Dat.mobility

ADVANCING ANALYTICS

Netherlands Travel Panel (NVP)

- **Started in 2019, data-collection through smartphones**
- **Recruited from the Kantar panel (100,000 participants)**
- **Smartphone app developed by Mobidot, launched in 2013**
- **Travel information collected 24/7 and GDPR proof**
- **Panel members receive incentive to participate**

Goal

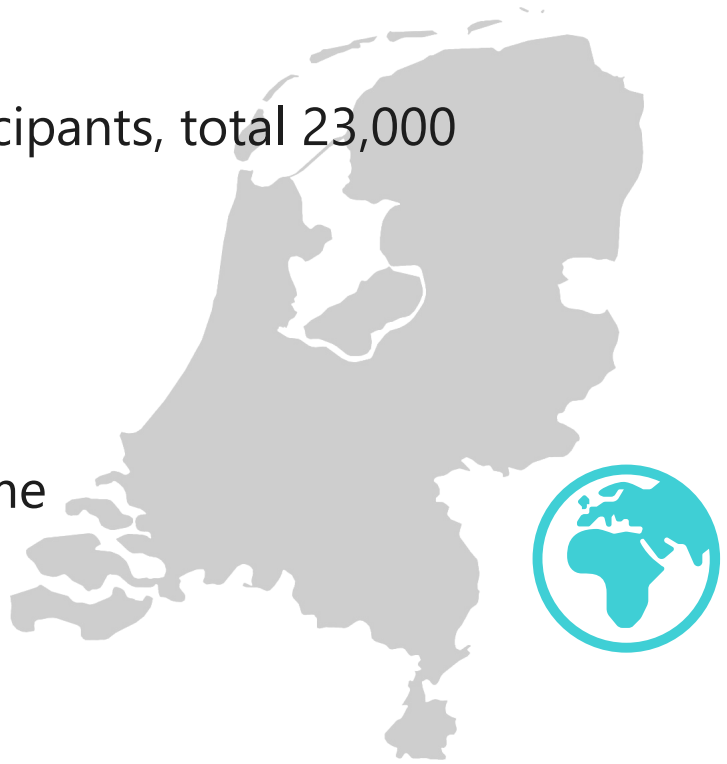
Create and maintain a large-scale, detailed, longitudinal, continuous data source to improve decision making on mobility issues

Netherlands Mobility Panel (NVP)

Nederlands Verplaatsingspanel

"Unobtrusive" data collection:

- Automatic trip, stay and mode detection
- Automatic activities/trip purpose derived
- Map matched routes
- Monthly ± 10,000 participants, total 23,000
- DB contains 5M trips



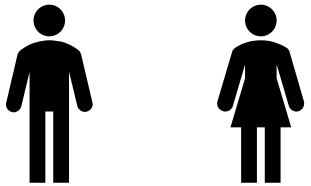
Characteristics:

- Continuous and real-time
- Longitudinal
- Representative sample
- Survey options

Information on trips

Speed	Street	Costs	Time
Distance	Waytype	Points on route	Quality
Modality	Postal code	OSM ID	Accuracy
Start (lat/lon)	City	Name road	Direction
End (lat/lon)	Stay patterns	Road type	Reliability
Purpose	Country	Next node	
Weather	Province	Lat/Lon	

Information panel members



Individual level
Gender
Age
Education
Occupation
Driver’s License
Residential location

