



Multimodal reisemønteranalyse

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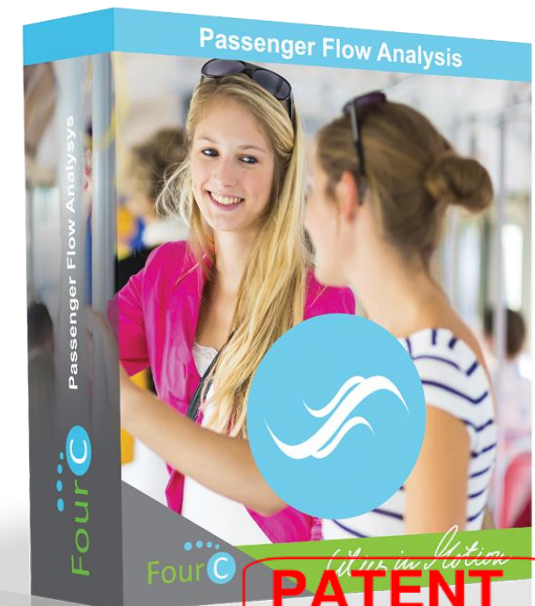
Background

- *“We have huge challenges measuring passenger growth”*
 - CEO Janne Sollie from AtB at the ITS Conference 2015
- *“We have a reasonably good overview of where people board, but have no idea where people actually get off!”*
 - Anonymous at PTA ... :)

