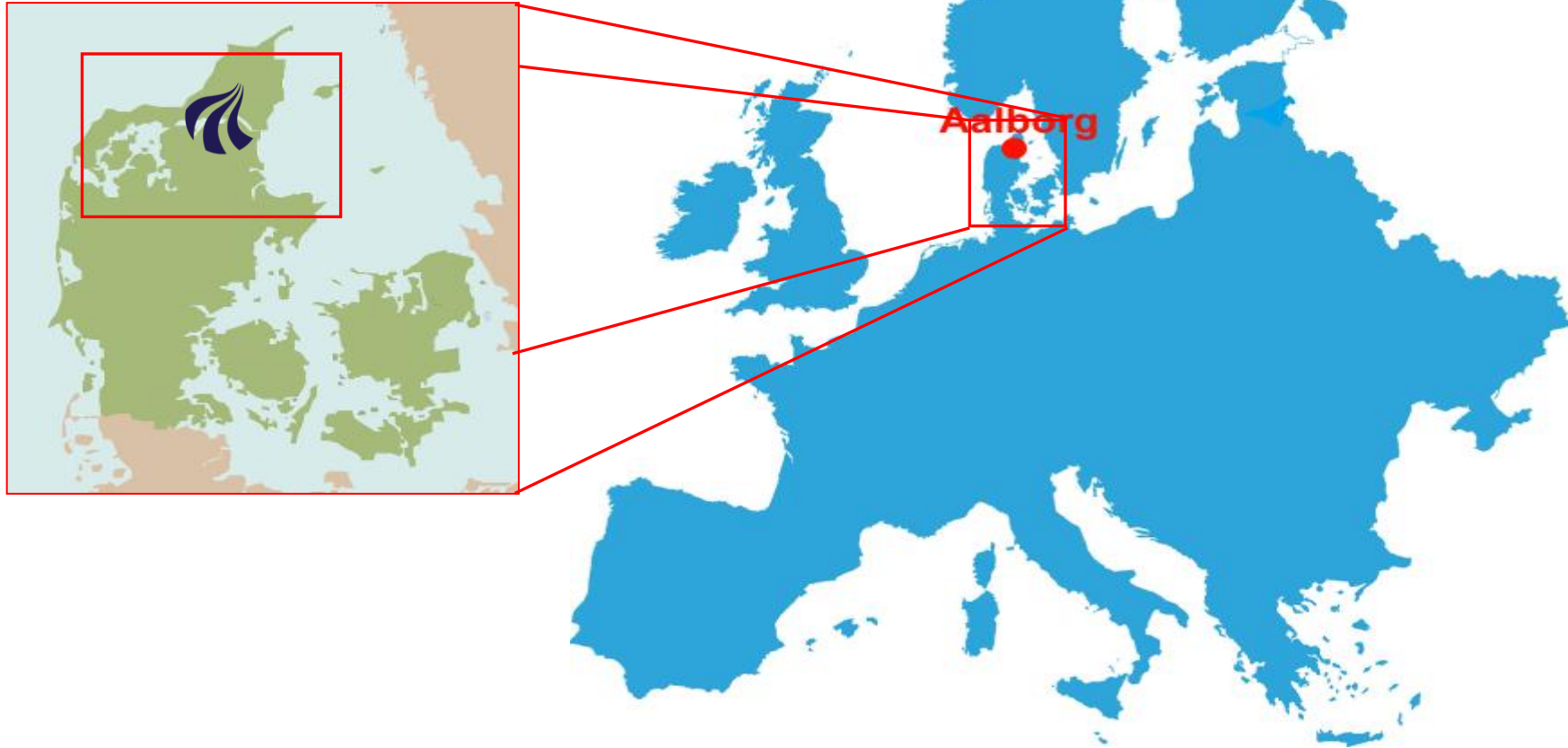
# FOT AT AALBORG UNIVERSITY

THE USE OF FOT DATA FOR IDENTIFICATION OF HAZARDOUS  
ROAD LOCATIONS



AALBORG UNIVERSITY  
DENMARK

# Where?



# Identification of Hazardous Road Locations on the basis of Floating Car Data

- Hazardous Road Location (HRL) is also known as Black Spot
  - A location which is more accident-prone than it should be expected due to traffic level, road furniture and road design.



