PBL Netherlands Environmental Assessment Agency

Towards a Co-ordinated Planning of Infrastructure and Urbanization

Problems, Solutions and Conditions for Success in the current Dutch Policy and Planning Practice

30 April 2014 | David Hamers

Content of presentation

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- PBL
- Context, research objectives and research questions
- Recent developments: main empirical findings (selection)
- Promising strategies to improve the match between urban and infrastructural planning, and conditions for efficient and effective implementation (including one example)
- Policy suggestions (selection)

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- The Dutch national institute for strategic policy analysis in the fields of environment, nature and spatial planning
- Scientific research focused on strategic decision-making by the Dutch national government

Context, research objectives and research questions

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- Urbanization and infrastructure influence each other
- Mismatch between the planning of urbanization and infrastructure in the Netherlands

Context, research objectives and research questions

- Three ‘gaps’:
  - between the discourses and institutional settings in the fields of infrastructure and spatial planning
  - between the centralized (national) planning of large-scale infrastructure and decentralized (regional) planning of urban development
  - between relatively abstract national interests and concrete decisions about specific projects

Context, research objectives and research questions

- An improved co-ordination of the planning in both fields serves a variety of policy objectives, including:
  - Urban economy
  - Accessibility
  - Sustainable transport
  - Attractive urban environments (working, living, leisure)
  - Efficient and effective spending of public funding

- This research aims to help policy makers and planning professionals identify, understand and address the most pressing issues

Context, research objectives and research questions

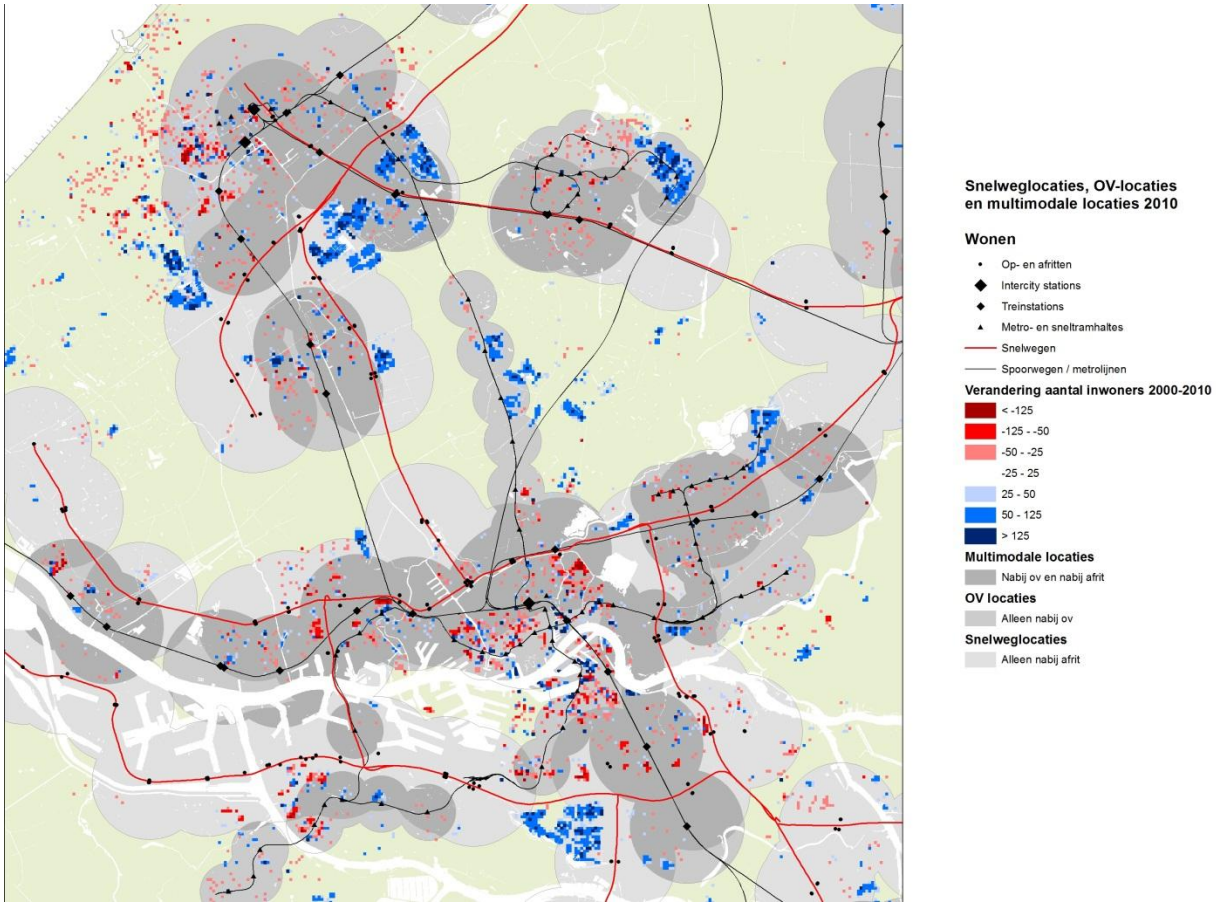
- What are the most important recent developments in the combined fields of spatial and infrastructural planning in the Netherlands? How do these relate to current policy objectives?
- Which strategies to improve the match between urban and infrastructural planning are currently available / discussed?
- Which of these strategies are the most promising for the current Dutch situation? How could they be implemented efficiently and effectively?

