STRENGTHENING THE IMPACT OF PUBLIC TRANSPORT
WHICH PUBLIC TRANSPORT SYSTEM FITS TO WHICH CITY?

KfW Sector Retreat:
The Future is Urban – Liveable Cities and Sustainable Mobility

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IMPORTANT DETERMINANTS FOR MODAL CHOICE

Geographical features

Terrain (mountainous/flat, rivers, lakes, etc)

Settlement density and population development

Existing transport infrastructures

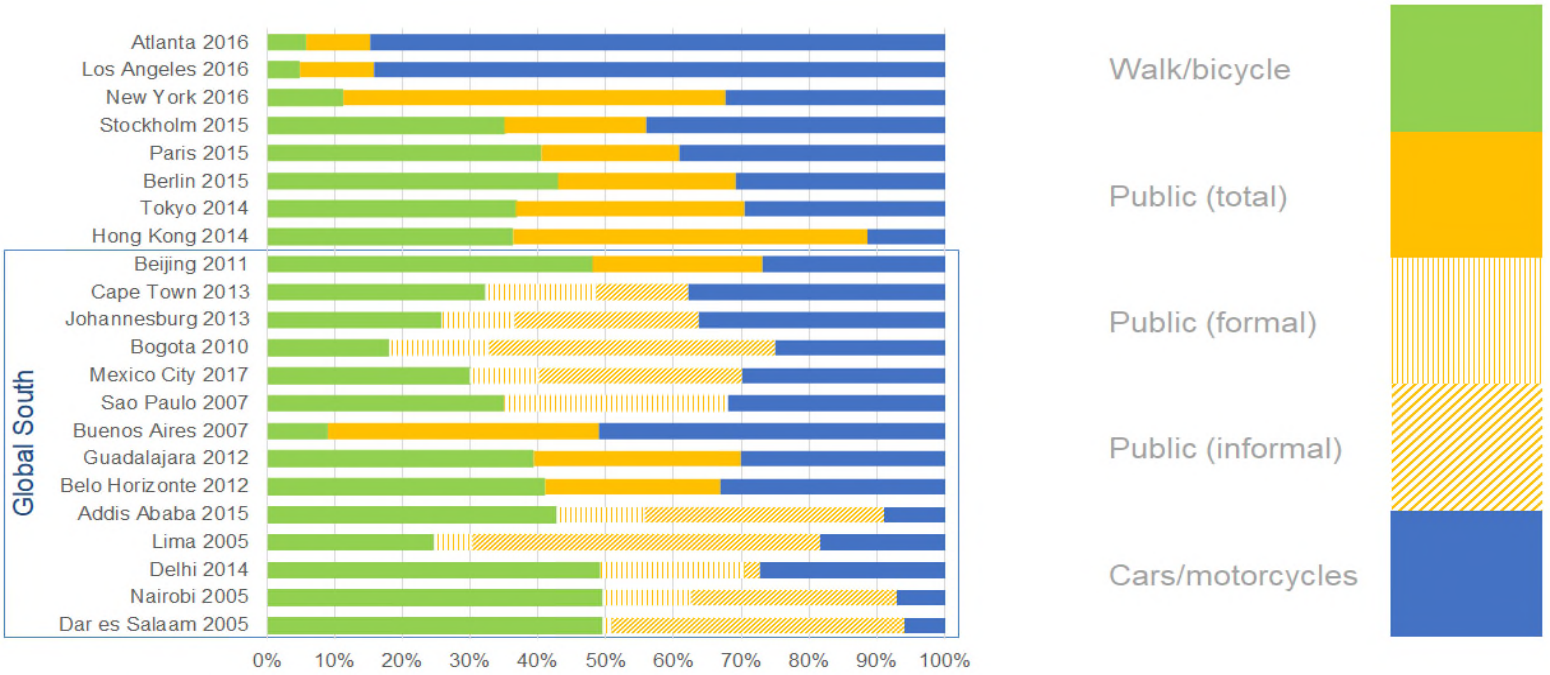
Income levels

Integration into Sustainable Urban Mobility Plan