Household level
Income
Size
Composition
Car ownership

Representativeness of the sample

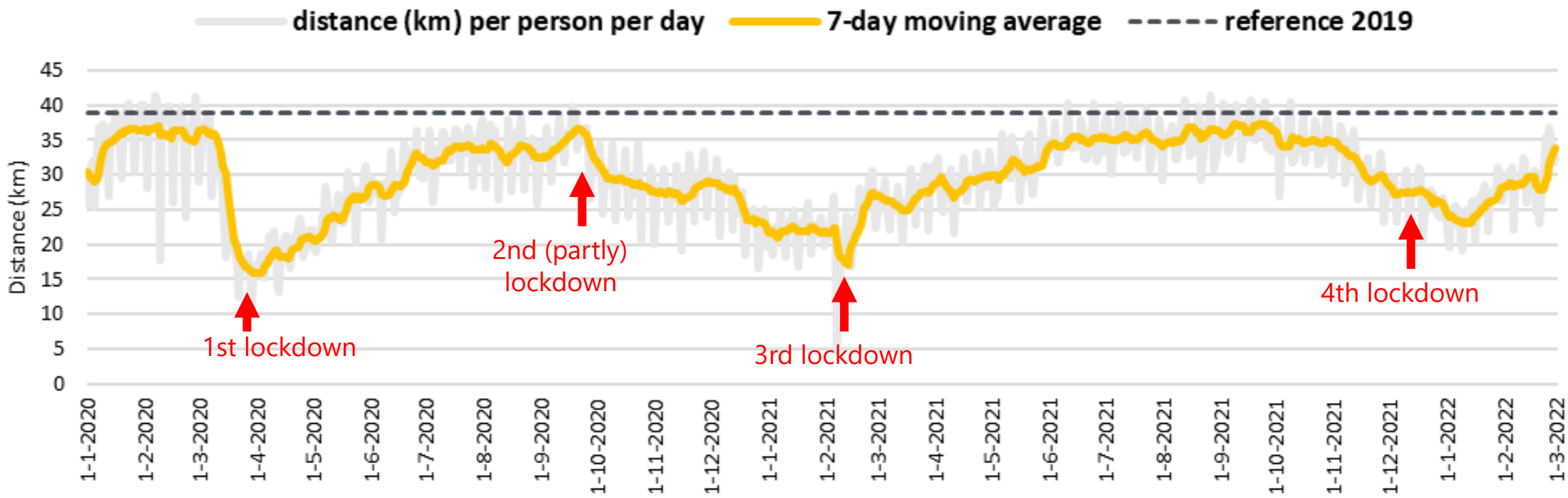
Table 1. Sociodemographic characteristics of the sample

Variable	Categories	Sample March	Sample May	Sample August	Population
Gender (%)	male	46.8	46.8	47.5	49.7
	female	53.2	53.2	52.8	50.6
Age (%)	16-24	2.0	1.8	2.1	13.5
	25-44	33.7	35.8	33.4	29.9
	45-64	44.0	42.3	44.6	34.3
	≥65	20.3	20.0	19.9	22.3
Urban Density – inhabitants/m² (%)	low (<500)	9.2	9.1	8.9	7.8
	medium (500-1500)	38.2	38.2	37.8	37.2
	high (>1500)	52.6	52.7	53.3	55.0
Education (%)	low	20.9	19.9	20.1	22.2
	medium	41.1	41.8	40.7	41.1
	high	38.0	38.3	39.2	36.7
Main occupation (%)	unemployed	32.5	32.0	31.2	38.1
	employed	66.0	66.5	67.0	54.4
	student	1.5	1.5	1.8	7.5
Household size (%)	1 person	19.8	19.2	19.0	21.1
	2 persons	41.7	41.7	42.8	35.7
	>2 persons	38.5	39.1	38.1	42.9
Household composition (%)	single	19.8	19.2	19.0	21.1
	family with children ≤12 yr	21.7	22.7	21.5	20.2
	family with children >12 yr	7.8	8.1	8.2	10.0
	multiple adults	50.7	50.1	51.3	48.6

