



# Short term traffic forecast, lessons from Amsterdam

Jan Maarten van den Berg

City of Amsterdam

Department for Traffic and Transport



# My presentation

1. Traffic Forecasting in the Netherlands
2. Three examples from Amsterdam
3. Development
4. Questions and Discussion



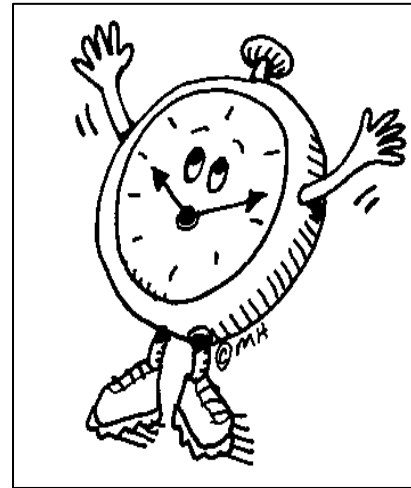


# Why traffic forecasting?

Problem: Delays

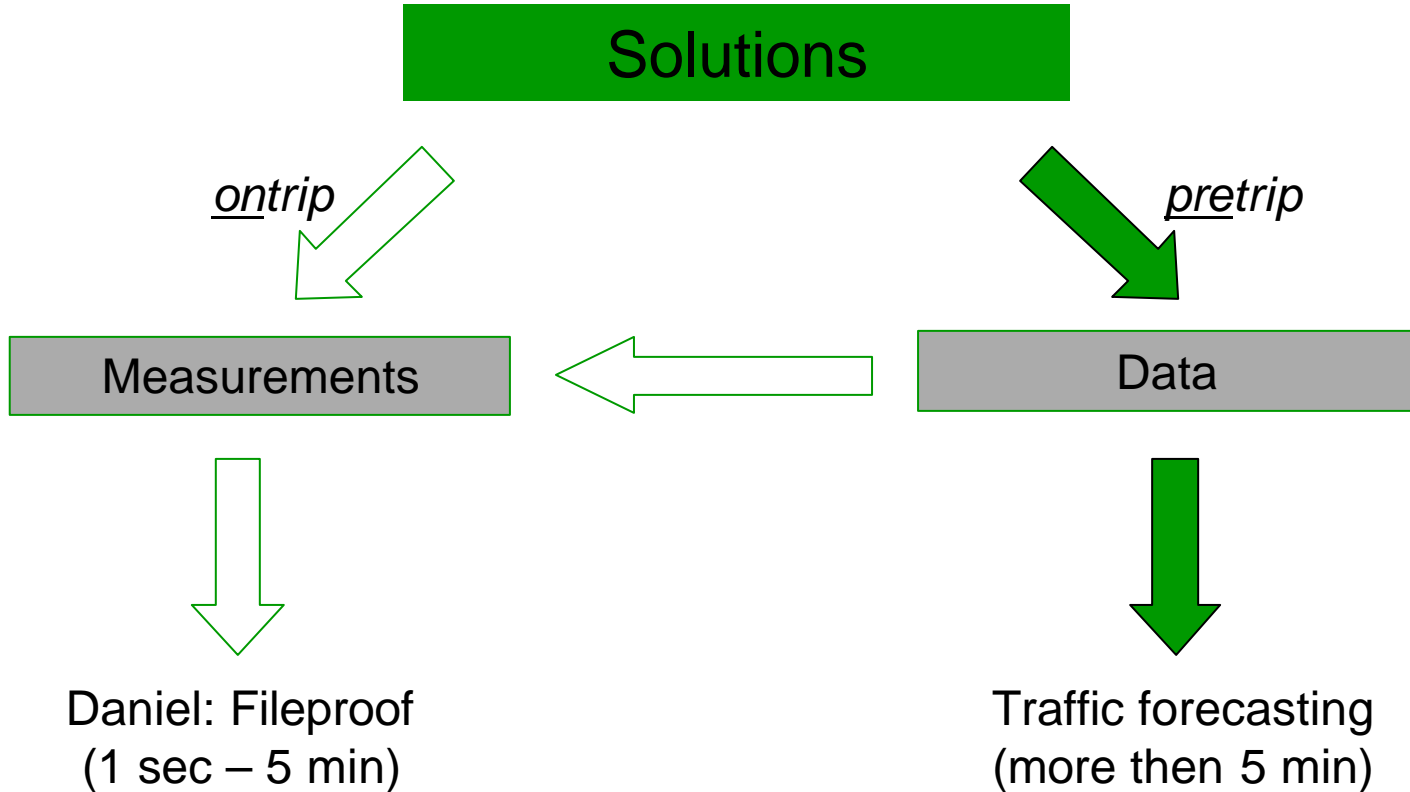


Aim: Reliable Traveltime





# Approach





# Short-term traffic forecast

- No consensus about definition
- Pretrip information concerning expected travel conditions (eg travel time, delay, congestion level, etc) based on:
  - presumptions,
  - realtime data and;
  - historic data.
- Forecasting horizon
  - More than 5 min, but more likely more than 15 min
  - Maximum 12 hours (daily urban system)
- Limitations
  - Prediction of human behaviour
  - External factors



## Data sources

- Access control data
- Single (double) loop detection
- Trafficlights loops
- LPR-camera's
- Radar
- FCD



# Classification of forecasting methodes

1. Historic data
2. Presumptions
3. Realtime data

- Old school = 1
- Academic = 1 + 2 + 3
- Data driven = 3
- Hybrid = 1 + 2 + 3

Navigation  
Decision Support  
Independant  
???



# Availability of parking spaces (long term)

- 1 hour forecast based on 100% realtime data
- 2 hour - 1 week forecast based on historic data (4 weeks)
- Local parameters
- Presentation in categories:

Geen kans   
Kleine kans   
Grote kans   
Zeer grote kans   
Gesloten 



Kans op een parkeerplaats op 31 januari 2009		Of kies een andere dag
12.00 tot 18.00		<b>Zaterdag</b>
 12.00 tot 13.00		Zondag
 13.00 tot 14.00		Maandag
 14.00 tot 15.00		Dinsdag
 15.00 tot 16.00		Woensdag
 16.00 tot 17.00		Donderdag
 17.00 tot 18.00		Vrijdag





# Daily Local traffic density indicator (short term)

- Average Curve based on historic data from mainroads (last 100 days)
- Daily Curve based on realtime data (every 5 min, about 400 loopsensors).
- Density levels for interpretation





# Traveltimes for VMS (short term)

1. Based on historic data (every 15 min, last 30 days) and Realtime data (every 1 min)
2. Importance of data depends on amount of available realtime data in last min (100% if > 20 counts).





# Development

1. Increasing availability of sensors!!!
2. Increasing use of datafusion (combination of loop, LPR and FCD technics)!!
3. Increasing flexibility of traffic modeling!
4. Increasing knowledge about patterns and behaviour.



## Questions & Discussion

- What do you think of our approach and current projects?
- Do you have any suggestions based on your own experience?
- Agreement for further collaboration.

Thank you for your attention!