Strategy of Push and Pull

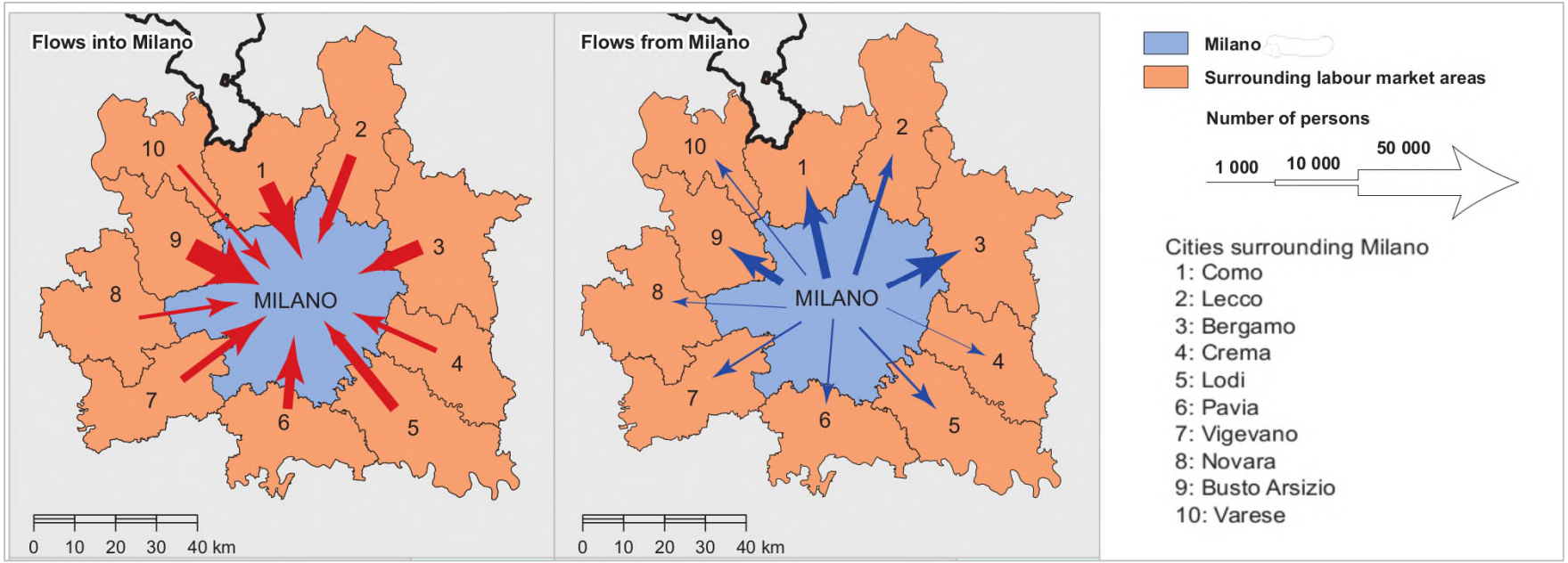
In order to reduce car traffic, it is not sufficient to build an attractive public transport system. Only a combination of Push and Pull will have strong impacts.

Existing Modal Split



Source: Venter and Mahendra, 2019

Integration of urban and regional planning



SYSTEM DESCRIPTION OF PUBLIC TRANSPORT MODES

Rail Systems

Tramway

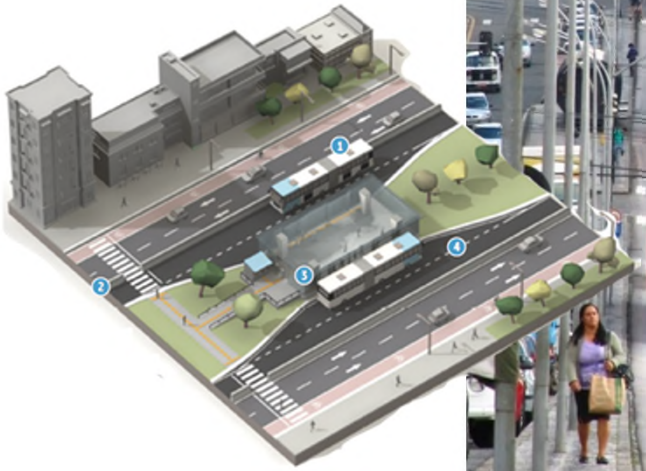
Metro

Light Rail Transit

Commuter Rail

Bussystems

Bus Rapid Transit (BRT)