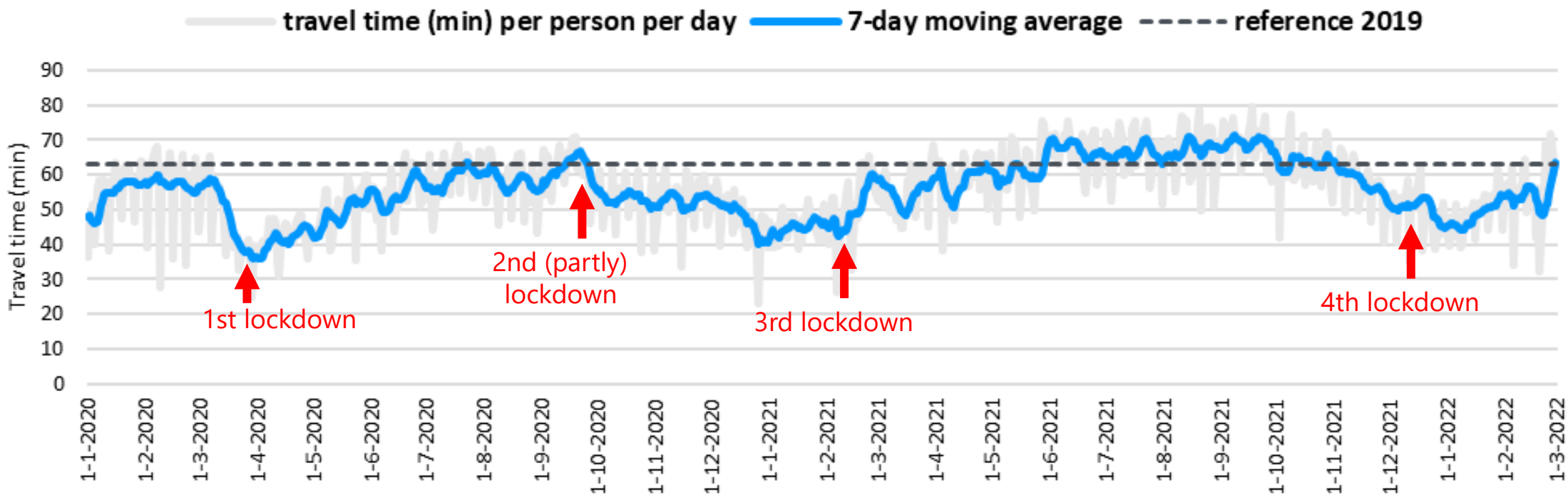
Monitoring impact COVID-19 pandemic

Dynamic impact first lockdown (animation)

Day-to-day mobility patterns - distance



Day-to-day mobility patterns – travel time



Post COVID-19 teleworking and car use intentions

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Post COVID-19 teleworking and car use intentions. Evidence from large scale GPS-tracking and survey data in the Netherlands

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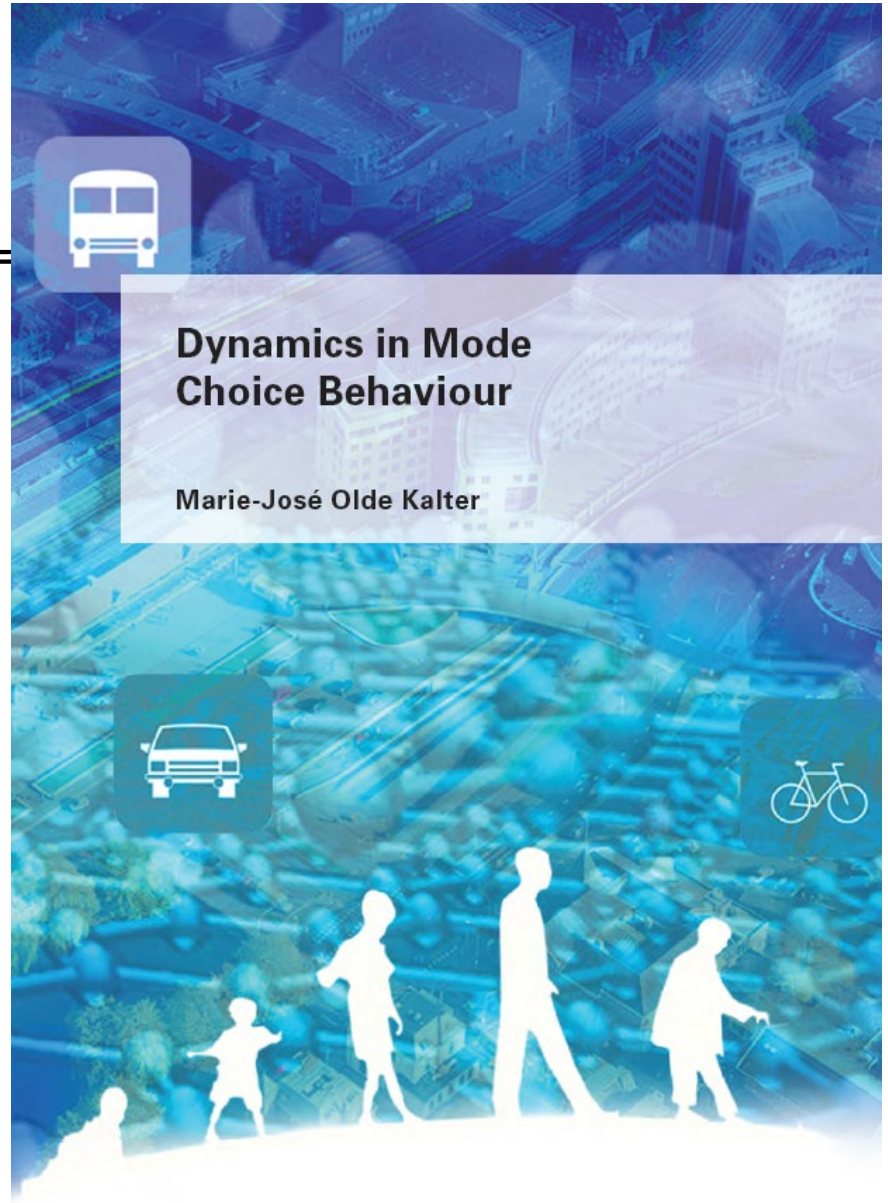
ABSTRACT

