

Mobility under Pressure

The mobility system today suffers from a number of unsolvable problems: congestion, emission of GHG and local air pollutants, noise, accidents, exhaustion of resources, etc. The share of transport in CO₂ emissions is steadily increasing and has now reached a third. The challenge is how to retain social and economic benefits associated with mobility while reducing the negative environmental, economic and social impacts.

Mobility Lock-in

The incumbent mobility system is mainly based on individual motorization of broad societal layers. There are several lock-in mechanisms that have led to the development of so called **automobility regime**:

- Sunk costs in plants, skills, and people
- Sunk investments in road, urban and spatial infrastructures
- User patterns and life styles
- Consumer preferences and cultural values that benefit cars
- Vested interests of the industry and car lobby
- Beliefs from established actors that retain status quo

Mobility Transformation

There are several promising innovative niche developments that can directly influence the predominant mobility regime.

- Intermodal travel
- Cultural and socio-spatial innovations
- Public transport innovations and modal shift
- Demand management and intelligent transportation systems (ITS)
- New life-styles (e.g. working from home, online shopping)
- Green propulsion technologies

Transition Management (Theory in a nutshell)

LANDSCAPE

(A broad range of factors are contained here, such as economic pressures, cultural values, social trends, wars and environmental issues. Change occurs at an even slower rate than at the regime level)

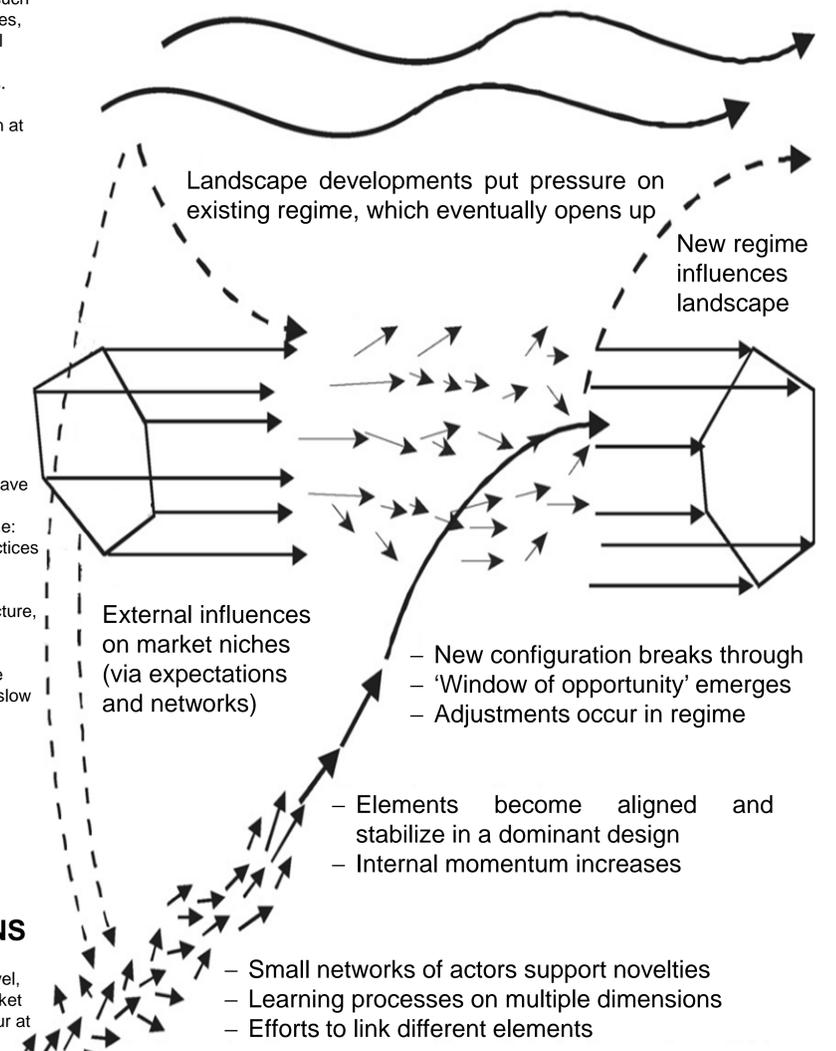
SOCIO-TECHNICAL REGIME

(Seven dimensions have been identified in the socio-technical regime: technology, user practices and application, the symbolic meaning of technology, infrastructure, policy and techno-scientific knowledge. Change occurs at the regime level but it is slow and incremental)

NICHE-INNOVATIONS

(Radical innovations occur at the niche level, largely free from market pressures which occur at the regime level)

Transition Management aims at structuring the social and political transformation processes simultaneously considering sustainable development.



Source: adapted from Geels, Frank W.; Schot, Johan (2007): Typology of sociotechnical transition pathways. In: Research policy 36 (3), S. 399-417.

Research Motivation

The motivation for this work is to achieve **FACTOR 10** of automobility in cities, i.e.:
Is it possible to get along with the tenth of the car fleet without restricting the mobility needs?

Research Approach

The goal of this research project is twofold:

1. Collect the systemic knowledge about possible pathways for the future of mobility, i.e. innovative solutions for mobility,
2. Investigate whether the achievement of factor 10 of automobility in cities is possible in the long run and what needs to be done.

In the transition practice the implementation of innovations (at the niche level) is considered to be a particularly effective tool for both exerting pressure on the existing regime and for gathering necessary transformation knowledge.

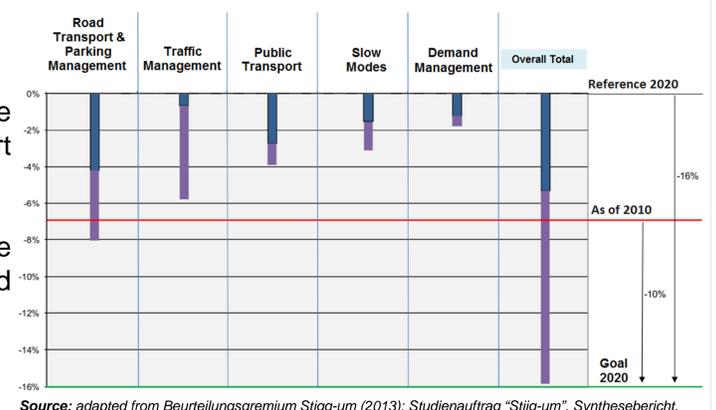
For data collection exploratory case studies of niche developments were chosen as a primary research method.

Case Study: Basel (Switzerland)

A thorough desk research has revealed that the authorities of the city of Basel aim at considerably reducing automobility in its urban area. In a plebiscite the citizens decided to reduce the motorized traffic performance by 10% until 2020 (compared to 2010).

Conclusions:

- Planned measures can eliminate the prognosticated gains in motorized transport performance until 2020
- Seven innovative reduction schemes are being defined to decrease the motorized transport in the city by 10% until 2020
- The greatest impact is expected by implementing traffic control systems and parking management measures
- However, high public resistance is to be expected



Source: adapted from Beurteilungsgremium Stigg-um (2013): Studienauftrag "Stigg-um". Synthesebericht.