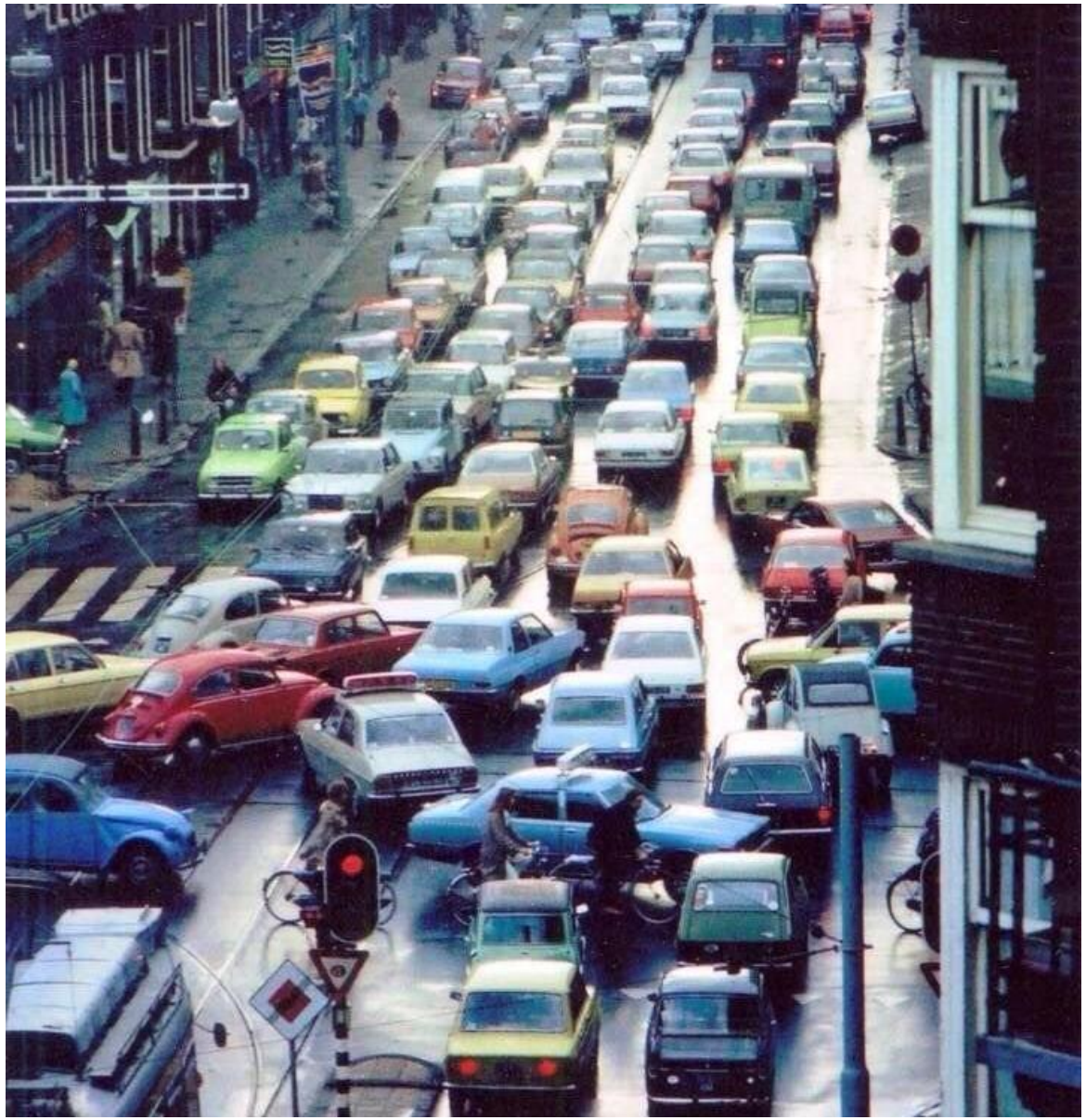
A quick guide to building effective evidence-based policy from data

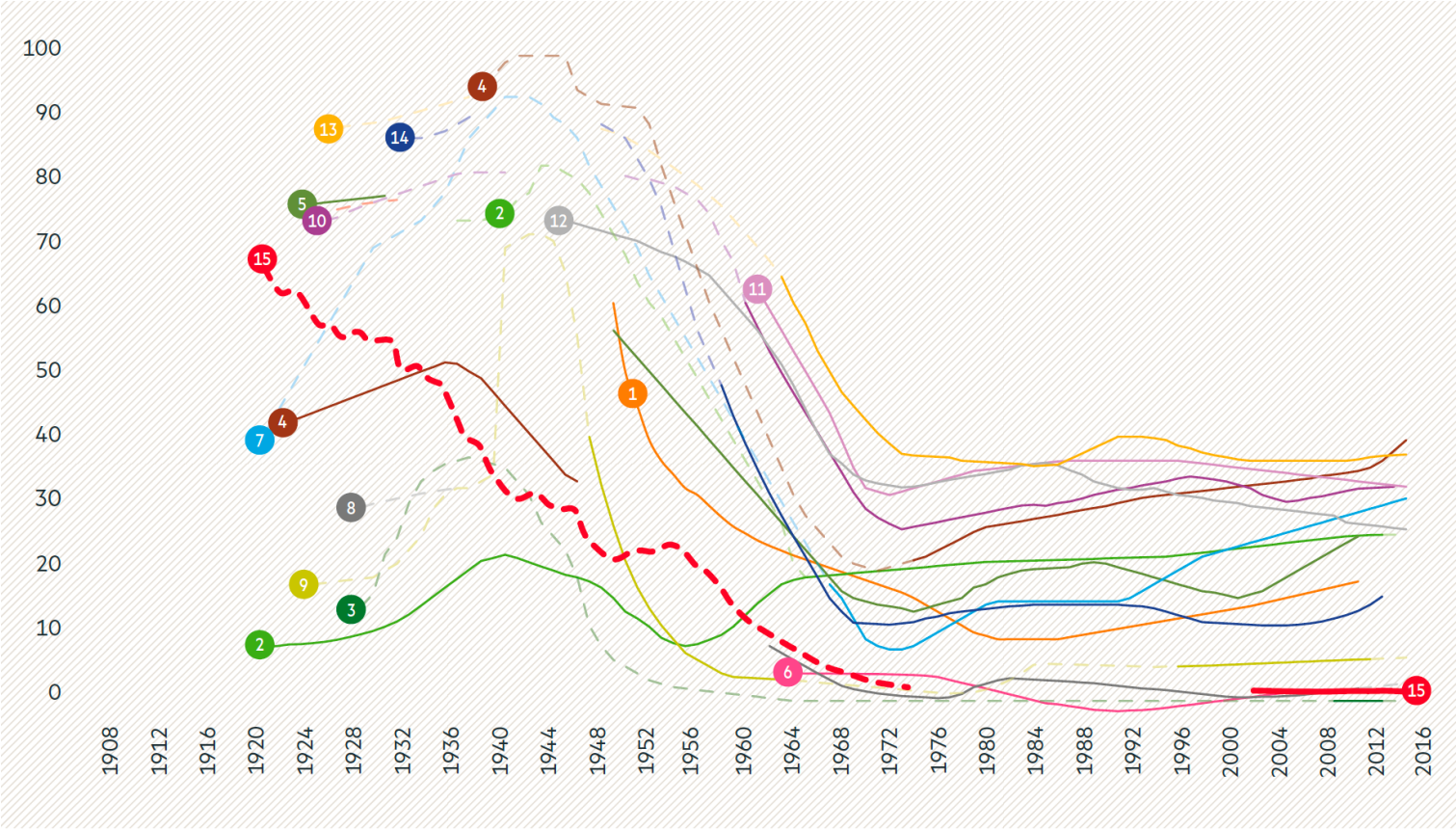
All Party Parliamentary Group for Cycling & Walking

