TCP INTERNATIONAL
TRANSPORT CONSULTING PARTNERS

cities for mobility
the world wide network
for urban mobility

Workshop 1:
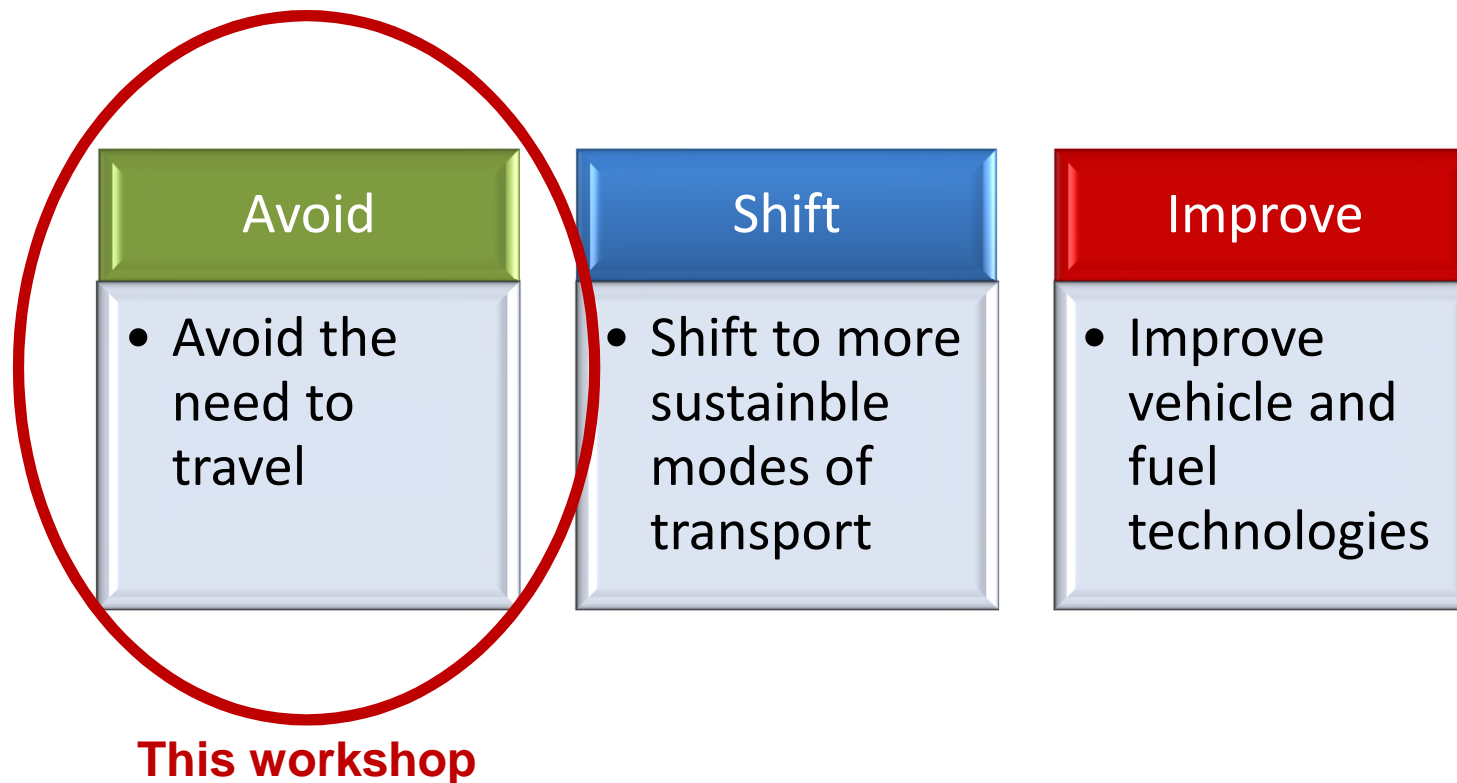
Avoid

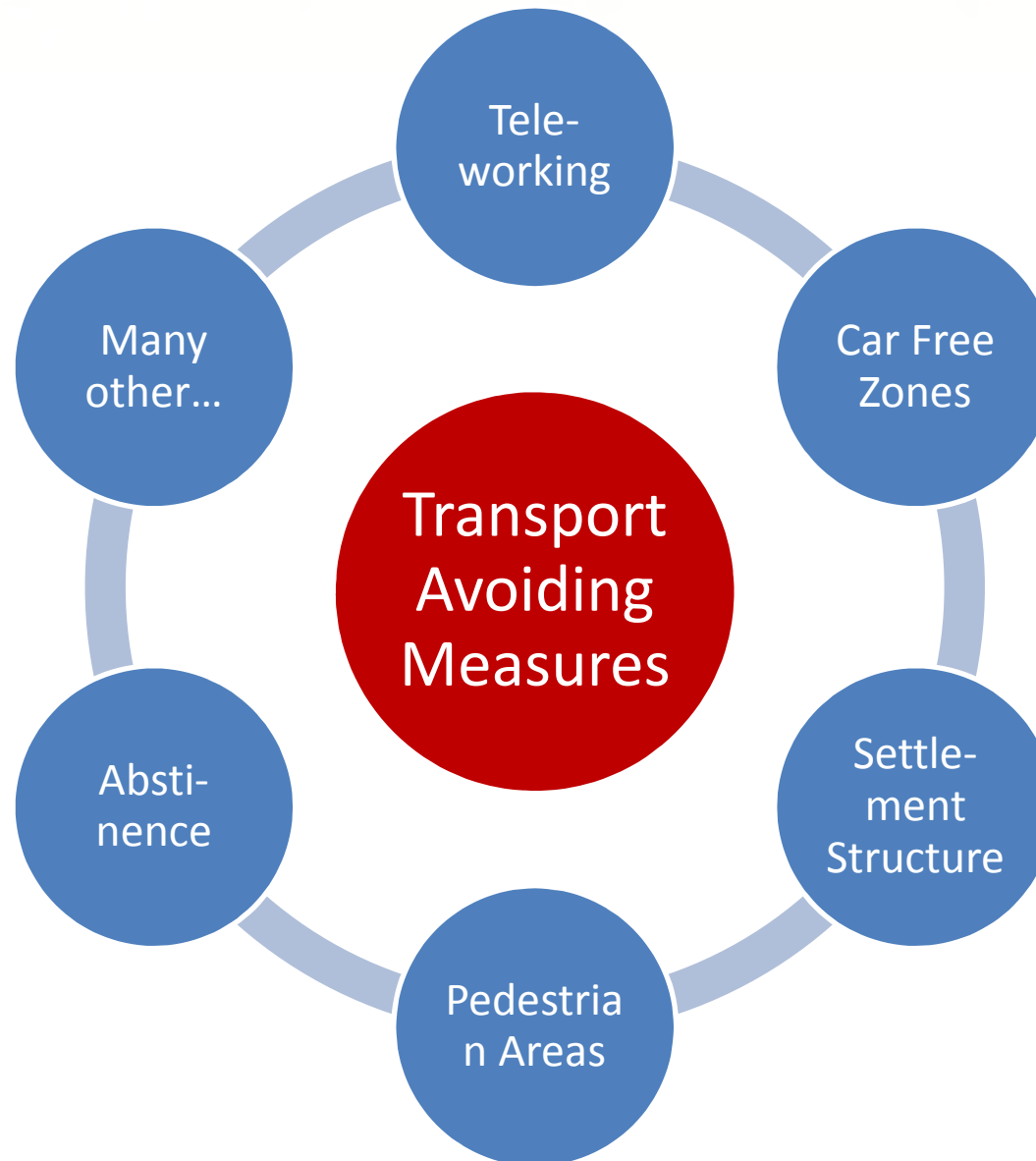**Niklas Sieber**

TCP International

Stuttgart

June 2, 2014

STRATEGY
PLANNING
ENGINEERING

3 Strategies for Sustainability in Transport

Avoid	Shift	Improve
• Avoid the need to travel	• Shift to more sustainble modes of transport	• Improve vehicle and fuel technologies