Recent developments

Recent developments

- Empirical findings (2000-2010) based on combined data / GIS analyses on:
  - Development of employment and residences
  - Nation-wide and urban regions
  - Proximity of residences and workplaces to infrastructure (e.g. train stations, lightrail stations, motorway exits)
  - A variety of urban environment types (18 in total, combined for analysis, e.g. urban centre, urban residential, suburban centre, business estate, et cetera)
  - Accessibility (e.g. number of jobs available (distance decay function))
  - Travel behaviour, modal split

Recent developments

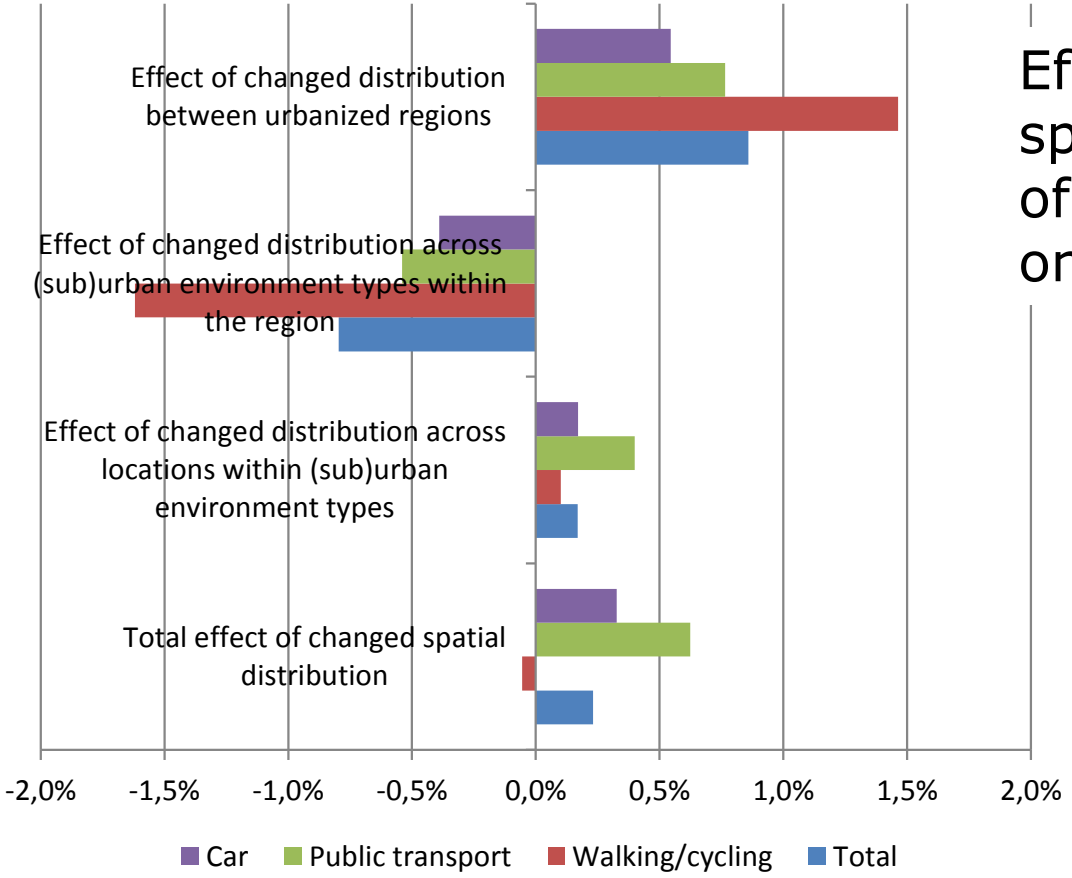


Recent developments

Recent developments

- Urbanization on a national level, but within urban regions suburbanization (both employment and residences)
- The beneficial effect of the first development (increased proximity) on the accessibility of jobs is almost cancelled by the negative effect of the second development
- National infrastructural policy aims for increased accessibility, but regional spatial policy works against this

