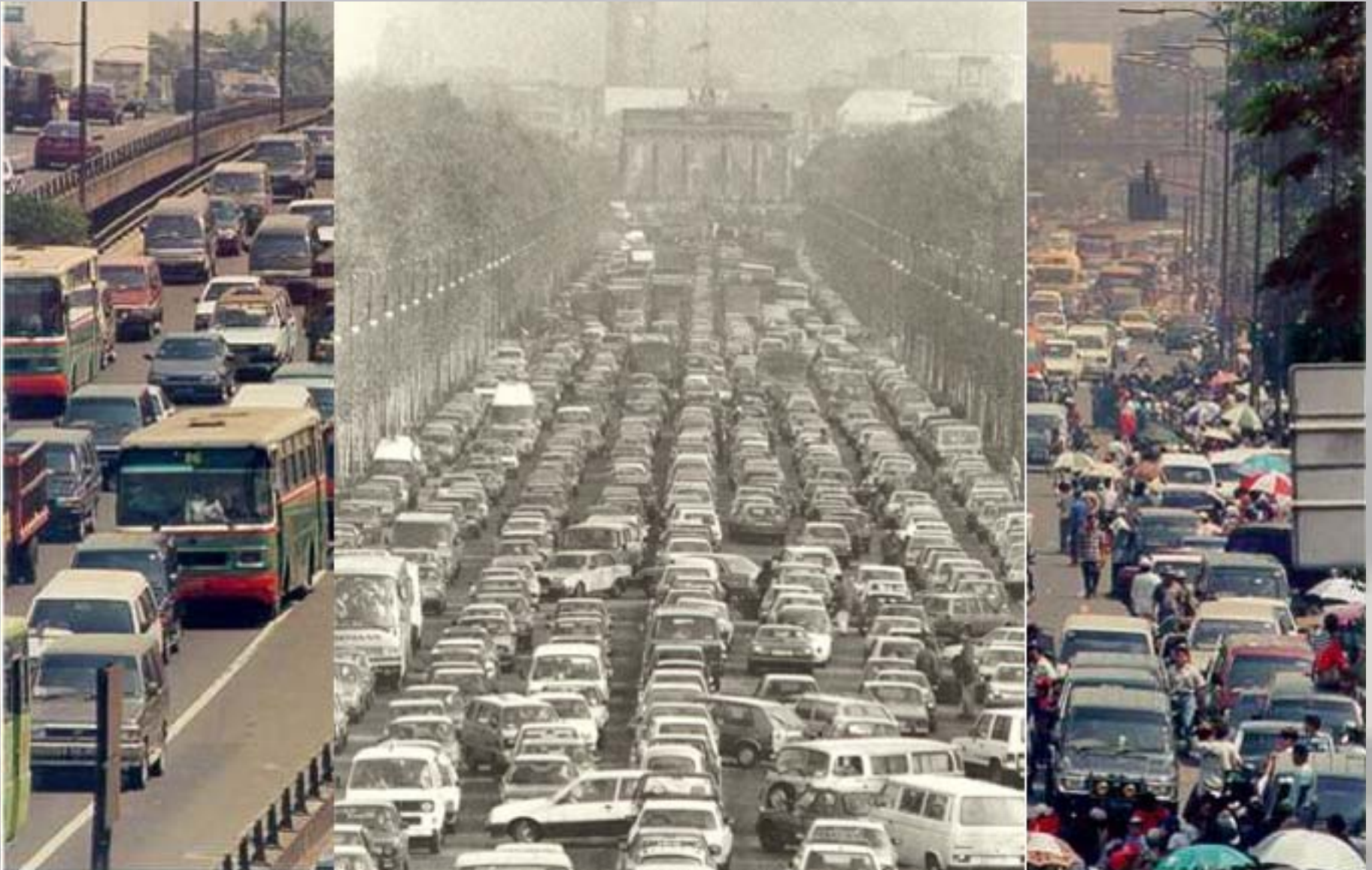


German-Malaysian Project:
**Approaches for Reduction of Air Pollutants, Sustainable
Urban Traffic Systems**
- Kuala Lumpur as a case -

Rudolf Petersen, Germany
UNFCCC SBSTA 26, Bonn May 11, 2007
Urban Planning and Development, Transportation

How to learn from 50 years of tradition in urban traffic congestion and air pollution?