This workshop

Niklas Sieber
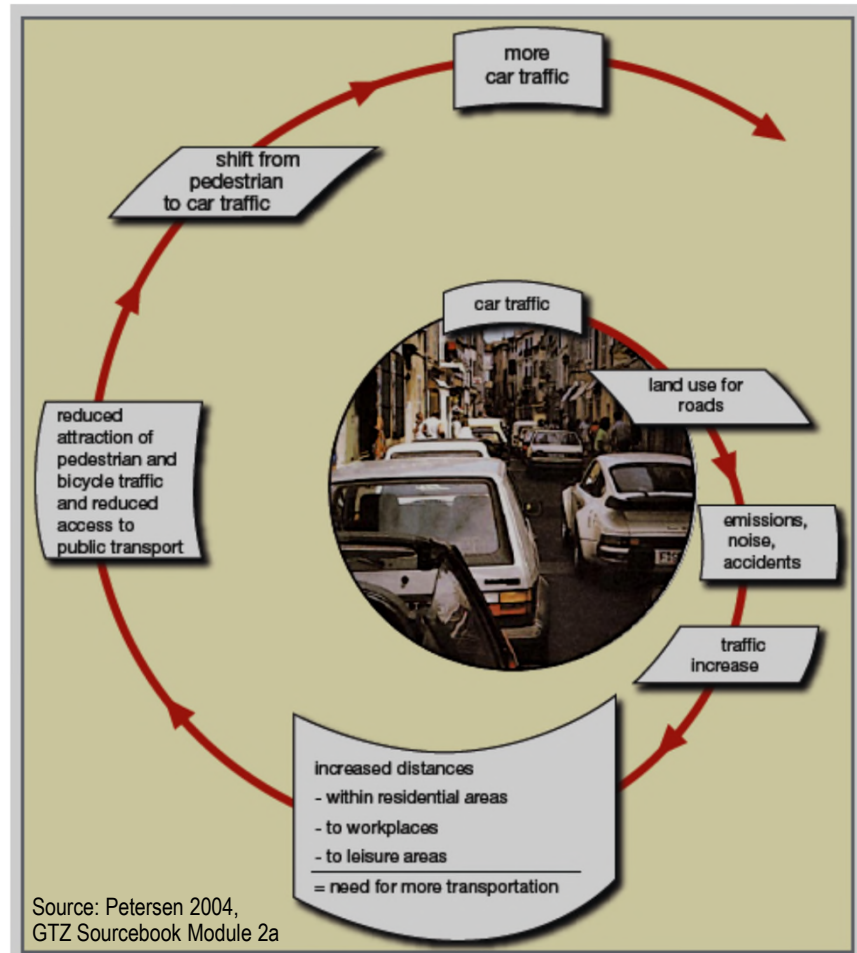
Urban Sprawl

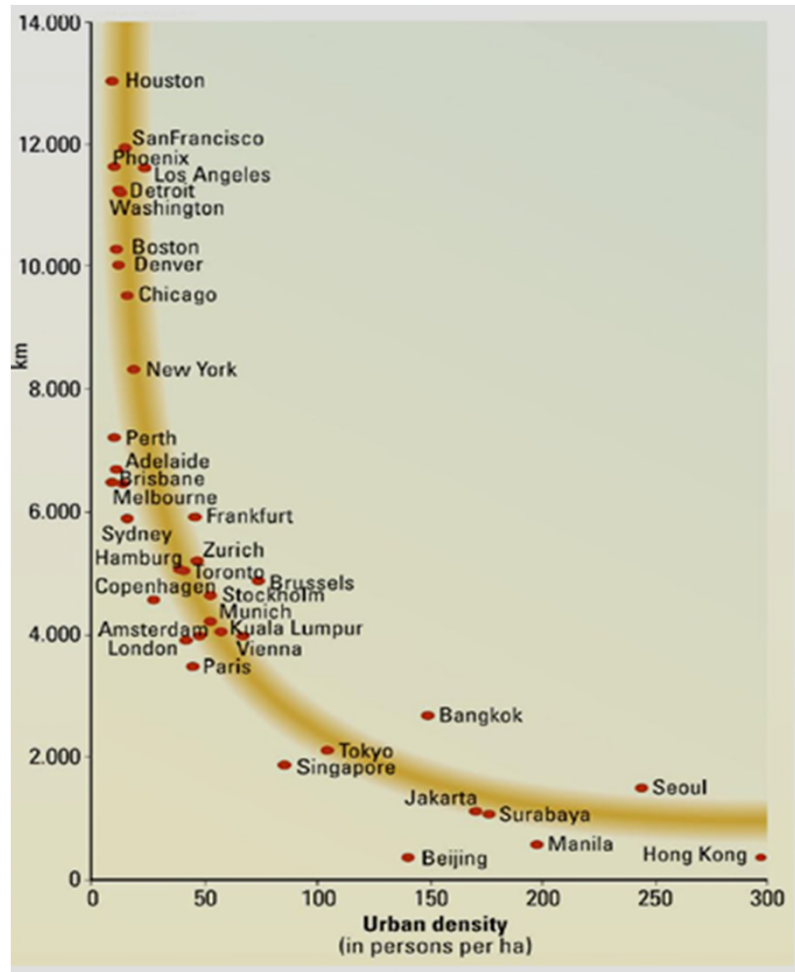Veränderung der Bevölkerungszahl 1970 - 87
