



CENTER FOR DATA-INTENSIVE CYBER-PHYSICAL SYSTEMS

From Big Transportation Data to Big Value from Transportation Data

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A step up in the data value chain

- Many Big Data sets collected
- Primary functionality meet
- Still high research and innovation value in several years
- Limited use



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Selected cases

- Opening up Big Data for public use
- DiRECTLY

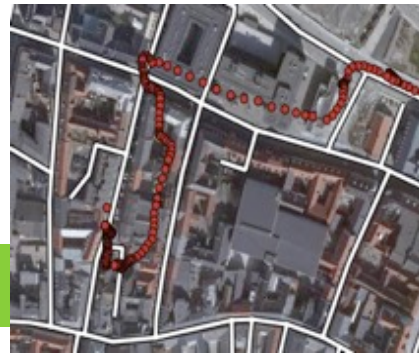
Opening up Big Data for public use

- In close cooperation with FOT-Net Data
- Based on ITS Platform
- Inspired from DiCyPS



ITS Platform

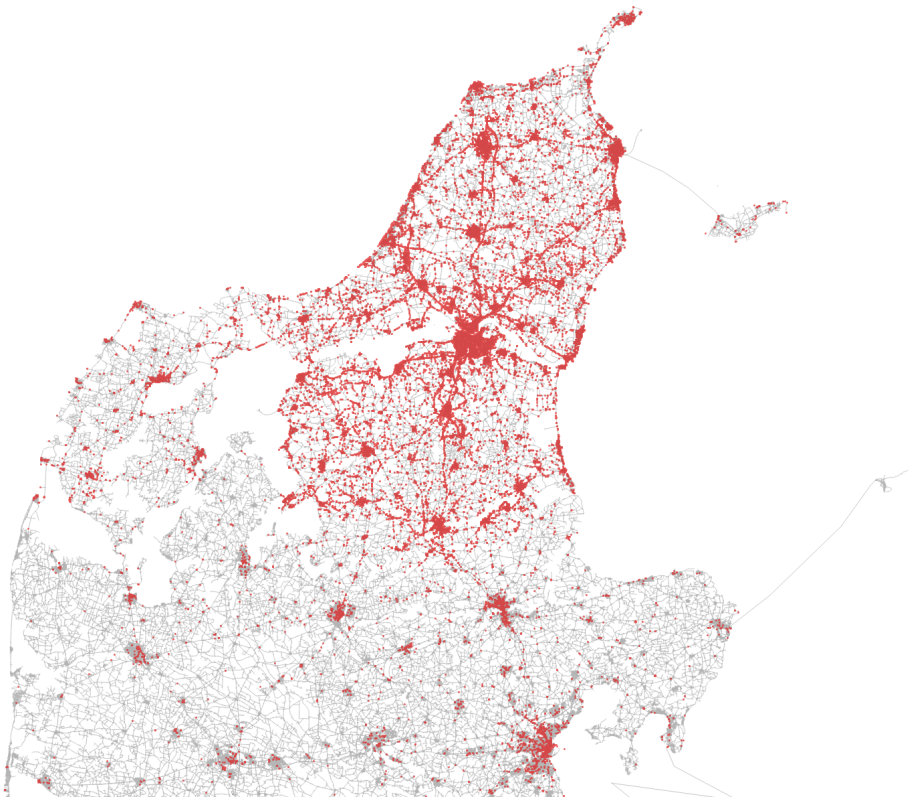
- **ITS Platform** (2010-2014)
- 425 cars
- ~15 million km
- $\sim 1.4 \cdot 10^9$ observations 1 Hz, 10 Hz on acceleration data
- OBU installed
- Applications:
 - Driver log
 - Automatic Parking Payment
 - Customized Traffic Information
 - Traffic Statistics for road authorities