Emma Stubbe - 9 June 2026

It wasn’t always this way…



Worldwide modal shares of the bicycle



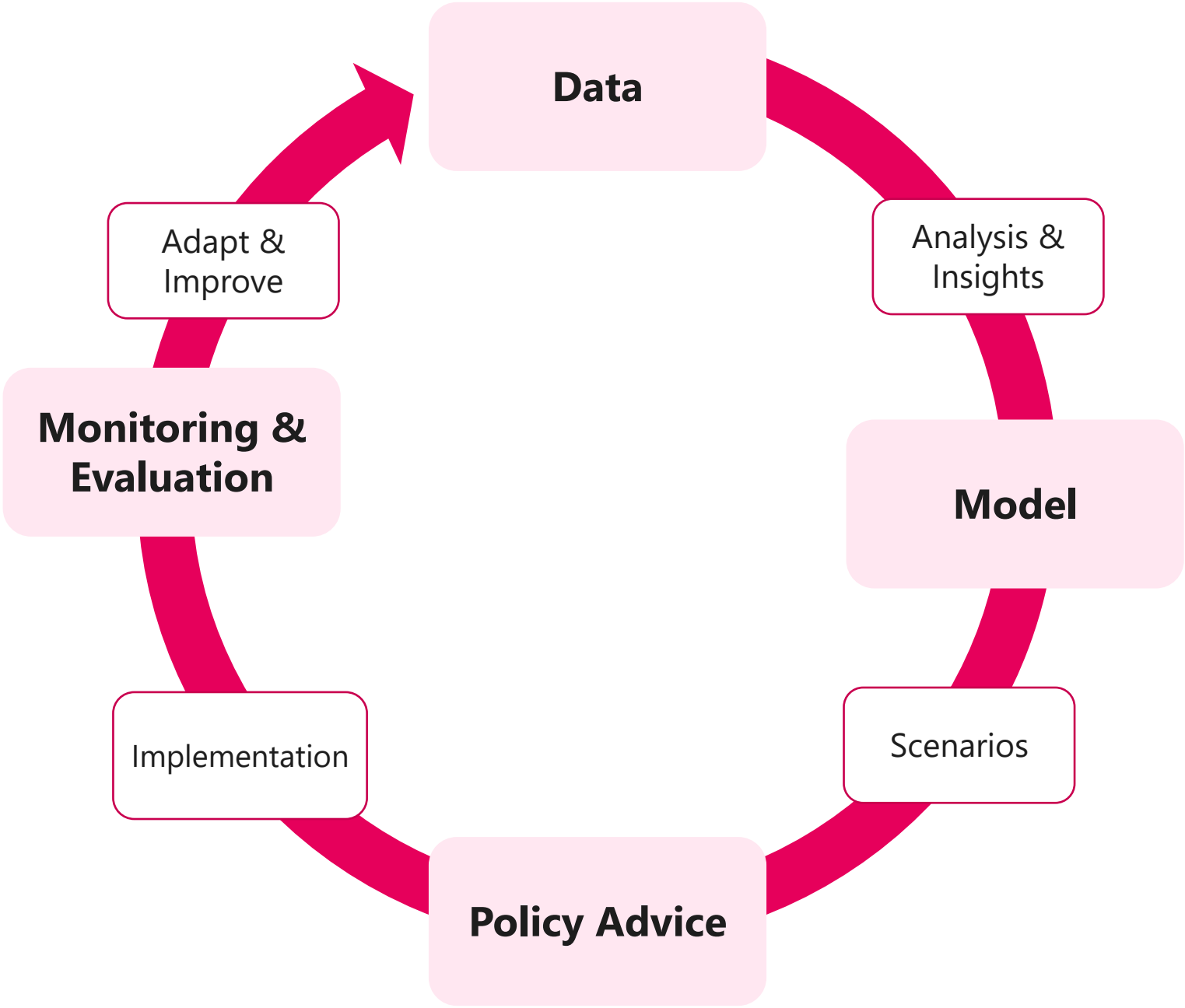
Source: Cycling Cities: The European Experience: Hundred Years of Policy and Practice. Ruth Oldenziel, Martin Emanuel, Adri A. Albert de la Bruheze, Frank Veraart

Meten is weten

Measuring is knowing.