Pollution Control Lesson Learnt in the US: Clean Technology is not enough

**Greetings from
Los Angeles**



- More than 30 years of emission reduction by tightened standards in U.S. do not guarantee healthy ambient air
- Increasing car traffic and travel distances result from
 - **unreasonable land-use**
 - **poor public transport**
 - **low gas prices**
 - **loss of urban livability**

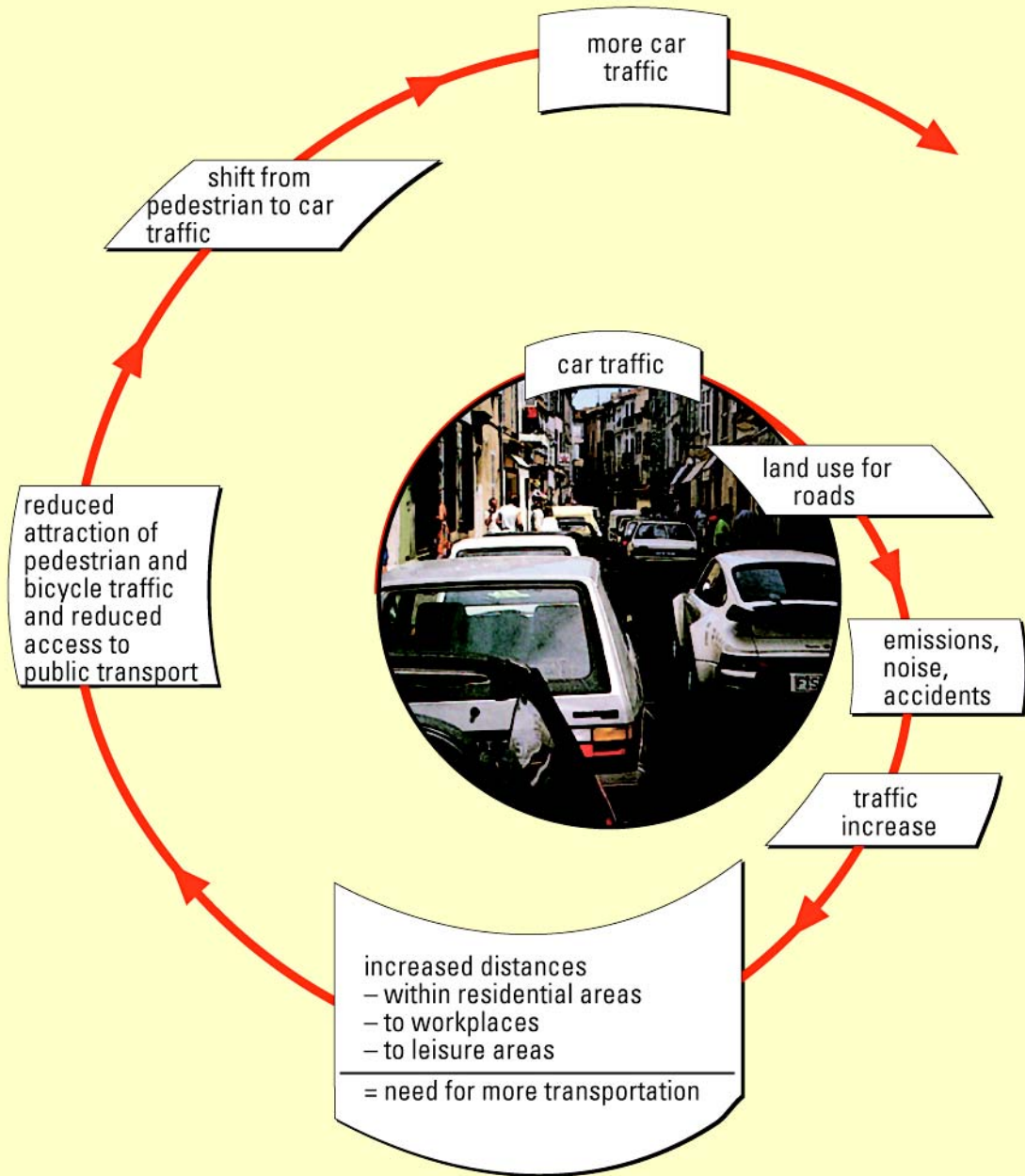
Integrated Clean Air Strategy in Transport