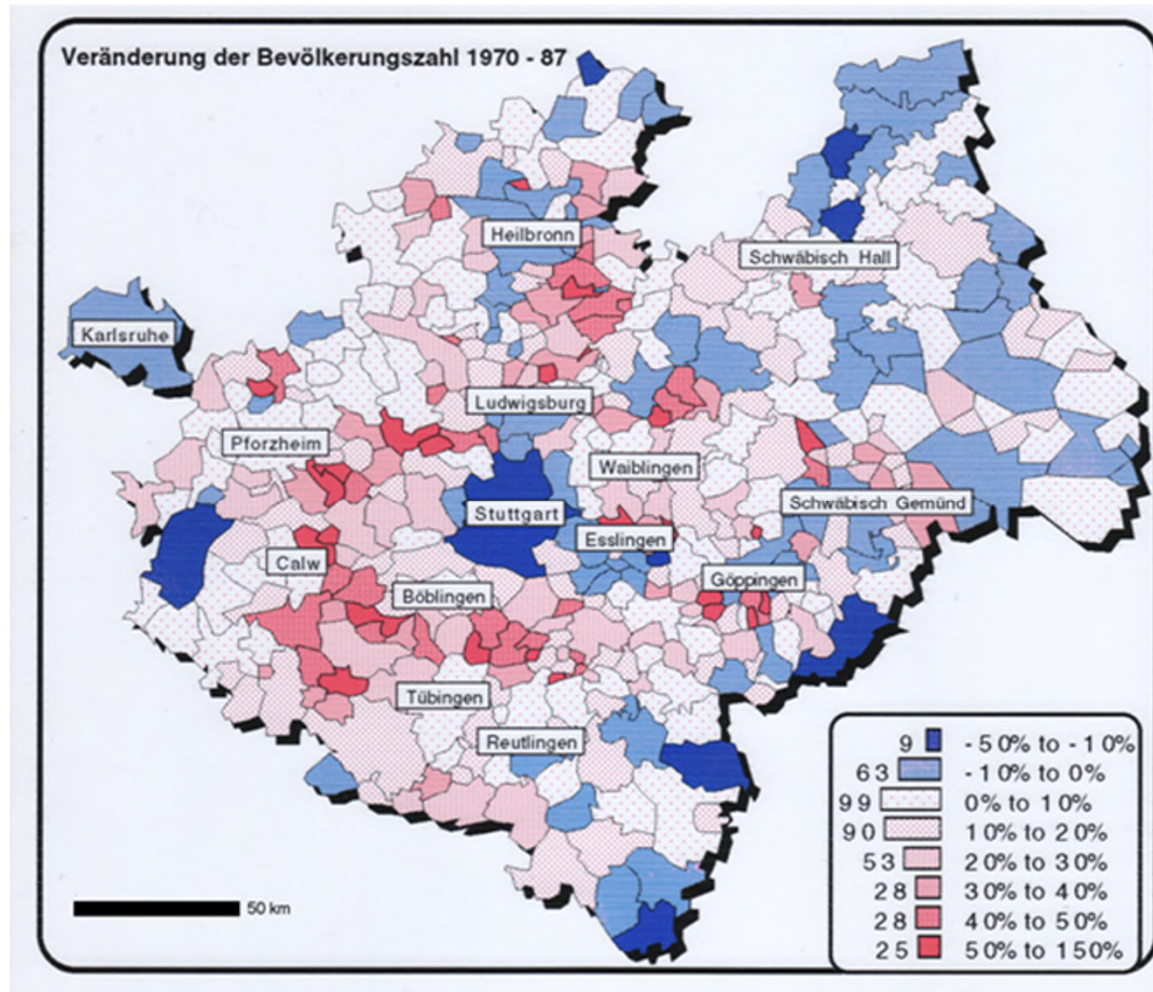
Example Stuttgart:

- Change of Population 1970-87
- Urban inhabitants moved to the outskirts of towns or to rural communities