Good knowledge is good (evidence-based) policy

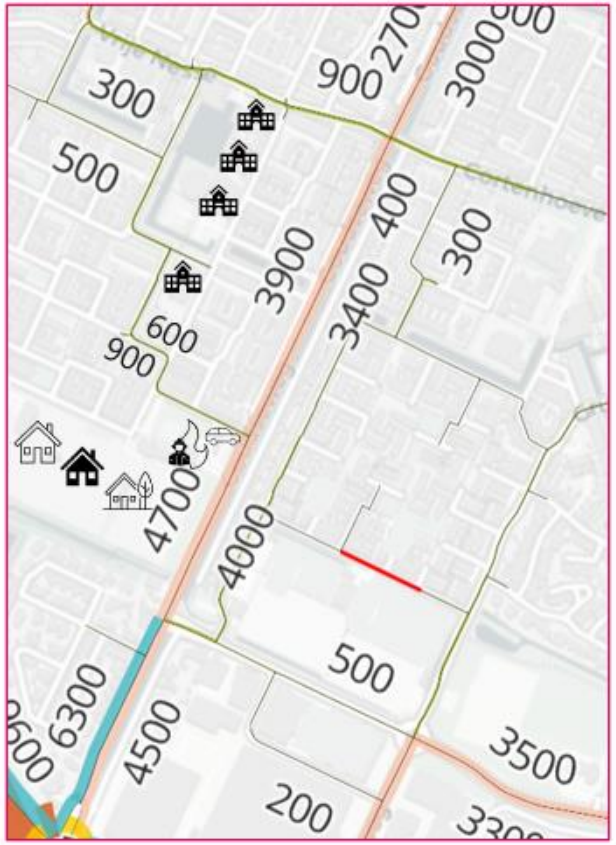
Evidence-based policy is a lever for change towards a more sustainable mobility.


Data
Analysis & Insights
Model
Scenarios
Policy Advice
Implementation
Monitoring & Evaluation
Adapt & Improve

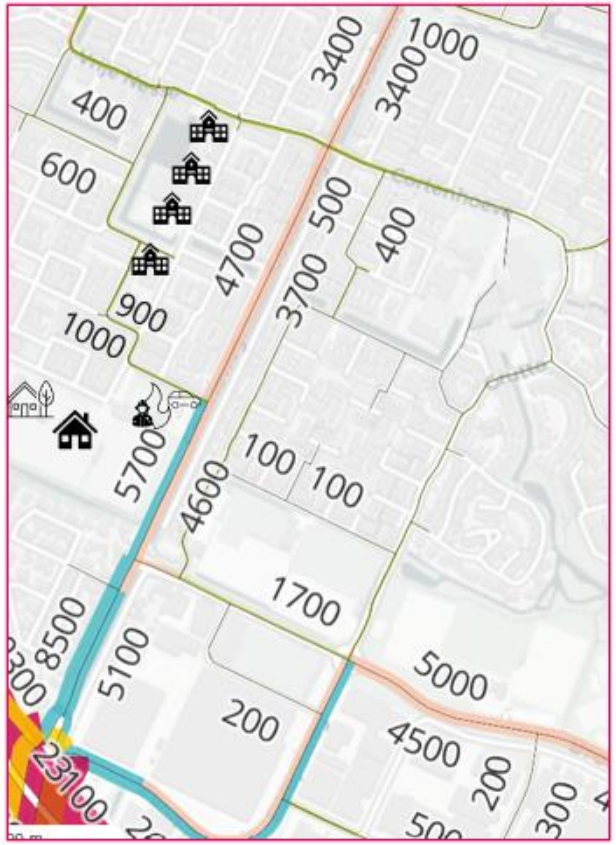
What data is used for models in the Netherlands?

Goudappel created, updates and manages the multimodal traffic model for the RotterdamThe Hague metropolitan region (MRDH) using a range of data:

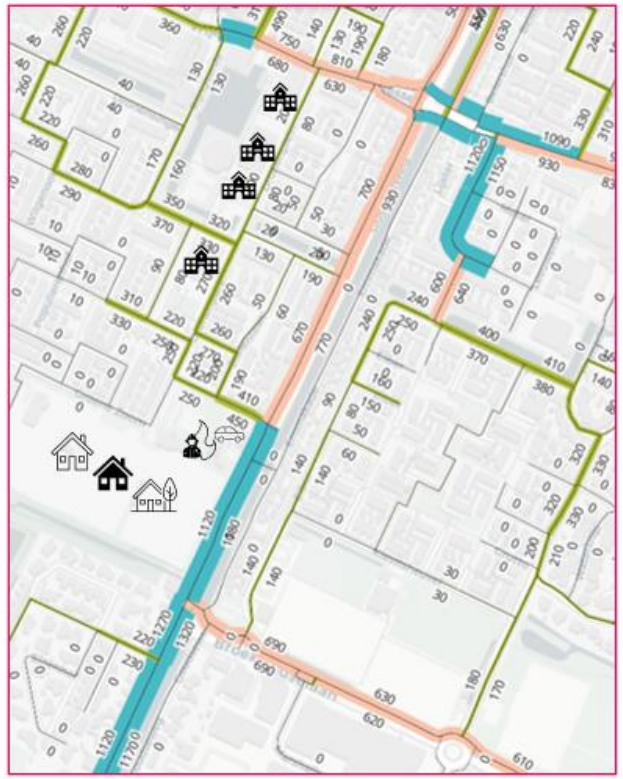
- ODiN: governmental mobility survey
- Goudappel's own Dutch Travel Panel (NVP)
- Public transport smartcard data
- Cycling & traffic count data
- Licence plate camera data
- Spatial development plans from municipalities
- Urbanisation and density data: for model parameters influencing trip generation, car ownership, modal split and mobility trends
- Policy-related data: e.g. lorry charging schemes, zero-emission zones, remote working rates and parking capacity constraints



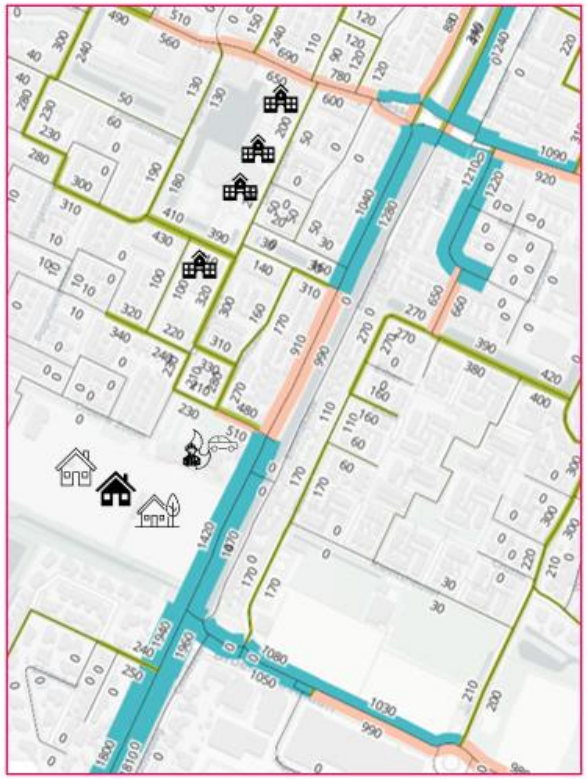
Intensiteiten motorvoertuigen per etmaal, basisjaar 2024