- Experiences can be applied to ghg reduction -

Control of Vehicle-km	Control of Emissions per Vehicle-km
Urban Transport Planning	Inspection & Maintenance Program
Priority for Public Transport Investment	Standards for New Vehicles
High-Density Development	Fuel Standards
Mixed-Use Development	High-Use Fleet Improvement Programs
ABC / Key-Site Development	Tax Incentives for Clean Vehicles/Fuels
Road Pricing, Fuel Taxes	Education of Drivers, Law Enforcement

Traffic Spiral

- **Feedback system between**
 - road construction,
 - sub-urbanisation
 - vehicle increase
- **Results are**
 - Fuel consumption
 - Air pollution
 - More congestion
- **Int'l experience: Not sustainable**

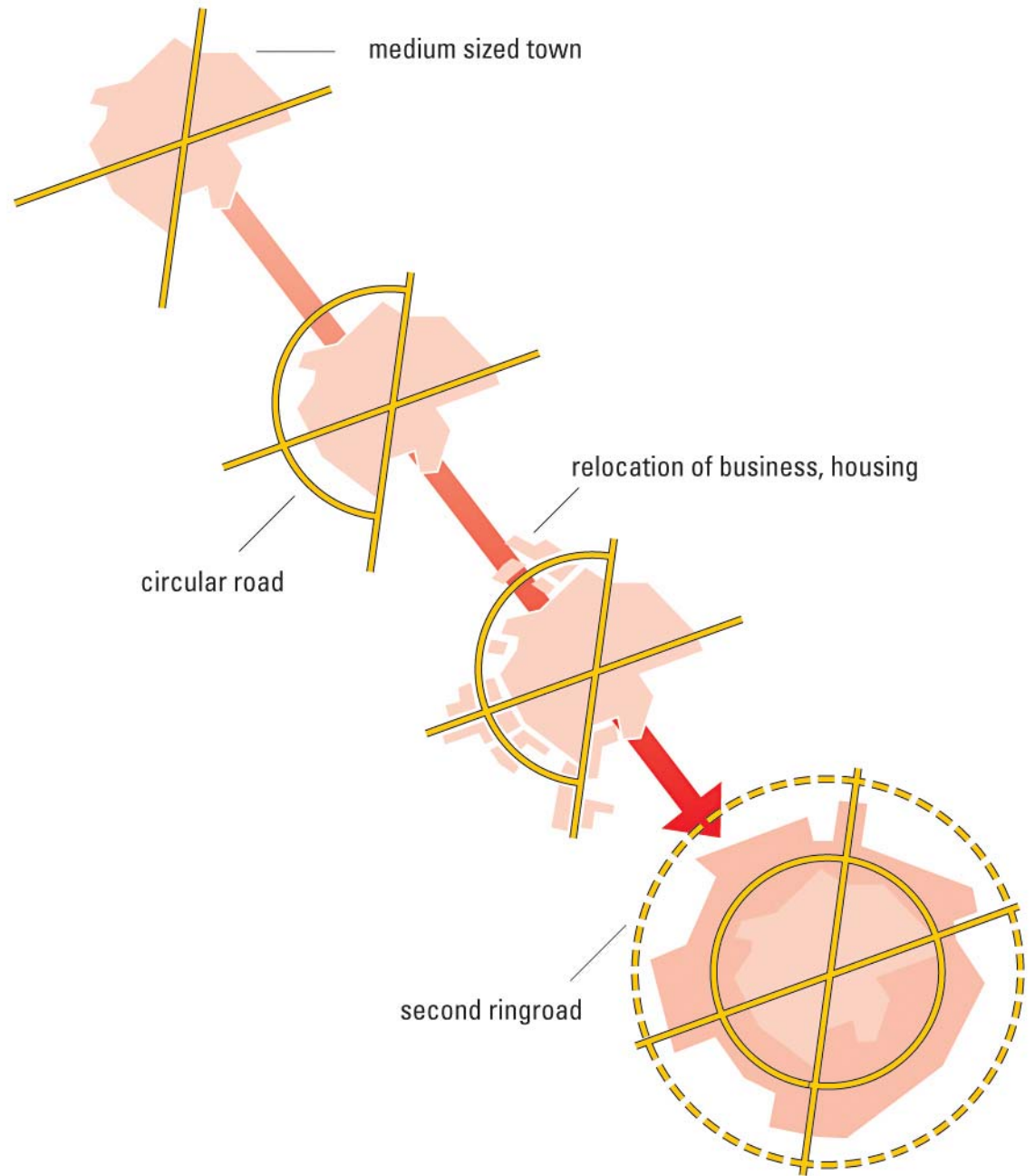


Bonn May 11, 2007

A Problem: Ring Roads

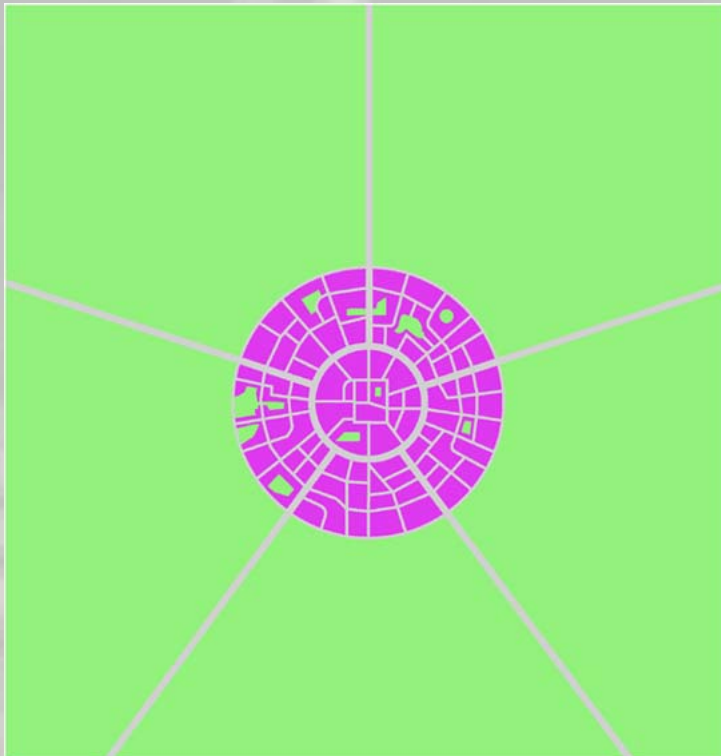
- Ring /circular roads initiate suburban development
- Relocation of businesses, housing
- Lower density of land-uses
- Car-oriented, higher distances