# Data source



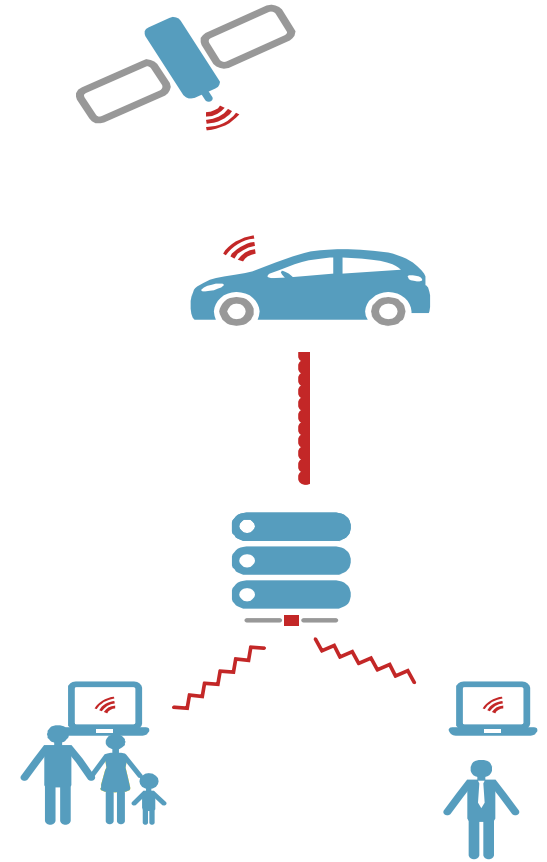
# ITS Platform (<http://itsplatform.eu/>)

- 2010-2014
- On Board Unit (OBU) with a number of sensors:
  - GPS
  - Accelerometer
  - Gyro
- Backend server
- Close cooperation between university and private companies



# More info on ITS Platform

- OBU in ~ 425 cars
- Floating Car Data (FCD):
  - >2,000,000 waypoints/day
  - ~25,000 km each day
  - Acceleration data (3 directions and 10 Hz.)
    - >60,000,000 acceleration/day