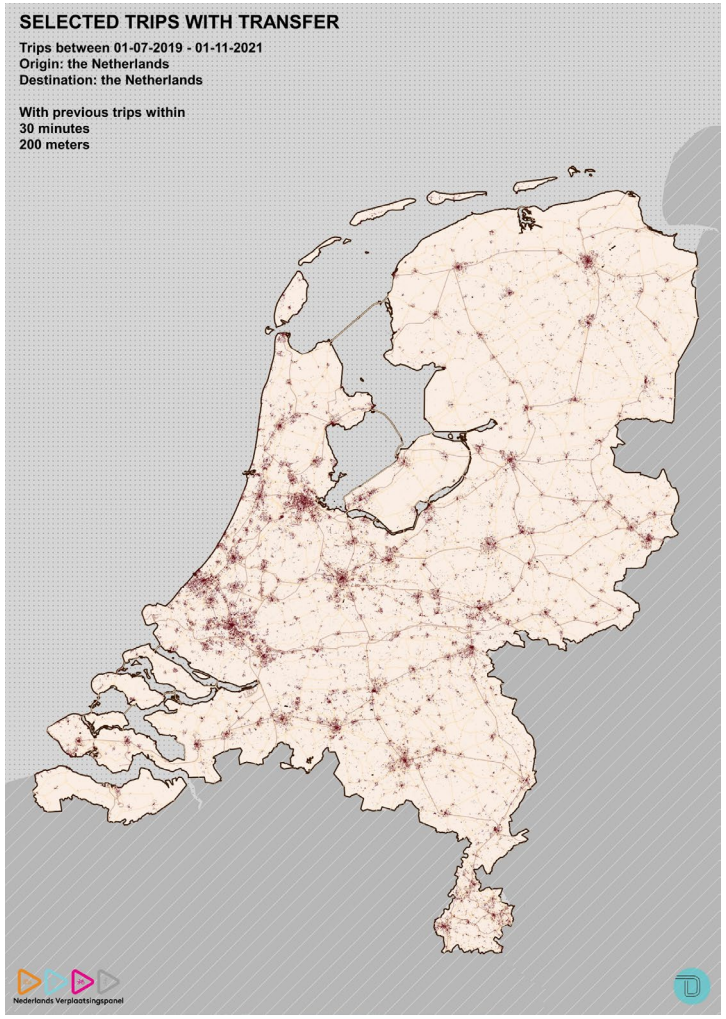
This study examines the changes in teleworking during the lockdown in April 2020 and the intention to change commuting behaviour after COVID-19 in the Netherlands. Survey data of 1,515 Dutch employees and large-scale smartphone-based GPS-data of the same participants before and during COVID-19 is used. The probability of increasing teleworking during COVID-19 is estimated using an ordinal logistic regression model, considering sociodemographic characteristics, the initial travel behaviour and the initial work situation as determining factors. Two binary logistic regression models are developed to analyse whether employees expect to continue teleworking after the COVID-19 pandemic and whether they will decrease car use for commuting. Both models consider teleworking and car use intentions in the context of behavioural changes during COVID-19. The main factors that influenced teleworking during the lockdown are job characteristics. Office workers and teaching staff were more likely to increase the amount of time spent working from home and showed a higher chance of changes in daily commuting routines. After COVID-19, office workers expect to increase teleworking. The results suggest that employees with a relatively large change in teleworking during the early lockdown expect to work from home more frequently after COVID-19. This effect is strengthened further by positive experiences with teleworking (i.e. more pleasure and higher productivity) and supporting policy measures by the employer, such as sufficient ICT facilities. The main conclusion related to intended changes in mode choice is that car use for commuting is expected to decrease after COVID-19, mostly because of an increase in teleworking.