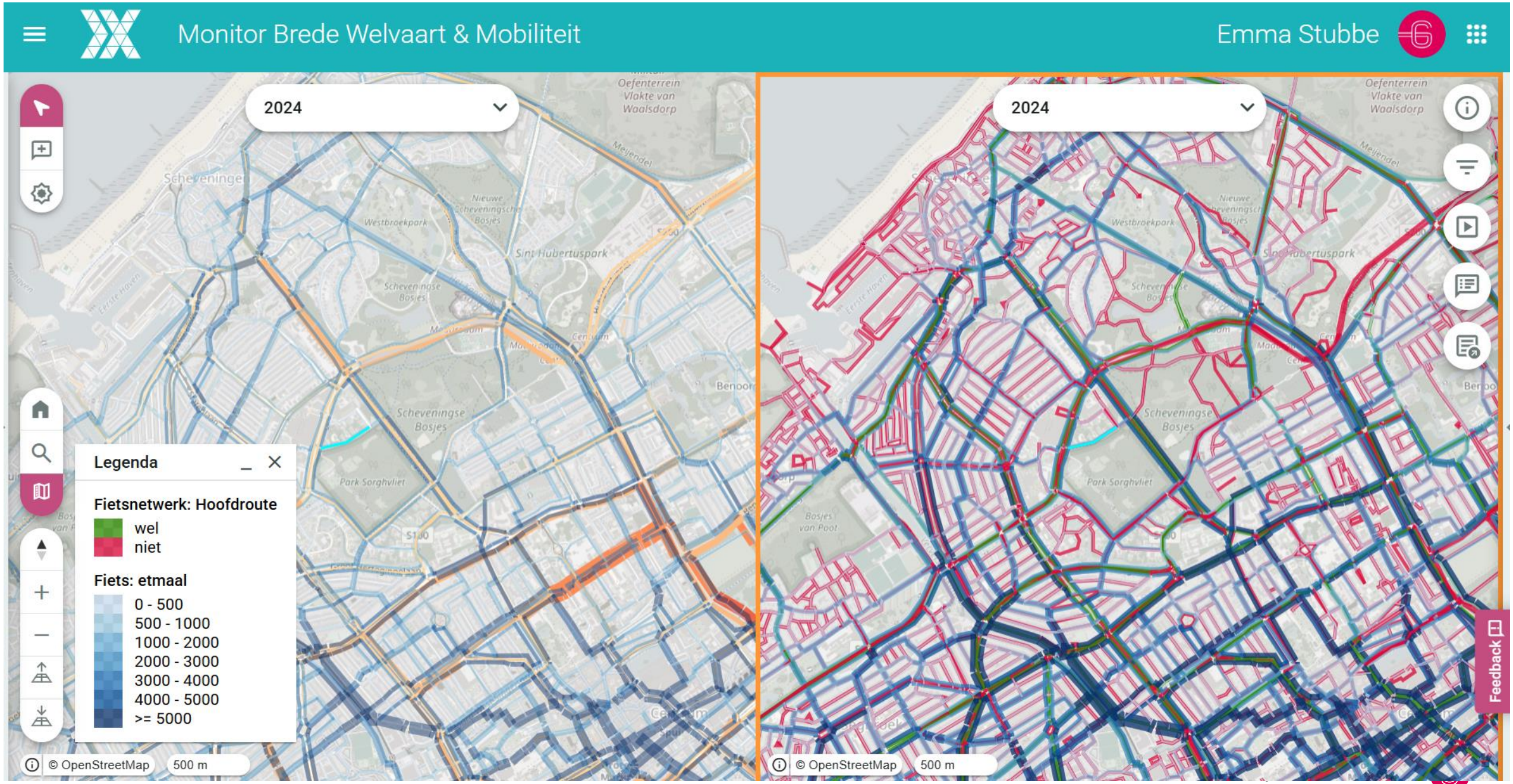
Intensiteiten motorvoertuigen per etmaal, prognose 2040



Intensiteiten fietsers per etmaal, basisjaar 2024



Intensiteiten fietsers per etmaal, prognose 2040


Monitor Brede Welvaart & Mobiliteit
Emma Stubbe
2024
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Feedback

From Model to Policy: Mobility Equity in Amsterdam

Goudappel also develops, updates and applies the Metropoolregio Amsterdam (MRA) regional traffic model, which combines rich data sources to support policy, landuse and infrastructure decisions.

Using the MRA model and accessibility analyses, Goudappel assessed how future housing growth, job concentration and mobility policy affect different population groups. This:

- Moves beyond traffic volumes to measure **accessibility and inequality**
- Identifies risks for **older people, young people and low/middleincome groups**
- Links **mobility, spatial development and "broad prosperity"** and
- Translates model insights into **10 concrete policy levers** to improve inclusive accessibility