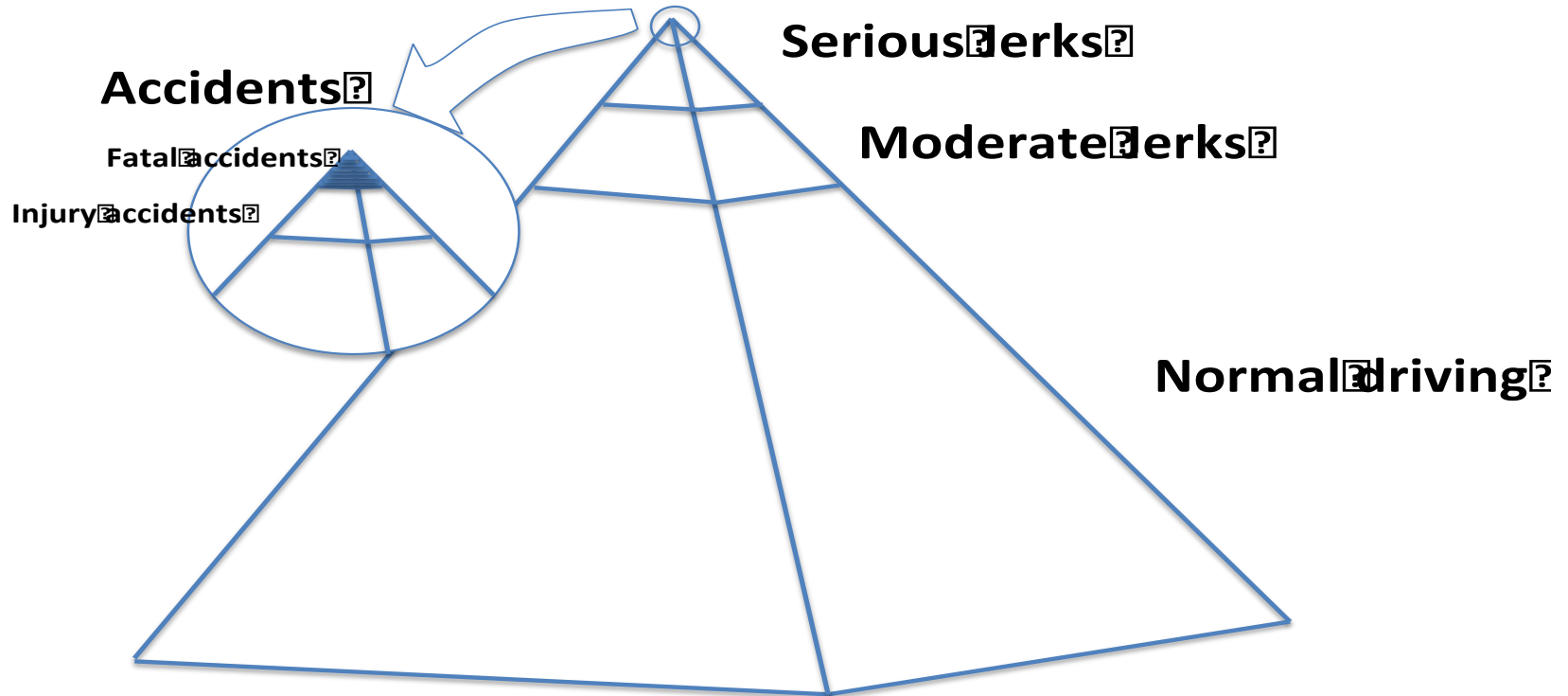


# HRL indicator

- Decelerations?
- Jerks (derived of decelerations)?
  - Nygård (1999)
  - Svendsen et al. (2008)
  - Bagdadi & Várhelyi (2011)