= **Urban Sprawl**

Traffic Land-Use Spiral

more car traffic

shift from pedestrian to car traffic

car traffic

land use for roads

reduced attraction of pedestrian and bicycle traffic and reduced access to public transport

emissions, noise, accidents

traffic increase

increased distances
- within residential areas
- to workplaces
- to leisure areas
= need for more transportation

Source: Petersen 2004, GTZ Sourcebook Module 2a
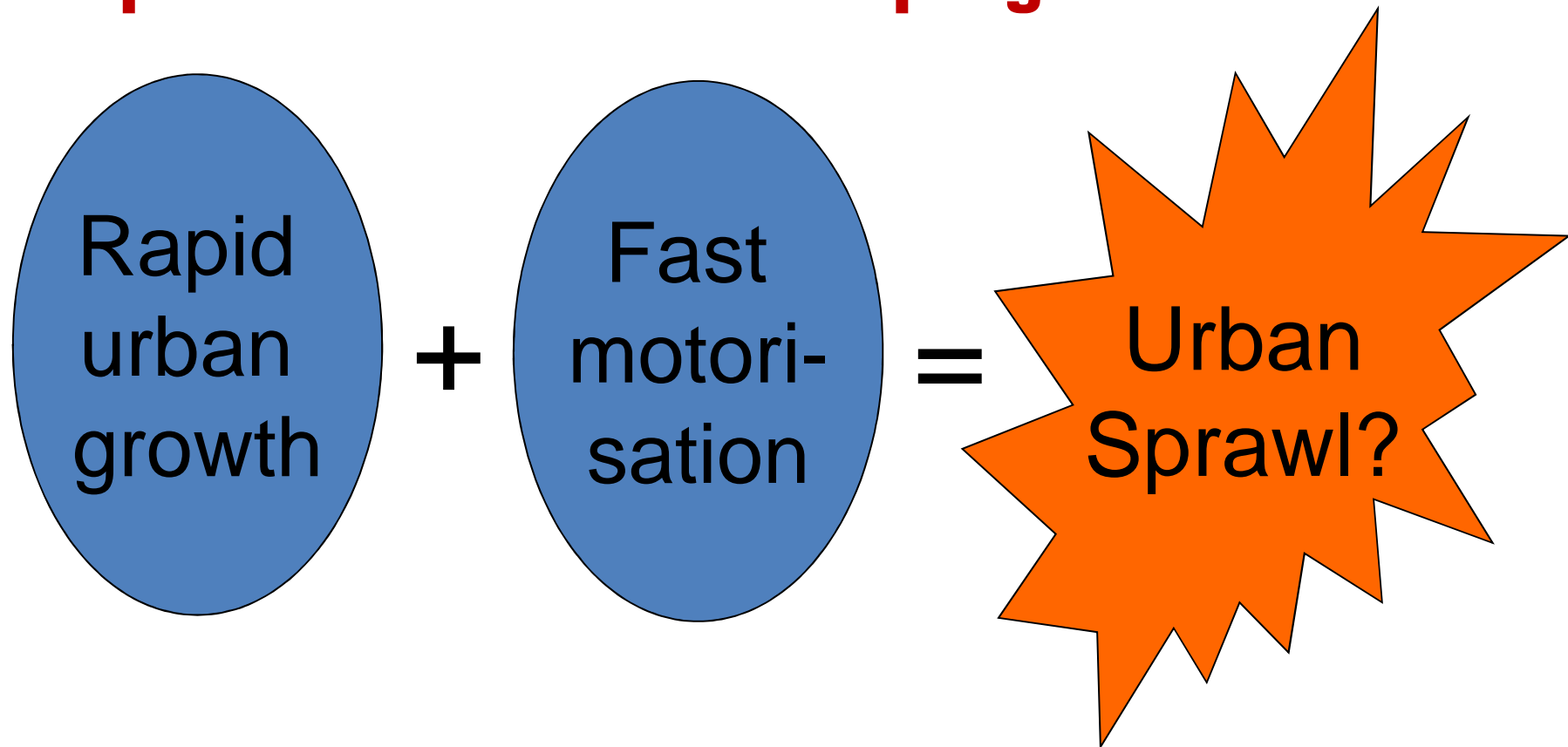

USA

Urban Sprawl generates Transport

Low urban densities generate

- large transport volumes

- are not suitable for public transport

=> high energy consumption

Implications for Developing Cities

Rapid urban growth **+** Fast motori-sation **=** Urban Sprawl?