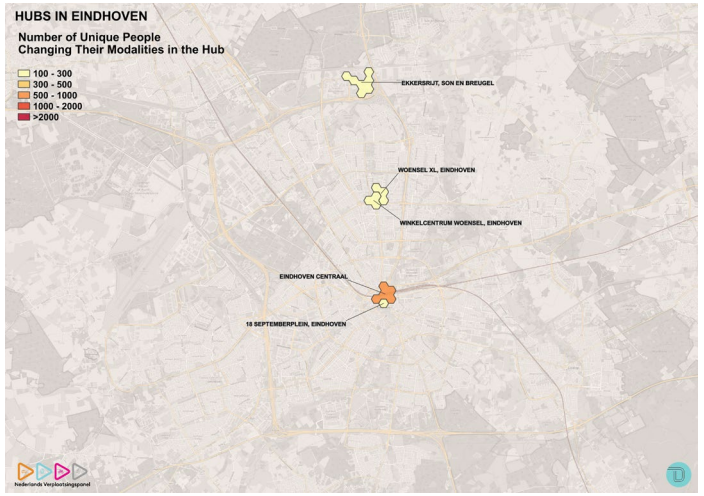
https://doi.org/10.1016/j.trip.2021.100498

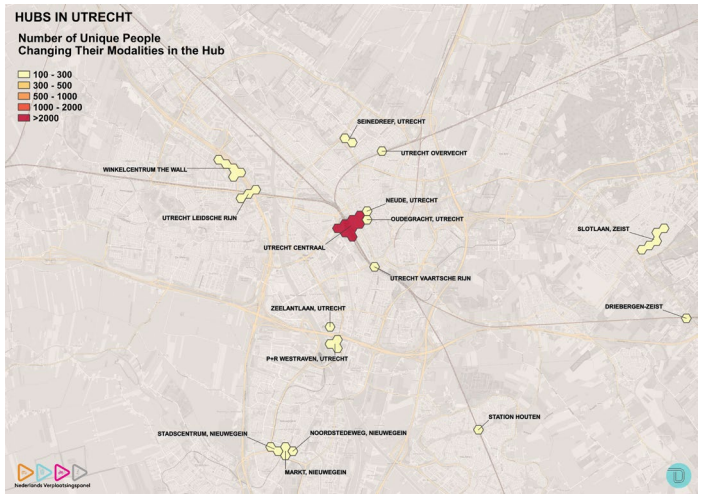


https://research.utwente.nl/en/publications/dynamics-in-mode-choice-behaviour

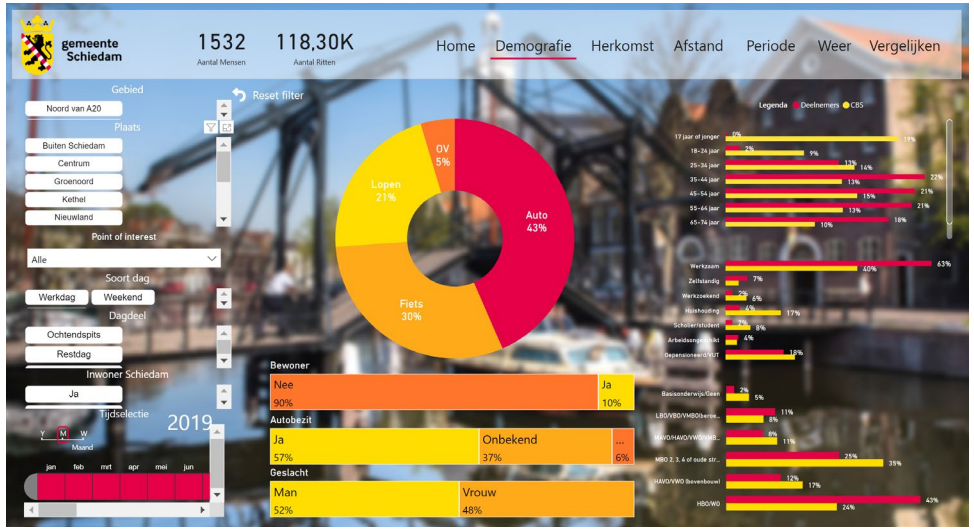
Data driven identification of hubs

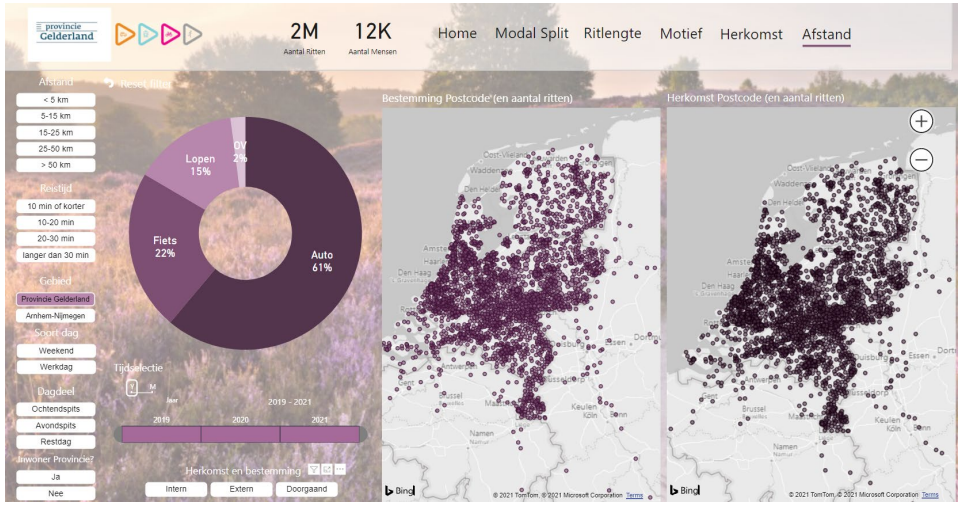