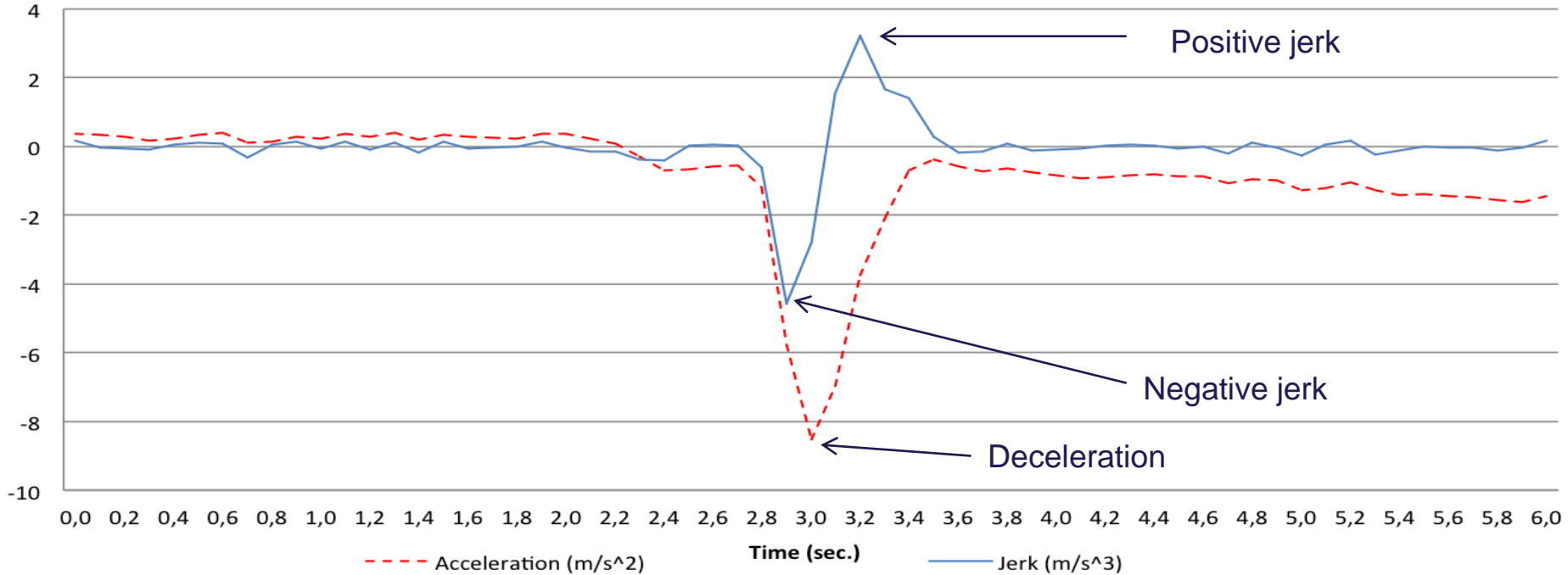


In principle it is an area-based conflict study technique

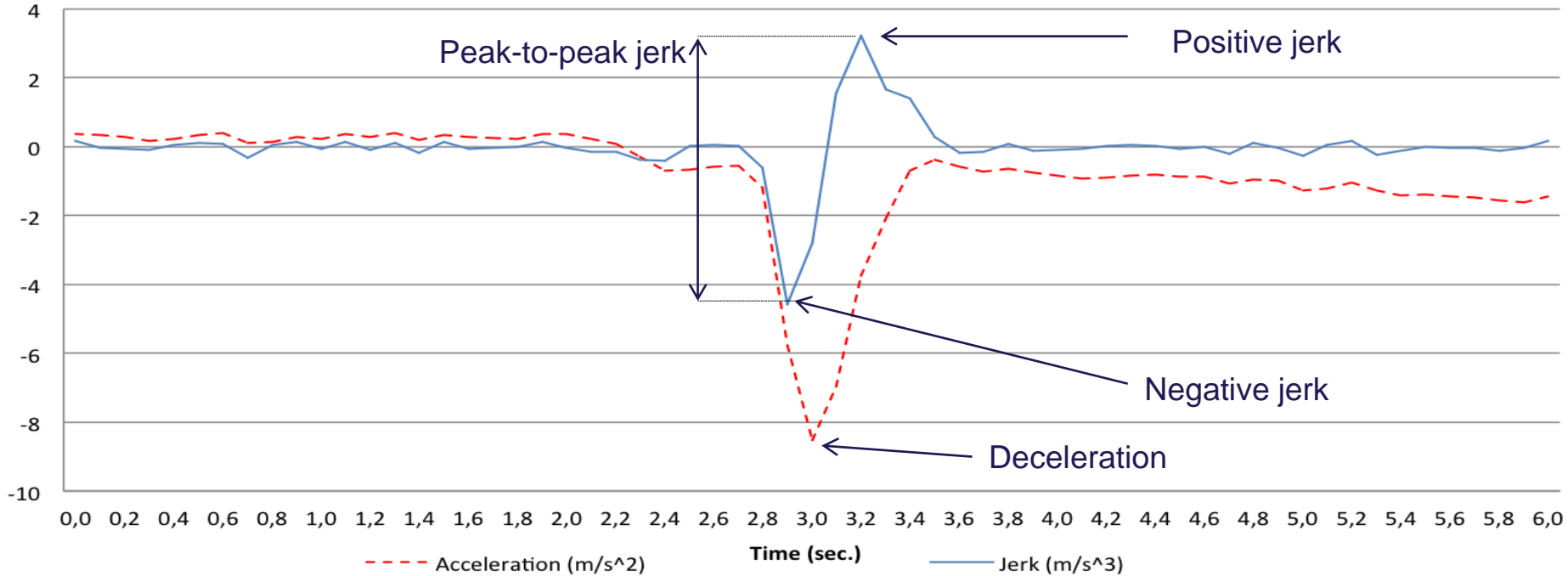




# Decelerations and jerks



# Peak-peak jerks

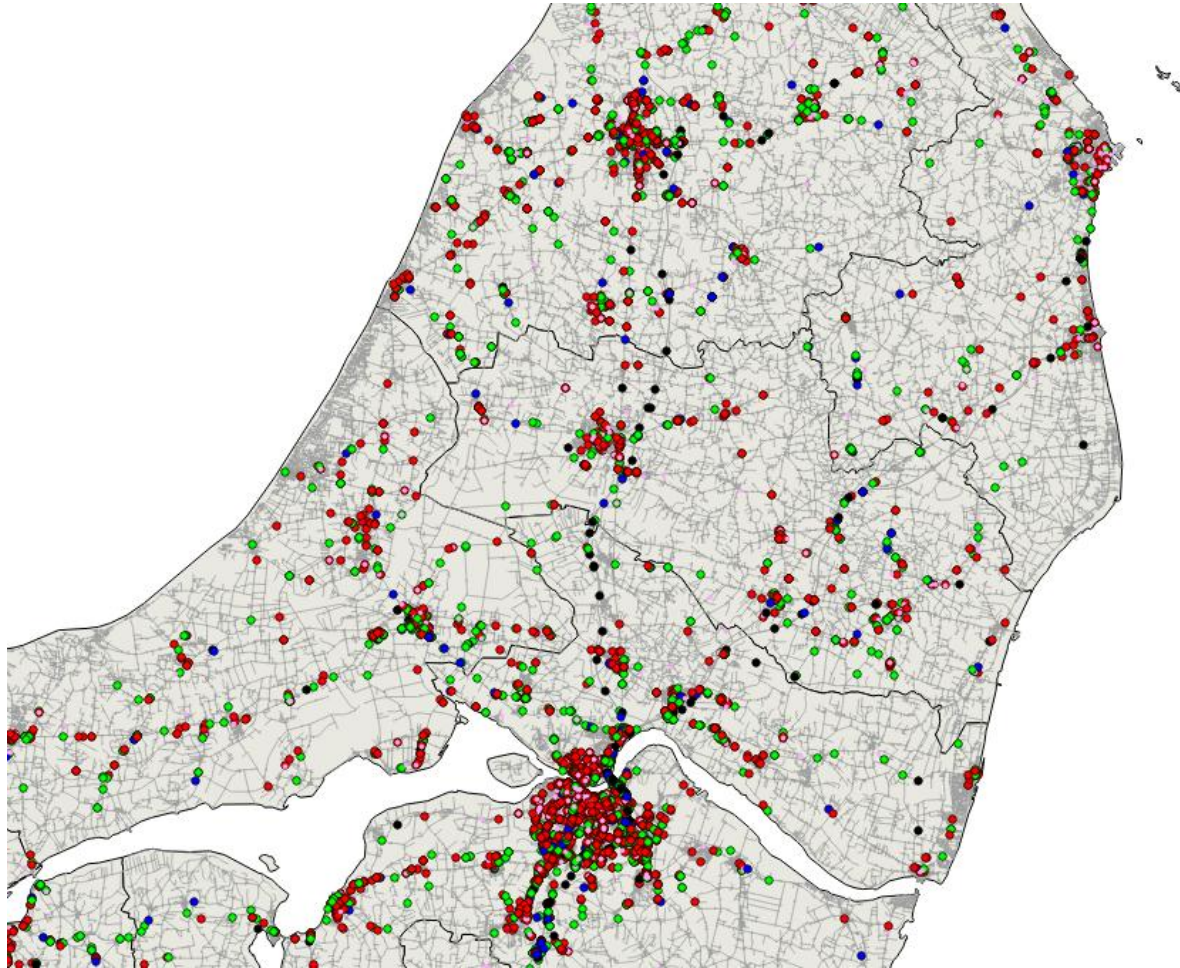


# Acceleration-based preliminary results

- 1 month of data
- ~400 cars
- Only deceleration based



# Acceleration-based preliminary results



# Thank you 😊

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