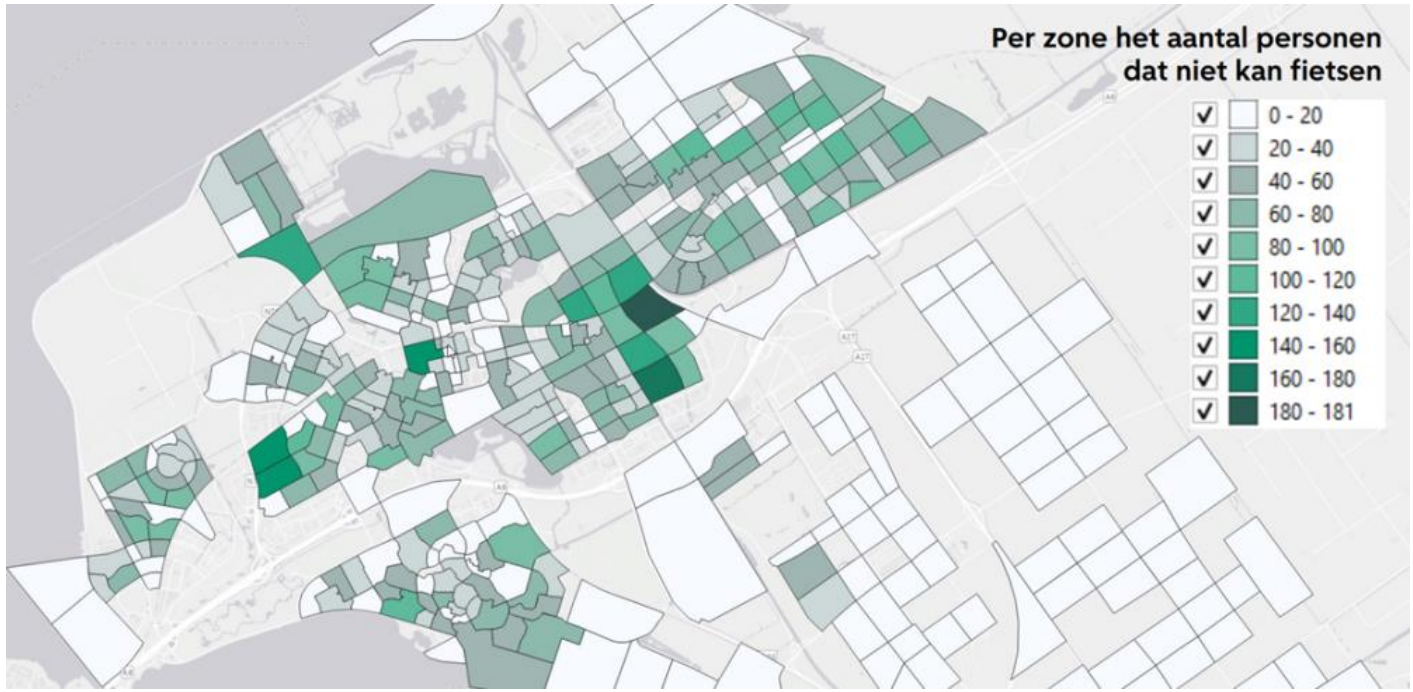
In other words: a transport model can be more than a forecasting tool. With Goudappel's approach, it becomes a basis for peoplecentred, equitable and actionable mobility policy.

10 Policy Priorities for an Equitable Mobility System in Amsterdam

- **Centre equity:** place vulnerable groups at the heart of mobility policy
- **Plan space smarter:** better align housing, jobs and facilities; ensure PT accessibility where gaps exist
- **Go polycentric:** spread housing, employment and amenities across multiple centres
- **Engage employers:** make the private sector co-responsible for workforce accessibility
- **Price fairly:** use pricing instruments to steer behaviour; embed inclusivity in future revenue models
- **Protect the vulnerable in the transition:** ensure climate and mobility goals don't disadvantage those least able to adapt
- **Don't forget the bike:** cycling can drive inclusion, *if barriers for target groups are addressed*
- **Plan with, not just for:** assess policy impacts on vulnerable groups and involve them in planning
- **Invest where it matters most:** prioritise connections between deprived areas, jobs and key facilities (e.g. regional cycling networks, BRT corridors)
- **Tailor solutions by group:** address specific barriers through targeted programmes (e.g. regional taxis, travel credits, cycling lessons)

Inclusive policymaking

In a hypothetical scenario in Almere where a bus route is cut short, residents who are unable to cycle and can walk no more than five minutes are left, in some zones, with no viable way to reach the city centre at all. For the average traveller, the impact is limited; for vulnerable residents, the difference is profound.



Application outside the Netherlands: SUMP Düzce, Turkey

Goudappel developed a traffic model for Düzce's Sustainable Urban Mobility Plan (SUMP), in partnership with local firm EuroMos. The model integrates preexisting traditional data as well as household surveys, land use, demographic development and travel demand, projecting daily trips to rise from 313,000 to 372,000 by 2040.

The model was embedded directly in spatial and infrastructure planning for:

- Testing and comparing mobility scenarios against a business-as-usual baseline
- Assessing mode shift impacts (car, PT, walking, cycling)
- Informing concrete infrastructure decisions:
  - Bus Rapid Transport corridor design
  - Cycling network structure
  - Road hierarchy and parking strategy
  - Central area pedestrianisation

Co-creating Mobility Policy and Measures

2.1. Goals

By engaging stakeholders and citizens, shared goals for Düzce's mobility future has been crafted, ensuring alignment with the community's aspirations. Düzce SUMP aims to contribute to a Düzce that is economically vibrant, sustainable, healthy, socially just and safe and attractive. These five goals will play a central role in everything related to mobility in Düzce in the future. This way, Düzce will remain a liveable, safe and accessible for all.

Economically vibrant
An economically vibrant city ensures a good settlement climate for businesses. The mobility system enables residents to easily reach their workplaces. The system is cost-effective and efficient. This goal ensures economic growth for Düzce.

Sustainable
Sustainability is crucial for the long-term health of the city. Reducing carbon emissions is an important factor as well as optimizing space for mobility infrastructure. Sustainable practices will help Düzce become a more environmentally friendly city.

Healthy
A healthy city prioritizes the well-being of its residents. This goal aims to improve air-quality by reducing environmental emissions, promote active modes of transportation, and decrease heat stress in public areas. Healthier lifestyles and cleaner air are key components of this objective.

Socially just and safe
Social justice and safety are fundamental to a livable city. This goal ensures that the mobility system is accessible to everyone and significantly reduces traffic casualties. Inclusive and safe mobility solutions are essential for a socially just city.

Attractive
Attractiveness enhances the city's appeal to residents and visitors. This goal focuses on making city centers more attractive, increasing tourism, and creating pleasant public spaces. An attractive city boosts civic pride and economic vitality.