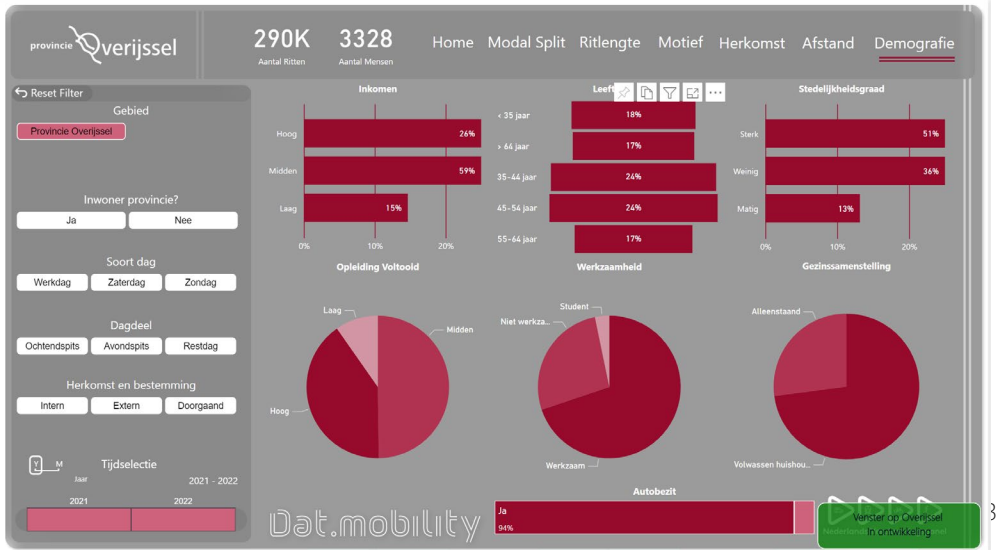




Dashboards: monitoring & evaluation







Challenges

- **How do we optimally open up these data**
- for clients (transport authorities etc.)?
- for researchers?
- for our own consultants?
- **How do we cover the operational costs in the long run?**
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