Which Direction for Developing Cities?

Mumbai:
8.3 m inhabitants

Cairo:
8.9 m inhabitants

Los Angeles
8.4 m inhabitants

Blackplots from the 1990s

Source: Sieverts 1997

Energy-efficient settlement structures

Point-Axle System in Stuttgart

Energy Efficient Settlements

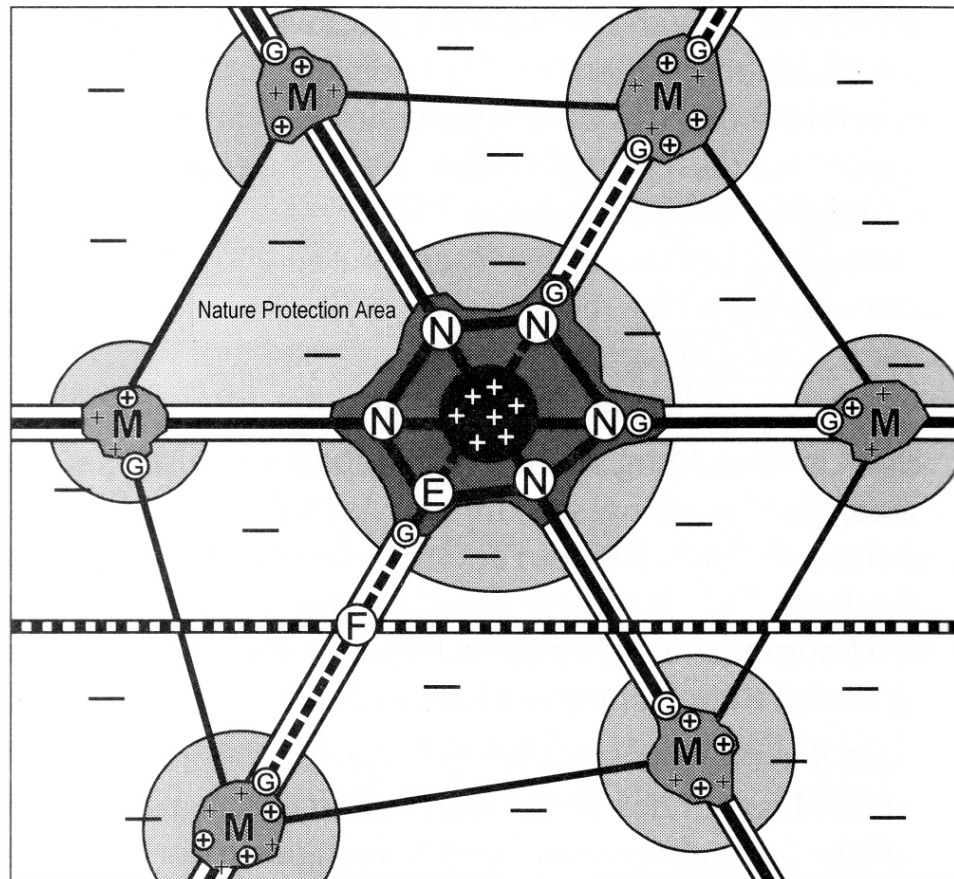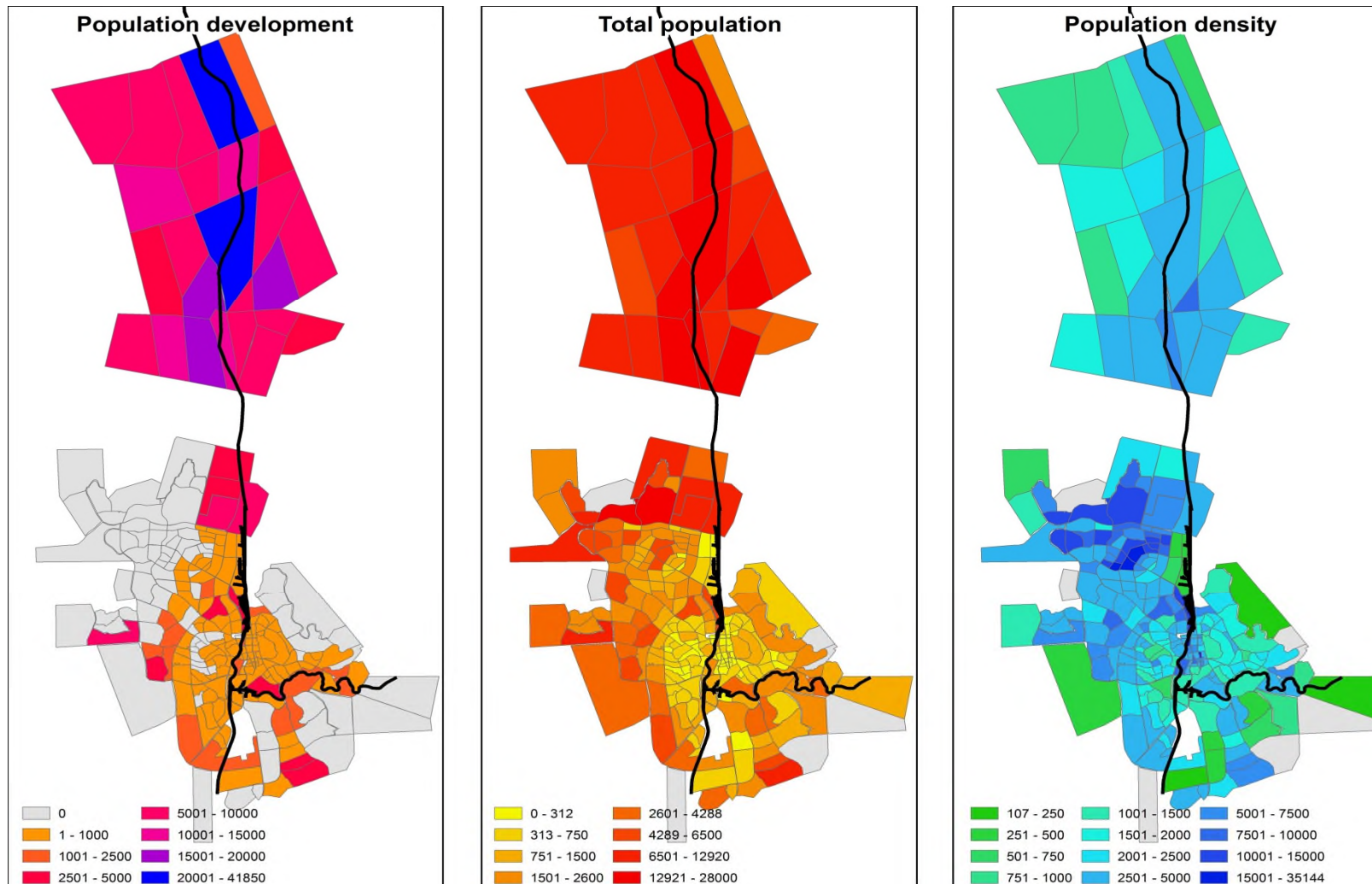| Features of energy-efficient settlement structures	
Point-axles systems, Densification of population along axles	Decentral Concentration
Planning of Satellite Centres	Endowment of centres with central facilities
Densification of Development Cernels	Green Belts
Mixed land-use for residents and business	Recreational areas and public space