BIA Project 2015-2018

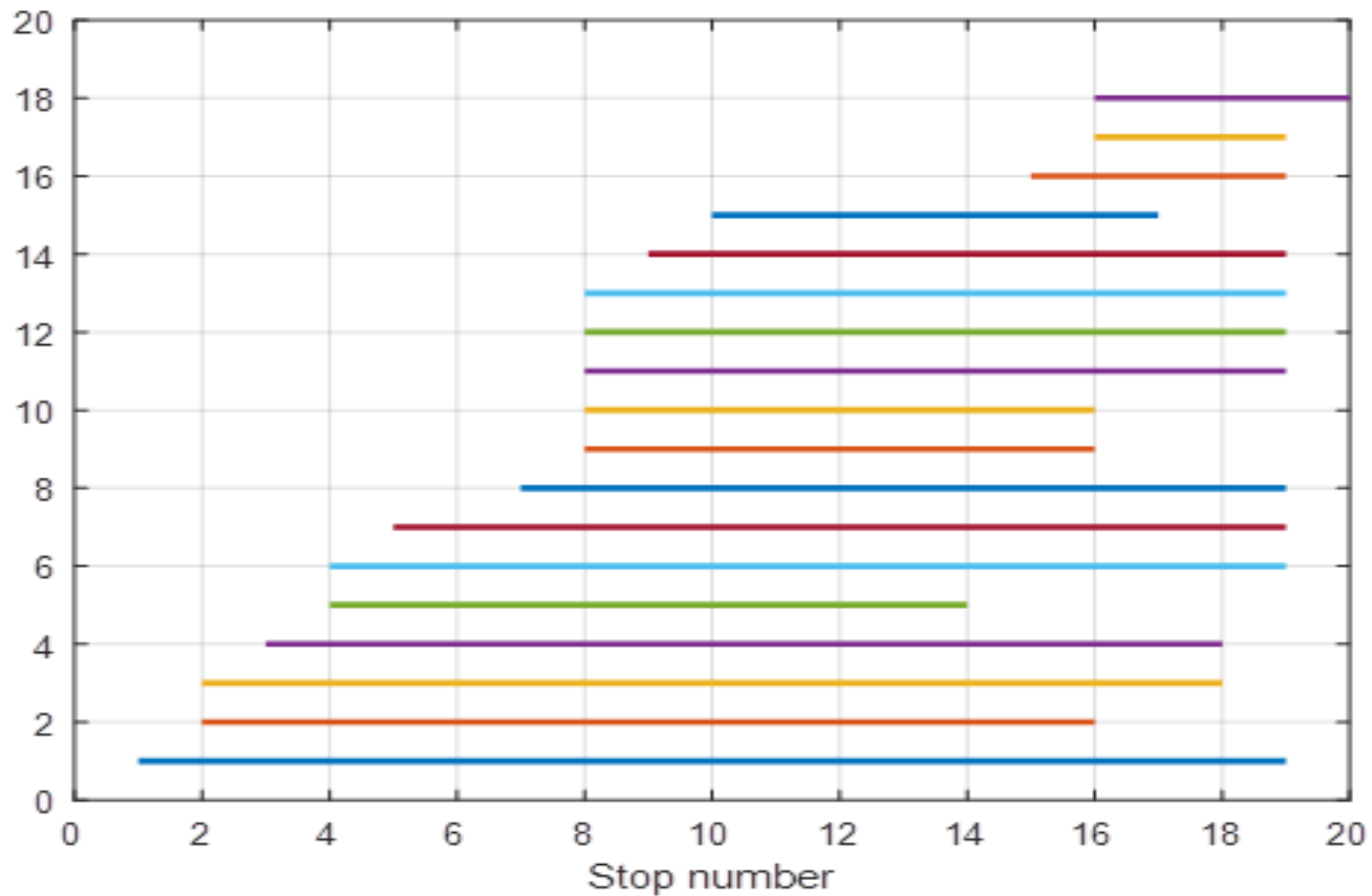
Passenger Flow Analysis

- Detects travel patterns on public transport
- Origin-destination matrix based on mobile device presence