Recent developments

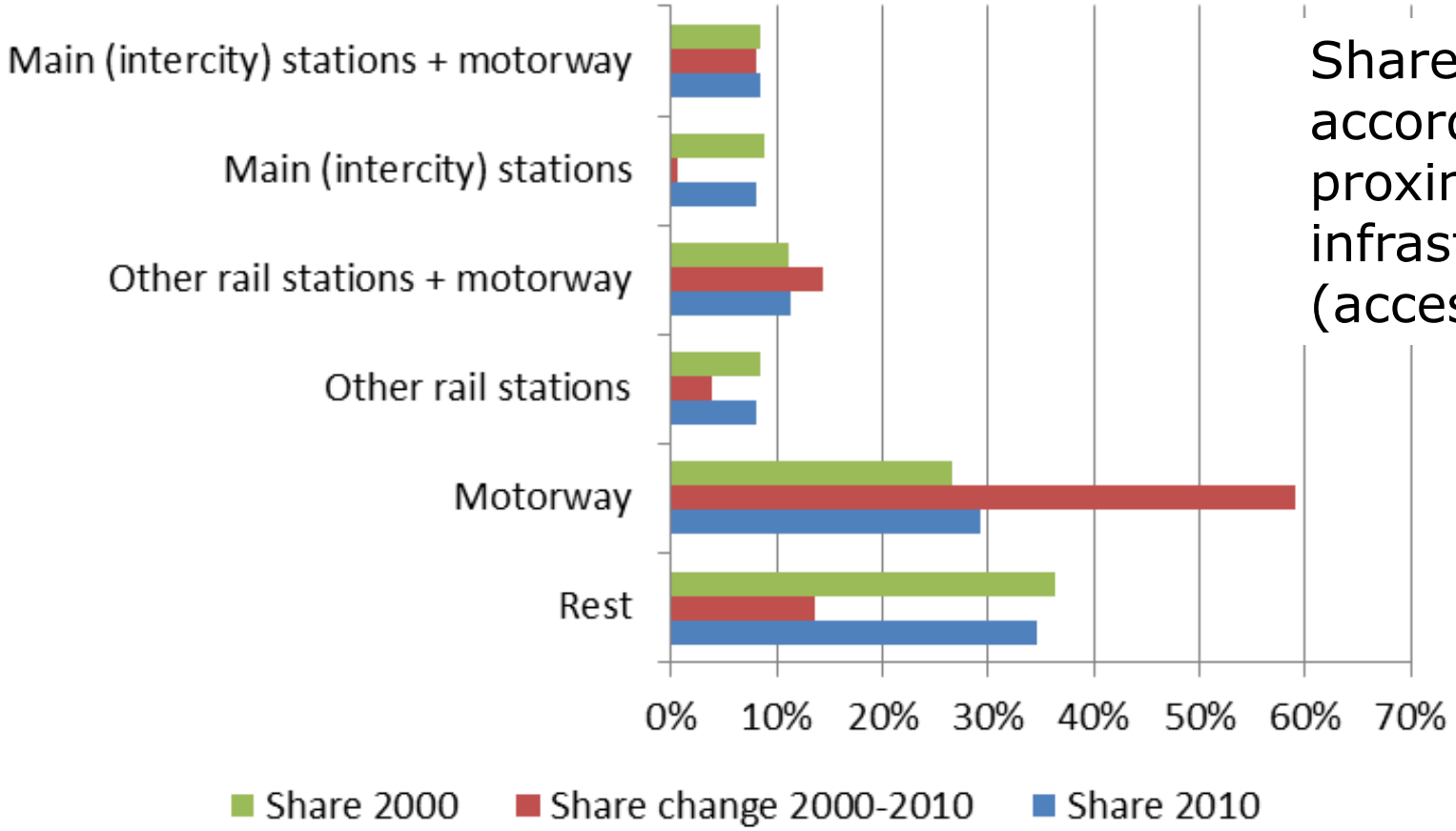


Effect of changed spatial distribution of residents (2000-2010) on accessibility of jobs

Recent developments

- (Highly) urban environments and locations with good access to public transport generally offer good accessibility (a large number of destinations within reach), offer a choice of transport options (public transport, car, cycling, walking), and show more sustainable transport patterns
- The share of residents and jobs near public transport stations has decreased
- The number of jobs has increased the most on motorway locations

Recent developments



Share of jobs according to proximity to infrastructure (access points)

Eight strategies to improve the match between urban and infrastructural planning

Eight strategies to improve the match between urban and infrastructural planning

- Current Dutch policy objectives and recent developments
- Scientific literature, policy debate and planning practice
- Assessment of the relative merits and risks of each of the strategies:
  - Which objectives can each of these strategies possibly help to achieve?
  - For each of these strategies, which dilemmas can policy makers be expected to have to face (trade-offs)? And, what are probable pitfalls in the planning practice (implementation)?

Eight strategies to improve the match between urban and infrastructural planning

- Urban development around infrastructural nodes
- Corridor development

TOD

- Multimodal accessibility (increasing transport options)
- Increasing speed limits / facilitating traffic flows

Eight strategies to improve the match between urban and infrastructural planning

- Urban densification (increased proximity)
- Diversification of urban environments
- Improving transfer points / connectivity (station areas)
- Small-scale spatial development / incremental (phased) infrastructure development

Promising strategy and conditions for effective and efficient implementation: example of TOD

Promising strategy and conditions for effective and efficient implementation: example of TOD

- Objectives:
  - Profitability of public transport
  - Efficient use of existing infrastructure
  - Sustainable transport
  - Improved basis for urban functions (more travellers)