Regional Plans for less Traffic

Planning features of a region with less car traffic

Ⓜ	District Centre (+ ⊕)	▢	Local Recreation Area
⚫	Urban Centre (+)	—	Area with low density
Ⓝ	Neighbourhood Centre (+ ⊕)	▨	Urban Fringe
Ⓔ	Suburban Centre	═══	Narrow Settlement Axle
Ⓕ	Airport	━━━	Public Transport Link
Ⓖ	Industrial/Business	▪▪▪▪	Regional Railway Link
⊕	Growth Employment	▮▮▮▮	Motorway
+	Growth Population	0 10 20 km	

Example: **TOD in Curitiba Brasil**

Example: Windhoek, Namibia

Thank you for your attention

Presentations in this workshop

- **Juan Carlos Escudero,**
  City of Vitoria-Gasteiz (Spain)
  The committment of a city towards active and sustainable mobility

- **Andrew Nash**
  Transport and City Planner, Vienna (Austria)
  Car-free Housing and Transport

- **Christoph Welz**
  Siedlungswerk Stuttgart (Germany)
  New urbanism – new mobility a chance to avoid traffic, the development of the „Rosensteinviertel" Stuttgart

Questions for this workshop

- Which of the ideas presented would be suitable for your town?

- Which own measures to avoid transport have you developed?

- What are the main constraints in implementing the proposed measures?