Bonn May 11, 2007

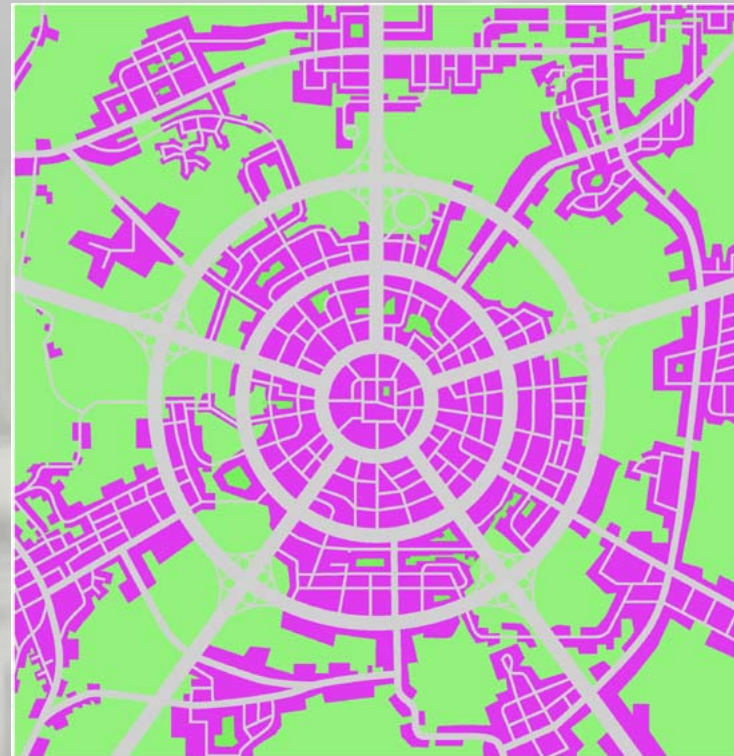


100 Years of Sub-Urbanisation

Typical Urban Region 1900

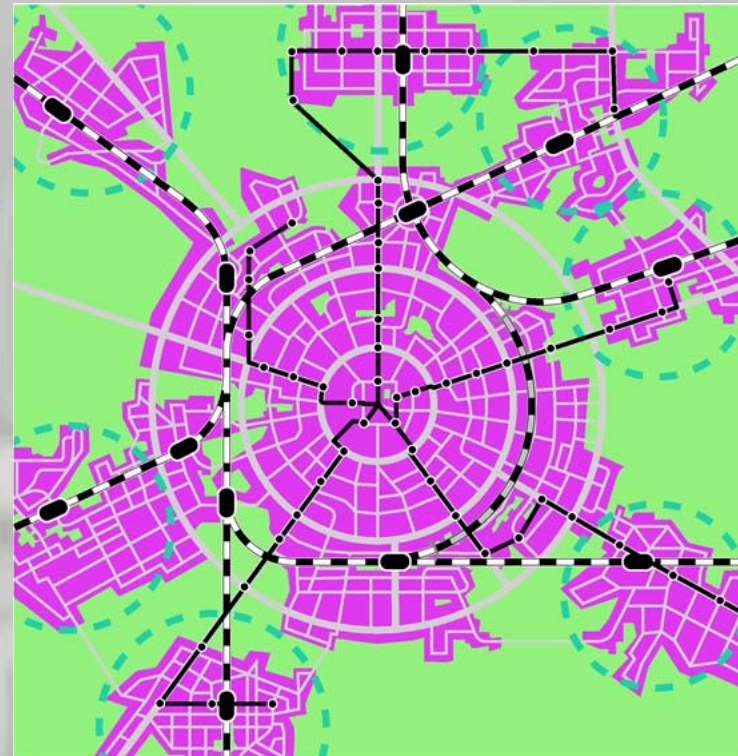
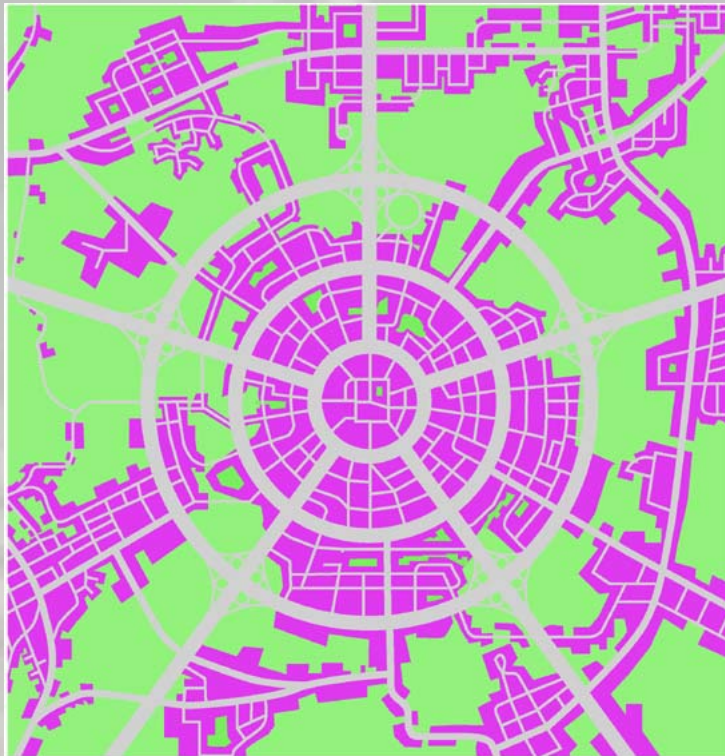