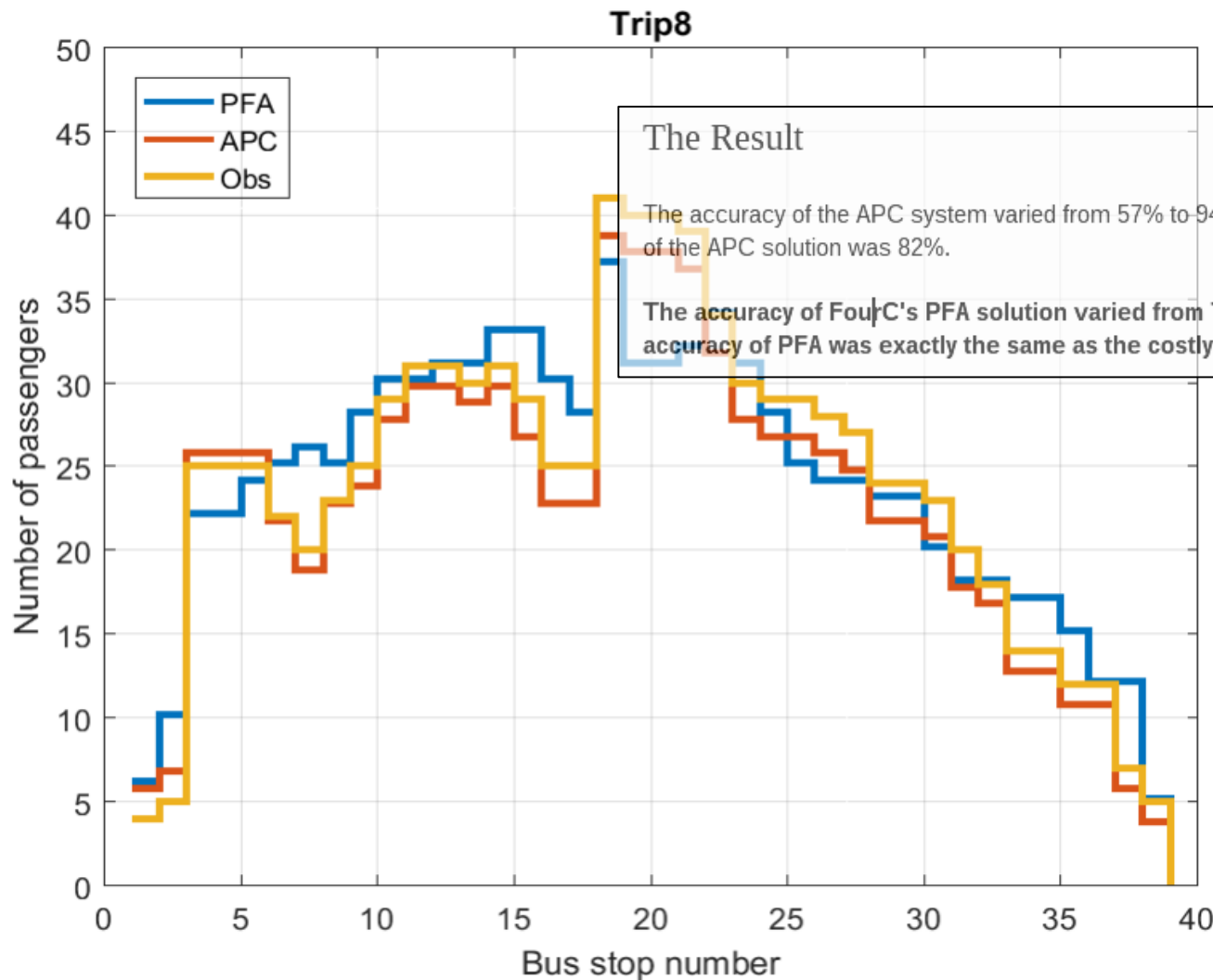


City in Motion
**PATENT
PENDING**

Travel pattern



Accuracy vs camera-based APC ? Field tests May 2016



The Result

The accuracy of the APC system varied from 57% to 94% on the 8 trips made. The overall accuracy of the APC solution was 82%.

The accuracy of FourC's PFA solution varied from 74% to 89% on the same trips. The overall accuracy of PFA was exactly the same as the costly APC system, i.e. 82% !

<http://www.fourc.eu/news-passenger-flow-analysis-matches-apc>

NSB Travel pattern test - Gardermoen - Lysaker

Where do
passengers
that left at this
stop come
from?