  - Improved connectivity (better transfer points) and alternative transport options in case of accidents
  - Complementary plans for urban development around nodes in stead of 'cannibalism'

Promising strategy and conditions for effective and efficient implementation: example of TOD

- Trade-offs and pitfalls:
  - Successful TOD policy asks for fewer (so, not more) plans for urban development around nodes (to avoid 'node cannibalism' and associated lack of return on investment)
  - Successful TOD policy asks for limited development opportunities elsewhere (e.g. on motorway locations)
  - Beware of possible tensions between spatial design requirements for improved connectivity vs attractive urban areas (e.g. a car park does not make a good square)

Policy suggestions

Policy suggestions (1/3)

- Strong growth on car-oriented and suburban locations results in underused new and existing station areas
- If policy opts for TOD, then it should decide against unlimited urban development away from station areas
- In an efficient and effective TOD policy not every public transport node is an urban destination
- An efficient and effective TOD policy asks for supra-local (regional or national) co-ordination (c.f. Kopenhagen and Tokyo)

Policy suggestions (2/3)

- Strong growth on car-oriented and suburban locations does not contribute to improved accessibility; it can even result in decreased accessibility (e.g. worsened motorway congestion)

- This risk can be reduced by making spatial and infrastructural policy jointly responsible (for transport consequences of spatial development and spatial consequences of infrastructural policy)

Policy suggestions (3/3)

- If the Dutch national government is serious about the spatial component of its national integrated infrastructural and spatial program (MIRT), then it should increase the opportunities for the funding of spatial plans (in stead of just infrastructural plans) and for a better match between spatial and infrastructural aspects of integrated plans

- To improve commuters' journeys the policy and planning parties involved should not focus on improving a single chain link, but should be made responsible for optimizing the entire chain

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