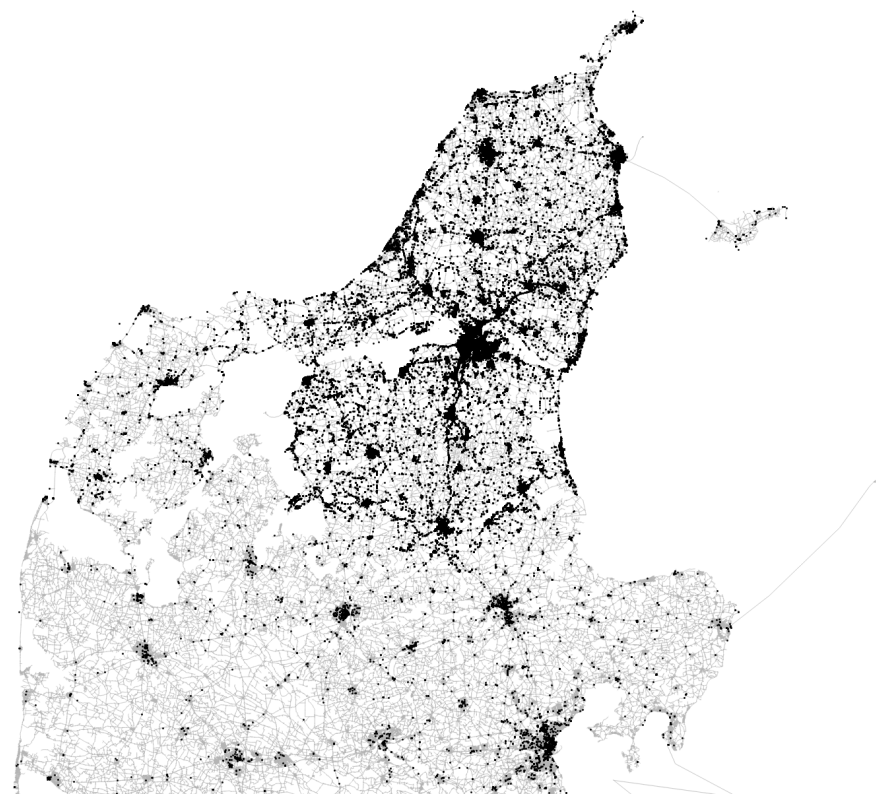
A lot of data: ITS Platform

- ~1.3 million trips

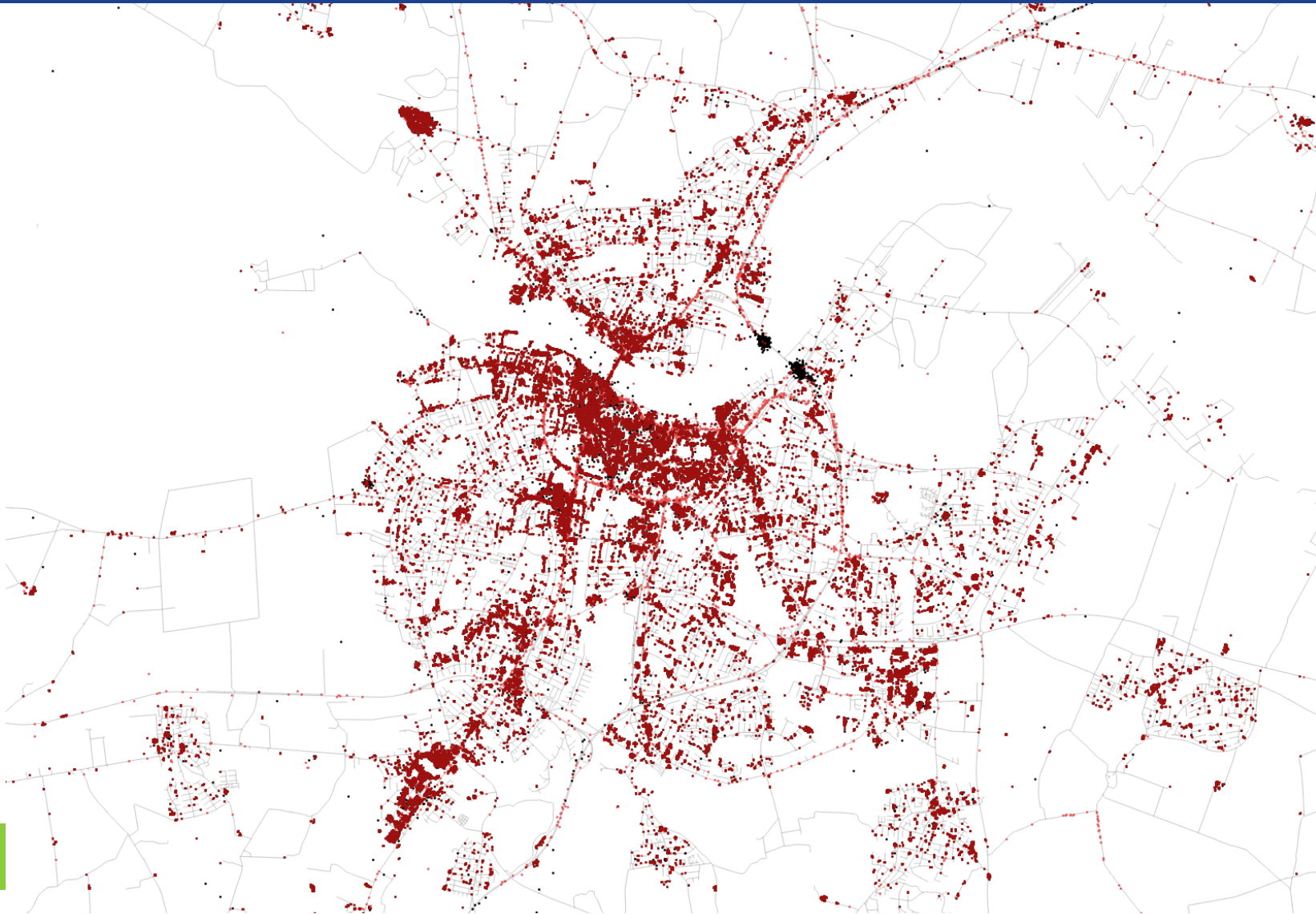
Trip initiations



Trip endings

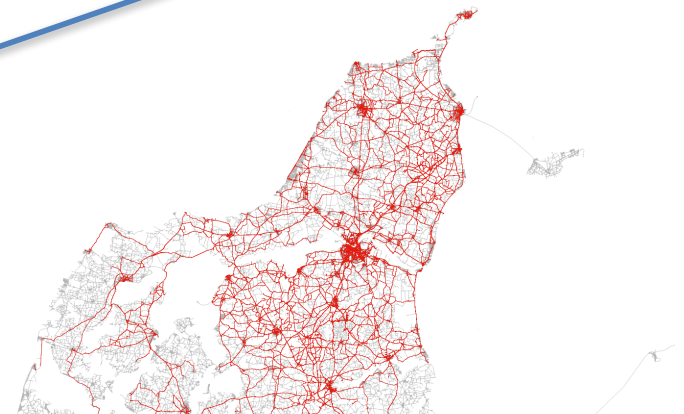
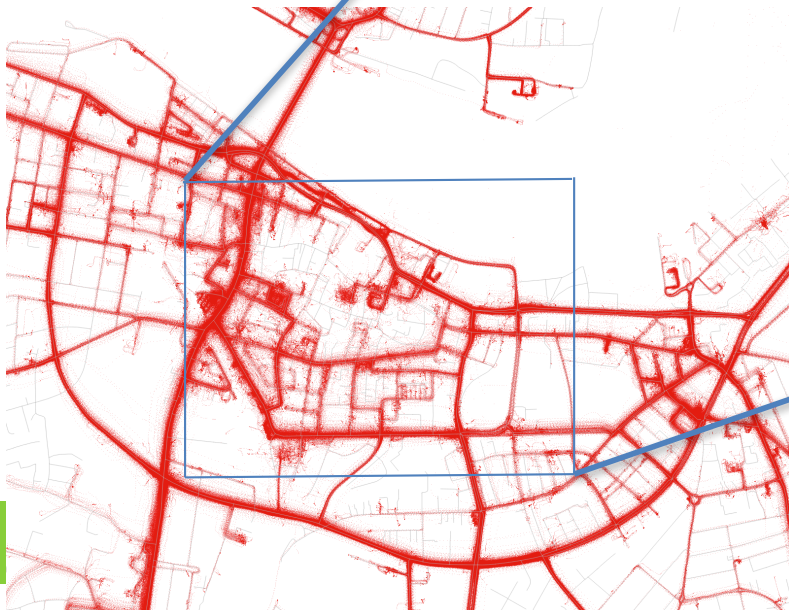


A lot of data: Trips in Aalborg



A lot of data: Trips in Aalborg

- 2 months of data

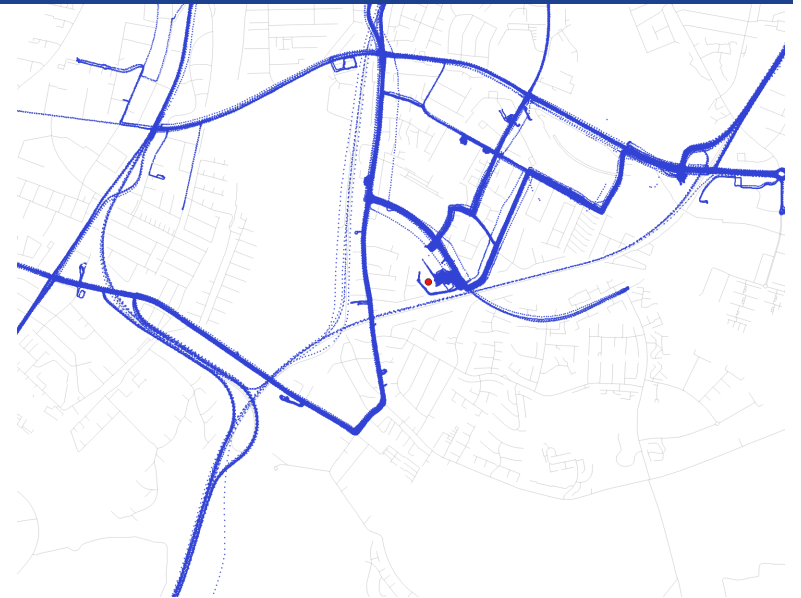


What have we done?

- Anonymisation
- Data protection is paramount
- Maybe too safe?

Anonymisation

- Each trip connected
- Random located 1km diameter circle around trip termination
- Date and time removed
- Attributes kept:
 - Position
 - Speed
 - Direction
 - Trip number (random)
 - Position number in trip (sequential)



Anonymisation

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How to get data?

- Enter <http://FCD-share.civil.aau.dk>
- Fill in the form with contact info and description of purpose
- Read and accept the principles for access
- Download data...
- (Still under development...)

“Business case”

- Citations will be a central parameter for research in the future
- Future research cooperation with more rich data (hopefully 😊)
- FCD will be free
 - All users have to cite us
 - All have to follow good practice
 - All have to agree on these (and more) conditions



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DiRECTLY

Linket offentliggøres om få dage



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Thanks 😊

Harry Lahrmann & Niels Agerholm