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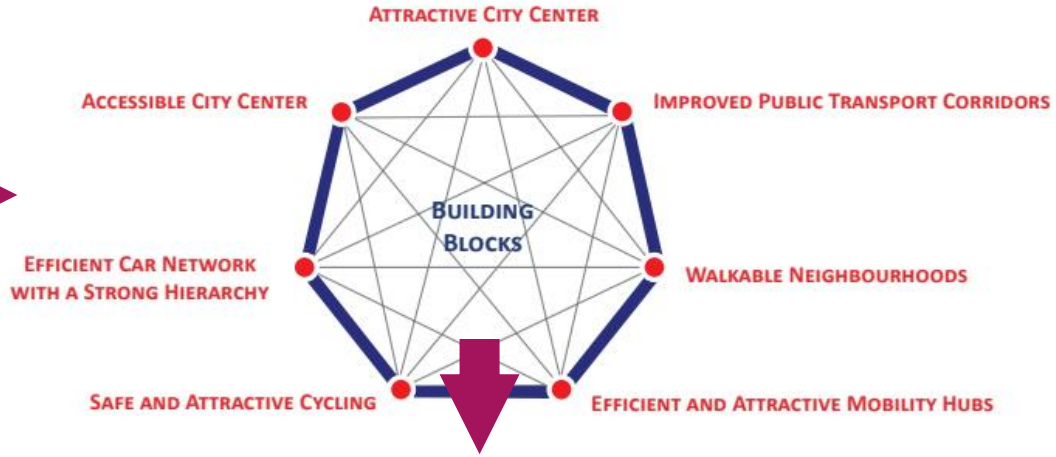

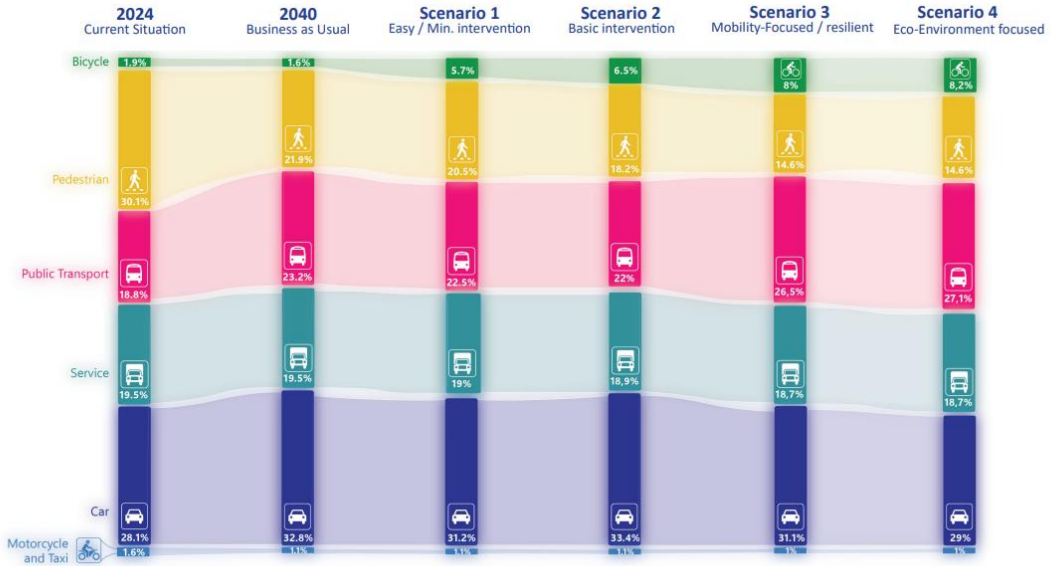

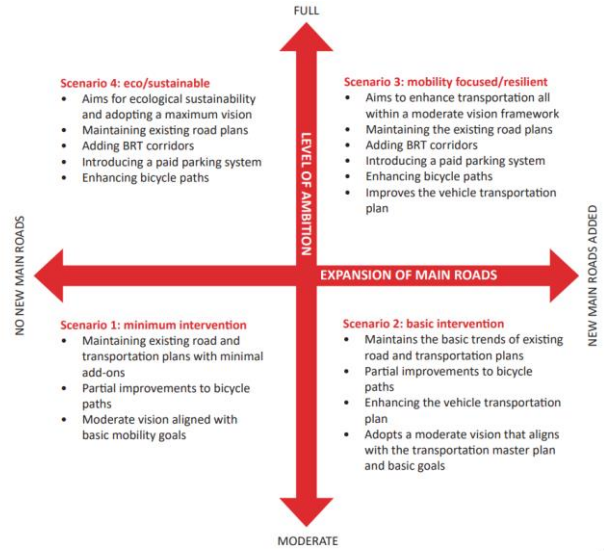

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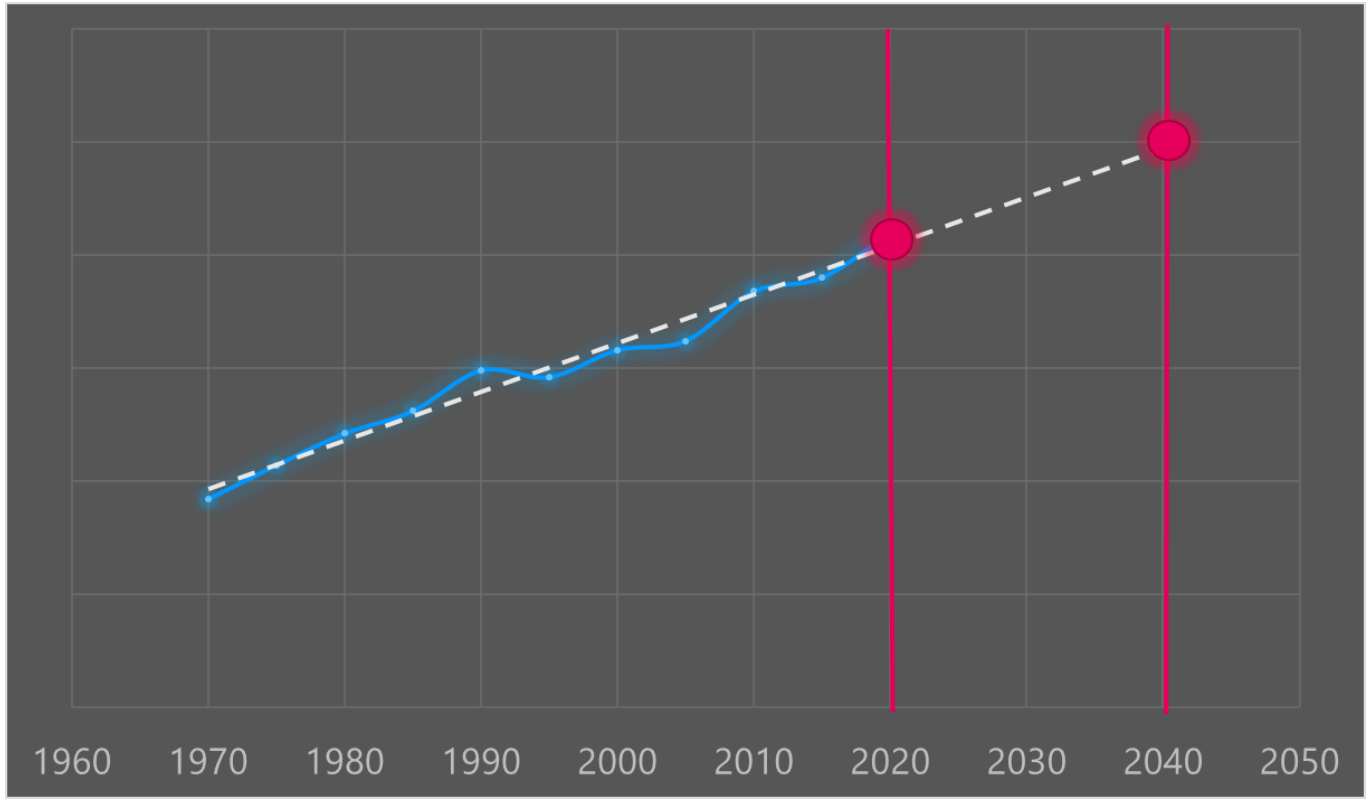
From “Predict and Provide…”