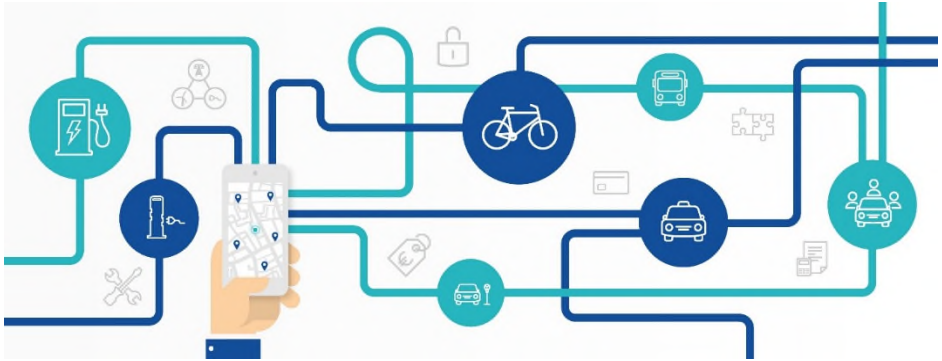
BRT Busstop in Curitiba, Brazil

- Prepaid Tickets
- Separate doors for access and egress
- Access for people with mobility constraints

Cable Cars

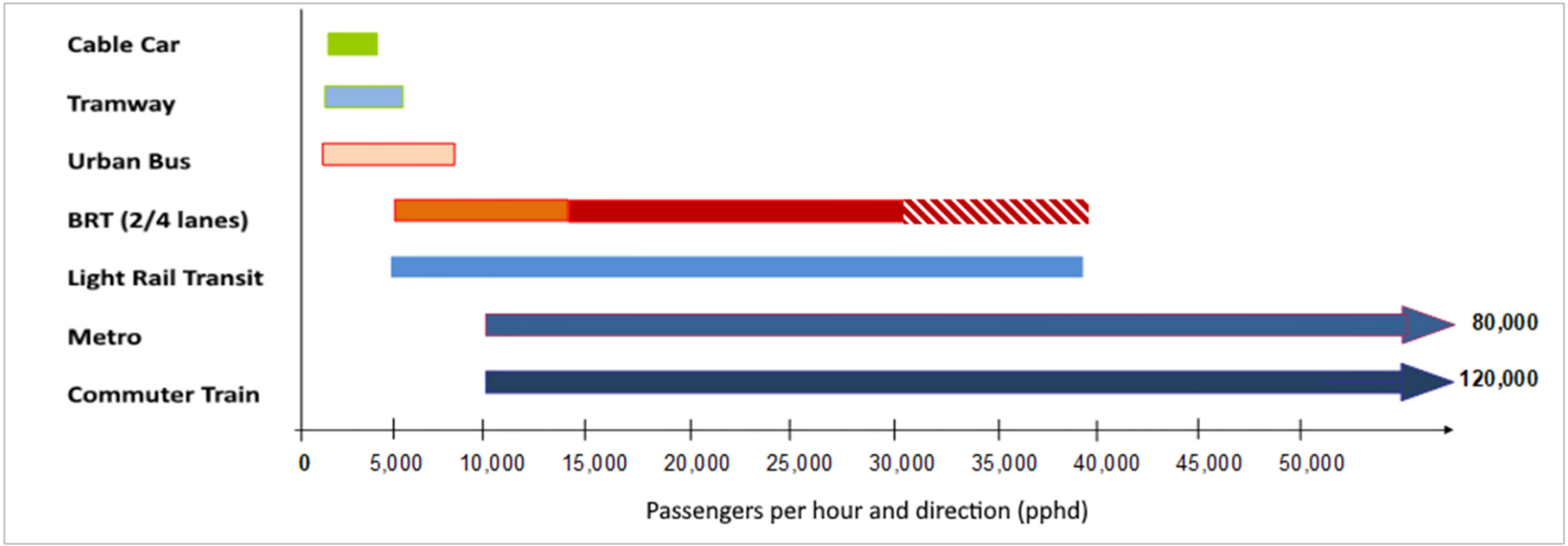
Mobility as a Service (MaaS)

- Taxis und Ride-Hailing-Services
- Ridepooling
- Carpooling
- Car-, bike- und Scooter-Sharing



WHICH PUBLIC TRANSPORT SYSTEM FOR WHICH CITY?