Typical Urban Region 2000



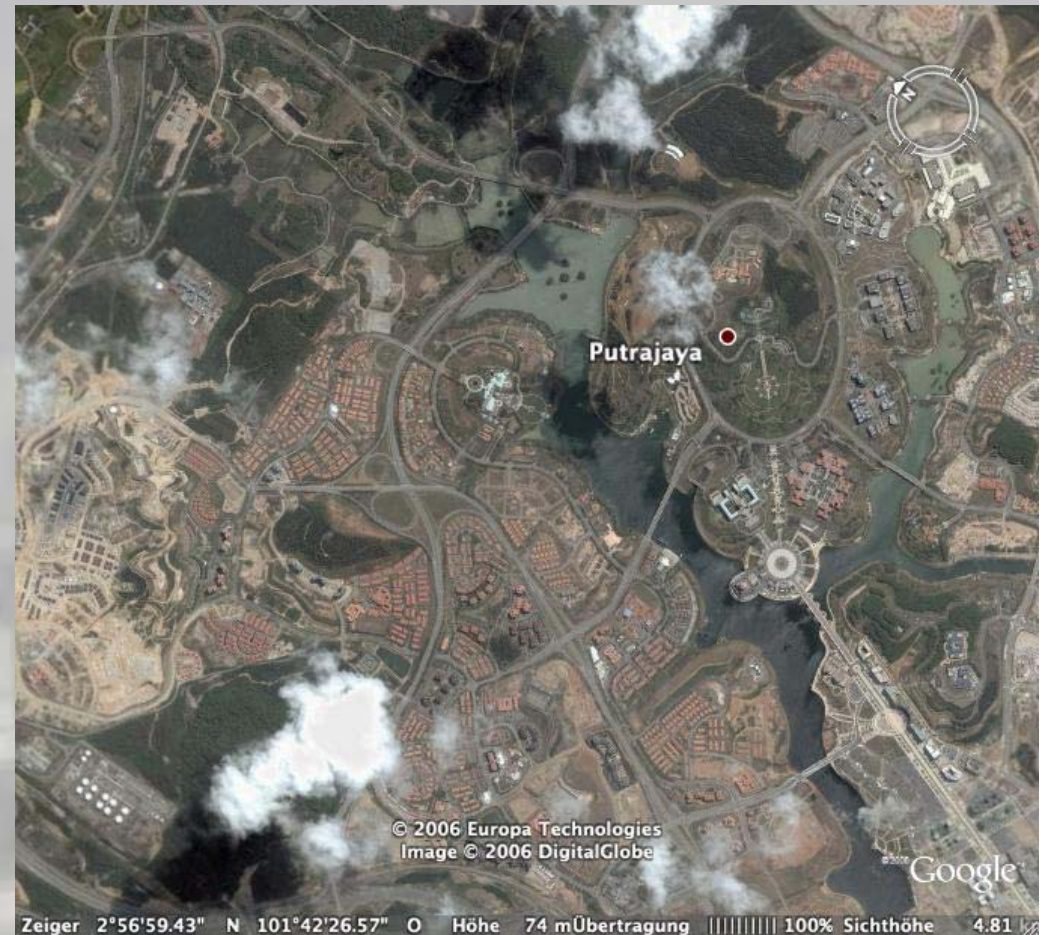
Vision: Turn Back Sub-Urbanisation

Typical Urban Region 2000 - Typical Urban Region 2100 ?