Decisions based on extrapolations of historical trends

Predict: Forecasting growth in mobility demand

Provide: Adapting infrastructure to meet projected demand

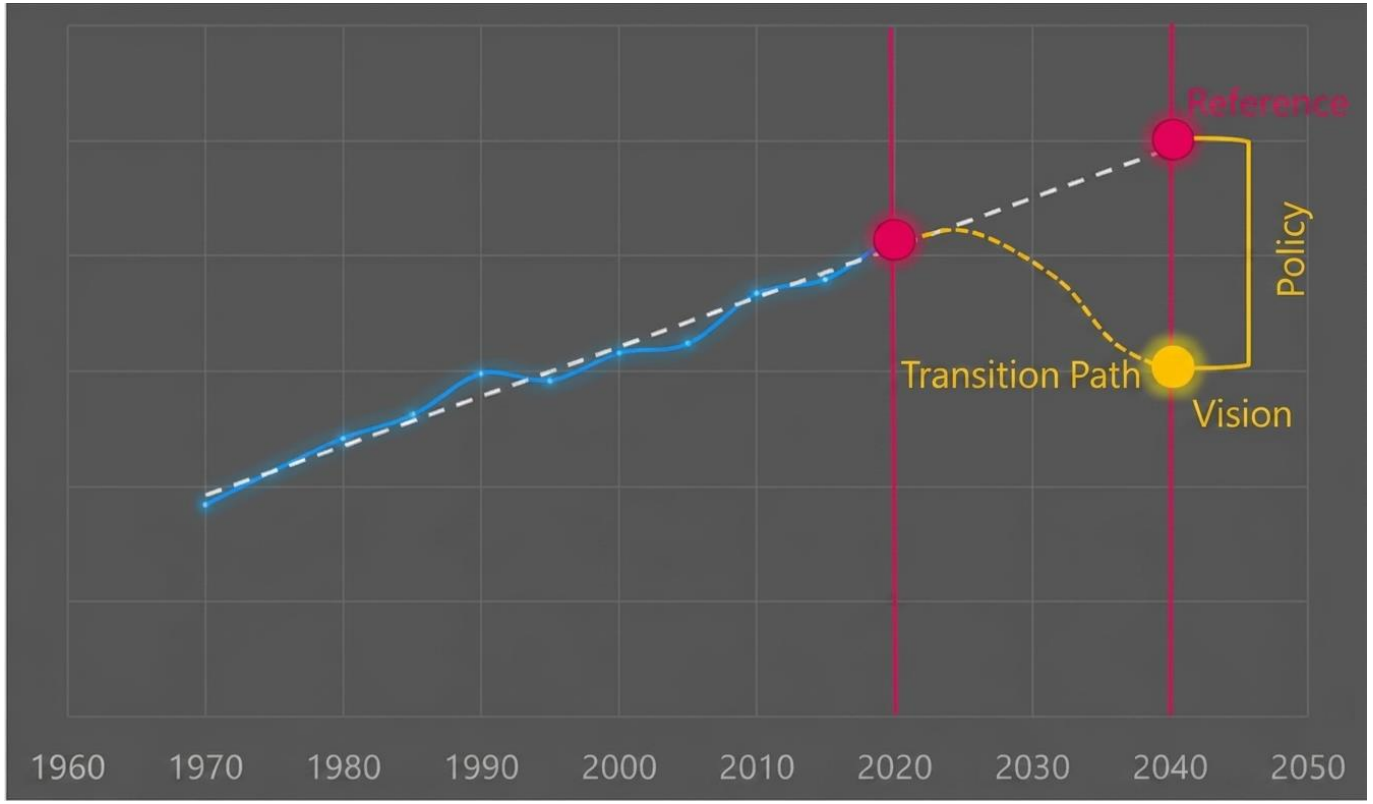
- Minimal policy intervention at national level?
- This approach may lead to:
  - Selffulfilling prophecy: Is this the desired future?
  - Nonrobust decisions if actual trends diverge from historical patterns