G = Oslo Airport Gardermoen

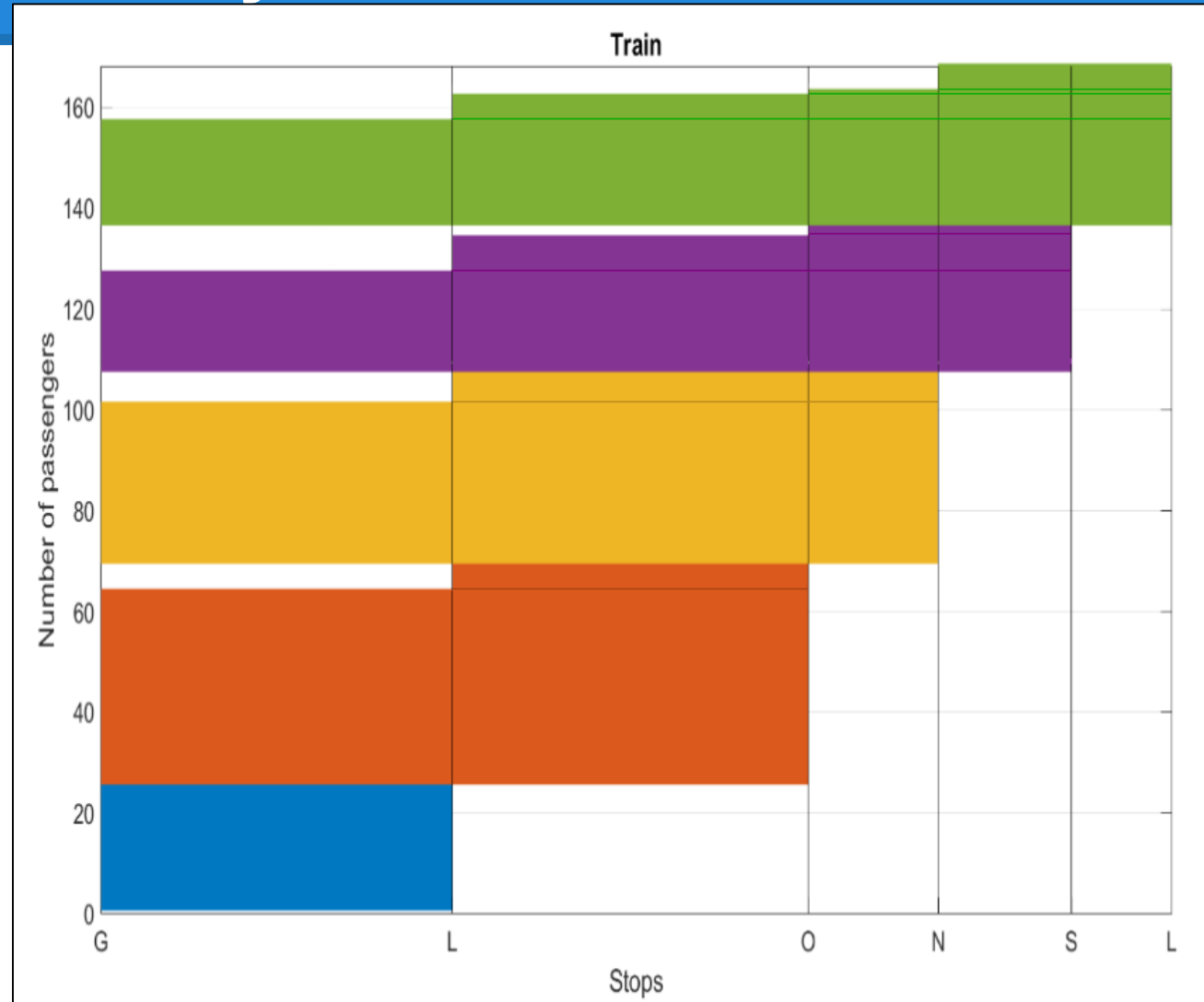
L = Lillestrøm

O = Oslo Central Station

N = National Theatre stop

S = Skøyen

L = Lysaker



Travel pattern



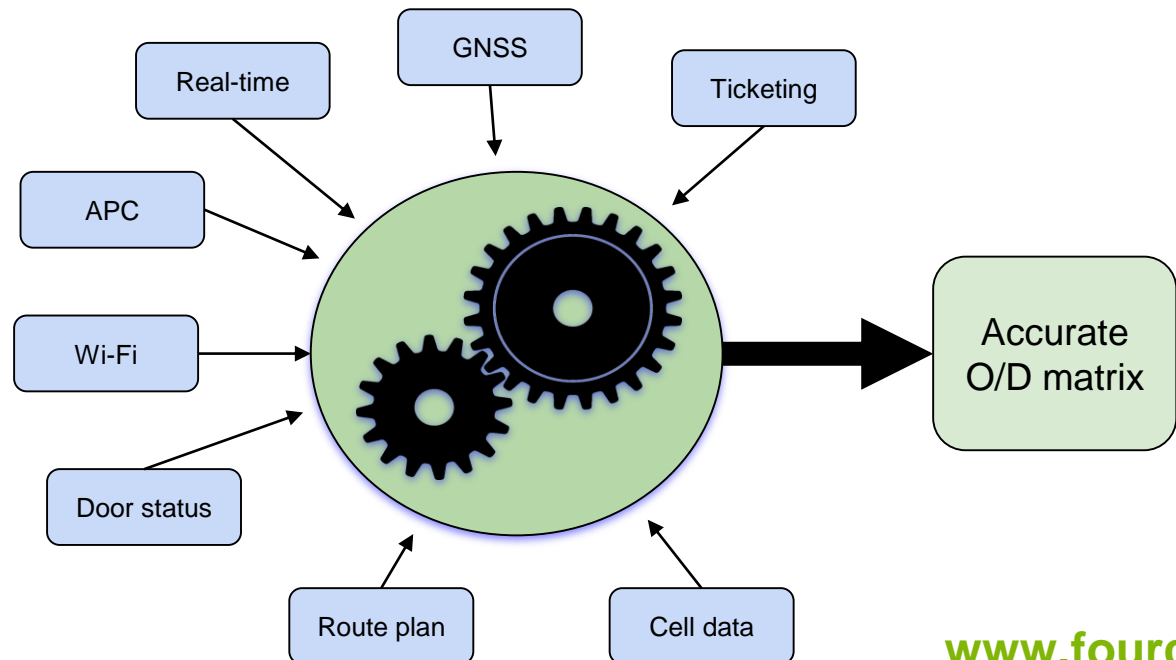
Problems

- Just one travel mode at a time
- Does not use obvious additional data source to improve accuracy
- Hard to detect actual transfers
- Lack of customer trust (“Does this really work?”)
- No big reference installation or full scale pilot

=> Solution: PILOT-T !

Pilot-T: Multimodal travel pattern analysis

- Large scale pilot (~140 vehicles and locations)
- Several transport modes (buses, bikes, boats)
- Wide range of input data (APC, RT, doors, ...)
- Connect to planning system
- Visualization
- ML / AI



Industrialization

- Piloting or delivering to the home market is a challenge
- Allow innovation in tenders
 - Example: Tender text: “We appreciate innovative solutions....”
 - But: “At least 5 references of which at least 3 with at least 1y running time...”
- Start co-operating with the industry instead of “competing” with it