Kuala Lumpur - Putrajaya: How can sustainability mobility be supported (= car dependency be reduced)

- Control new investments
- Classify areas according to transport access
- Example e.o. Dutch ABC Concept)
 - A: Locations around train / bus station (shopping centers, large office buildings etc.)
 - B: Good/average accessibility by PT (housing, work places, leisure facilities)
 - C: Outside near highway ramps (facilities with low numbers of visitors)
- Coordinate local/regional planning



KL: Why the car and not p.t.

- Rational reasons mentioned: Travel time and access
- Not mentioned: Differences between various buses types / rapid rail
- Not mentioned: Social status
- Public participation needed

Bonn May 11, 2007

Table 1: Factors that encourage the use of the car

No.	Statement	Percent
1	Less Travel time	44.1
2	Desirable Routes not covered by public transport	33.8
3	Comfortable	2.5
4	If its save	2.0
5	Infrequent public transport services	17.6

Table2: Factors Discouraging car users from using public transport

No.	Statement	Percent
1	High risk to road accident involving	17.0
2	High traffic congestion and delay	36.6
3	It is not cheap and no cost saving (fuel and tool)	14.4
4	It is no economical to maintain	10.9
5	Parking and maneuver problem	23.7

Table 3: Likelihood of car users switching to public transport.

No	Statement	Percent
1	Vehicles usually arrive on schedule	37.2
2	Fare is low	28.0
3	Vehicles are not too crowded	3.2
4	Vehicles are clean	2.0
5	The route is more accessible	29.6

Source: Kamba/Rahmat/Ismail Journal of Social Sciences 2007

2

What are the options?

Bus rapid transit



Light Rail Transit



Underground metro

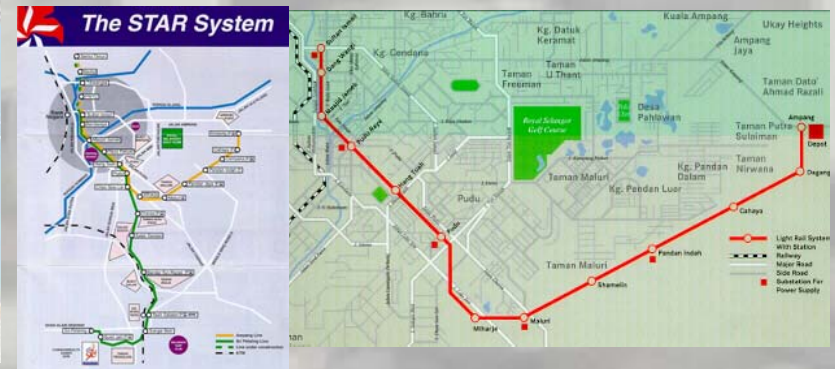
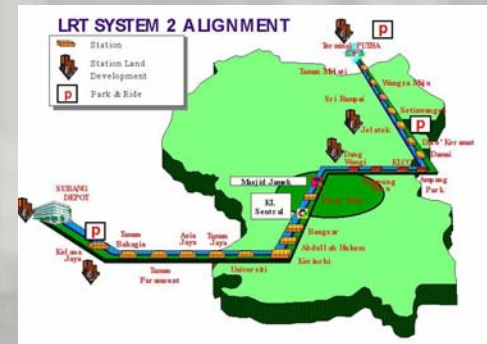


Urban rail



KL: Public transit competing with private car use - Importance of system integration and land-use planning

- Strong co-ordination between pt services
- Joint tariffs between transit operators
- Urban development supporting p.t.



Land-use and transport closely related

Integrated concepts needed to reduce transport emissions

Urban Land-Use

- Mixed-use areas
- No disperse settlements
- Population density
- City center residents
- Urban architecture to attract walking
- High-use locations transit-orientated

Urban Transport System

- Balanced use of road area
- Priority for public transport and for NMT
- Transport management for sustainability goals
- Time losses for PT travelers are cost.
- All travels have to be paid by the traveler.

Thank you.
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