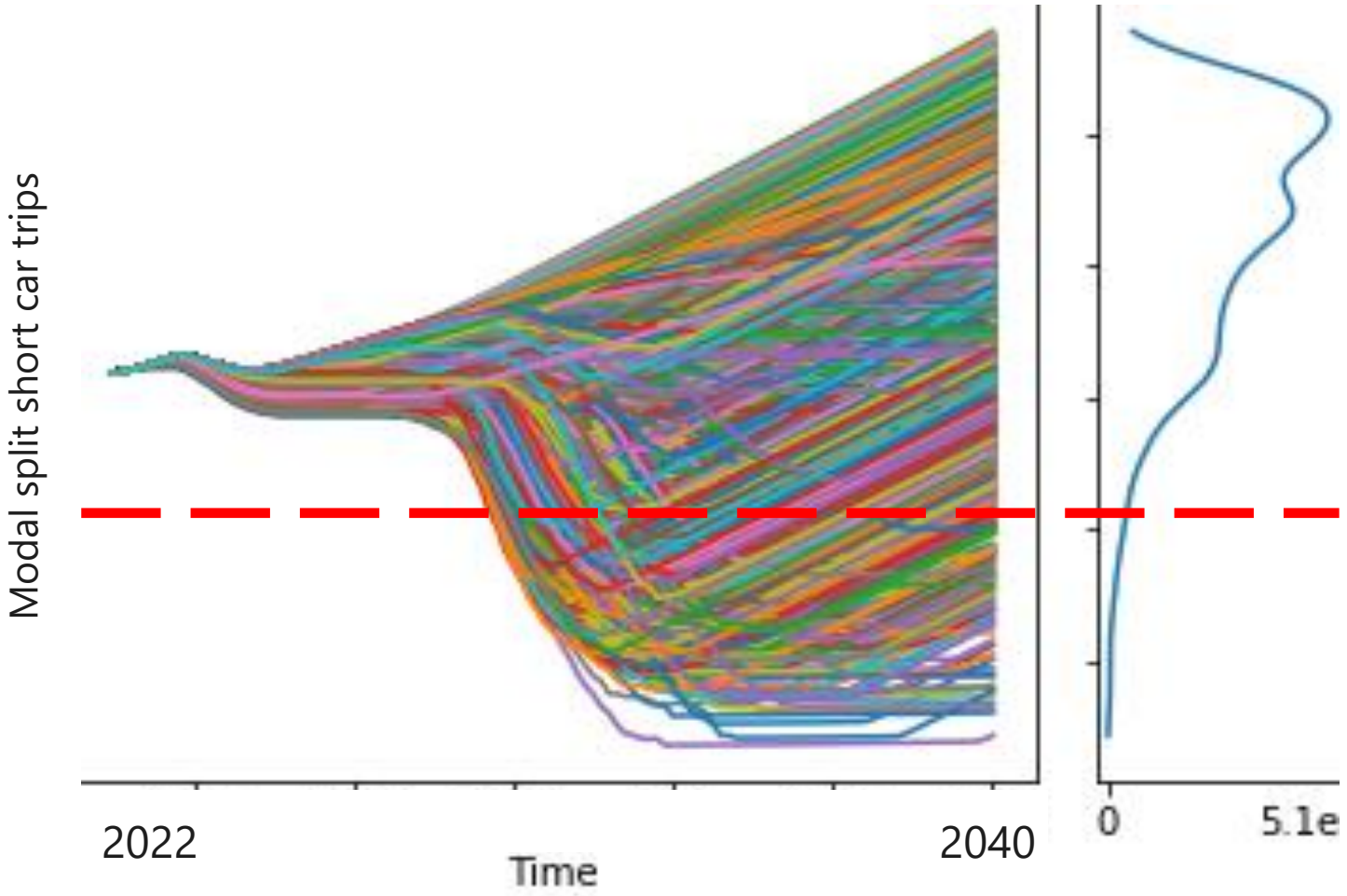
To “Vision and Validate”

- **Vision:** Defining a desired future (e.g. mobility transition, urbanisation challenges and climate objectives)
- **Validate:** Are we on the right track? Continuous monitoring and adjustment
- **Scenario analysis**

Result: Targeted interventions across different policy levels



Defining the desired future and exploring the transition towards it



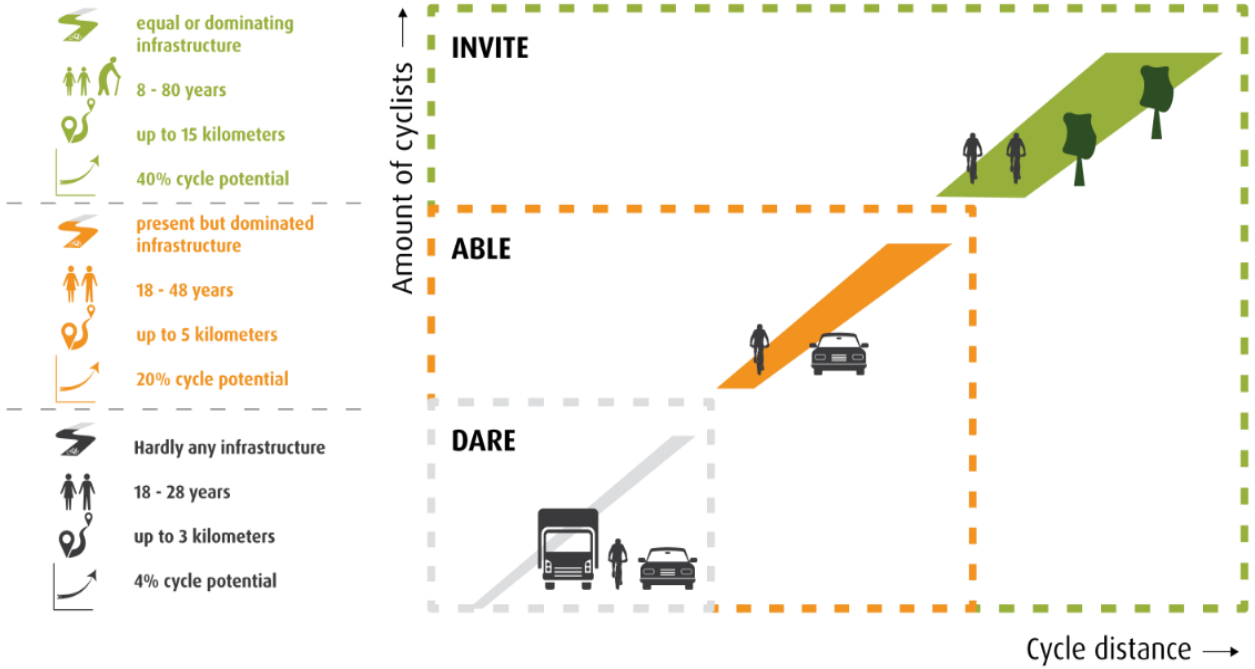
Example target: 30% reduction in short car trips (0–7.5 km) compared to the current situation

- Constraining above-threshold scenarios: Under what conditions does our ambition fall short?
- Encouraging below-threshold scenarios: Which factors have the greatest influence on achieving it?

In this example: Action is needed to meet the target

Monitoring & evaluation

- Cost-benefit analyses
- Justifying investments with evidence
- **Moving towards proactive planning: vision-led approach to dare, enable, invite cycling**
- *Example Noord-Brabant region's new continuous cycle routes:*
  - Fewer cars on the road: nearly 20% of users previously travelled the same route by car or public transport
  - More cycling: 35% of participants report cycling more than before the construction of the high-speed cycle route
  - Higher route satisfaction: the F261 between Tilburg and Waalwijk now scores 7.5 out of 10, up from 5.9



MOBILITY MOVES US

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