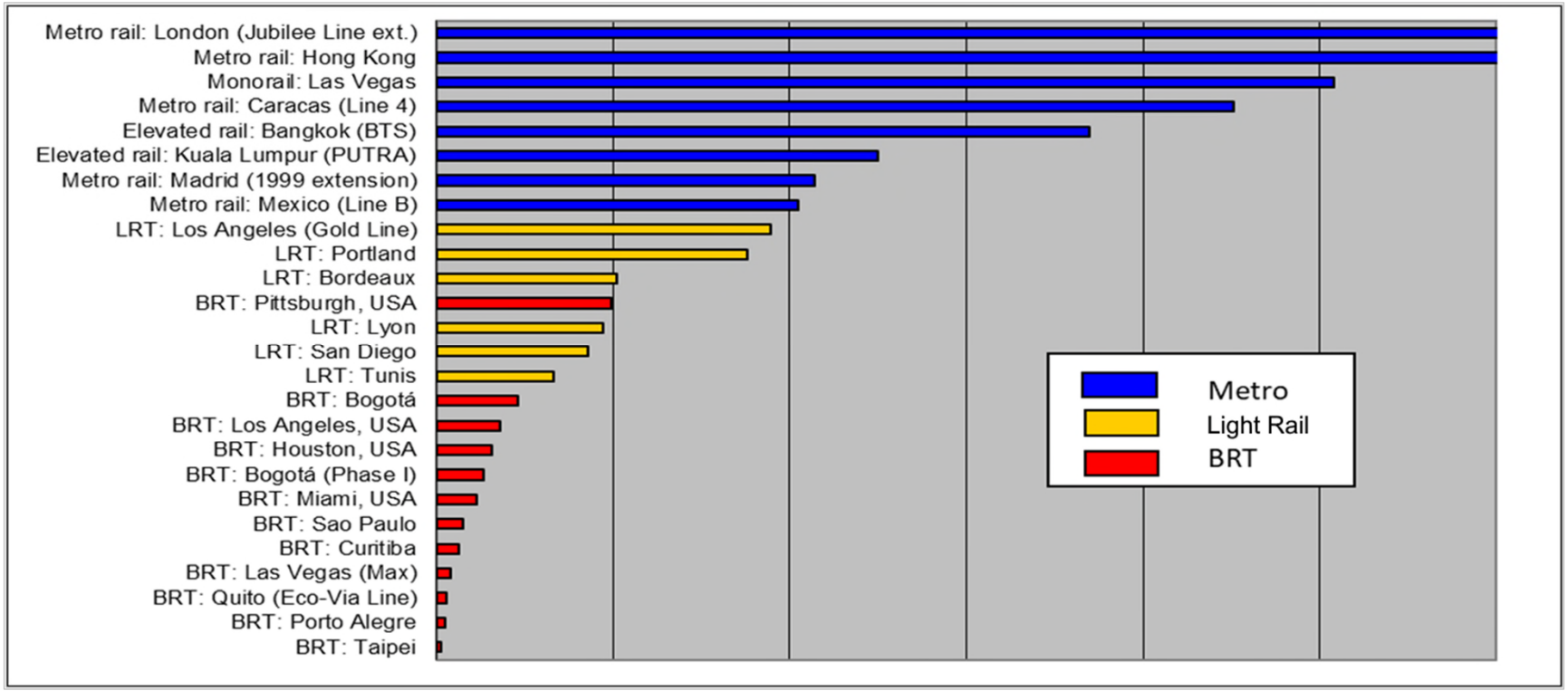
Comparison of typical TP capacities



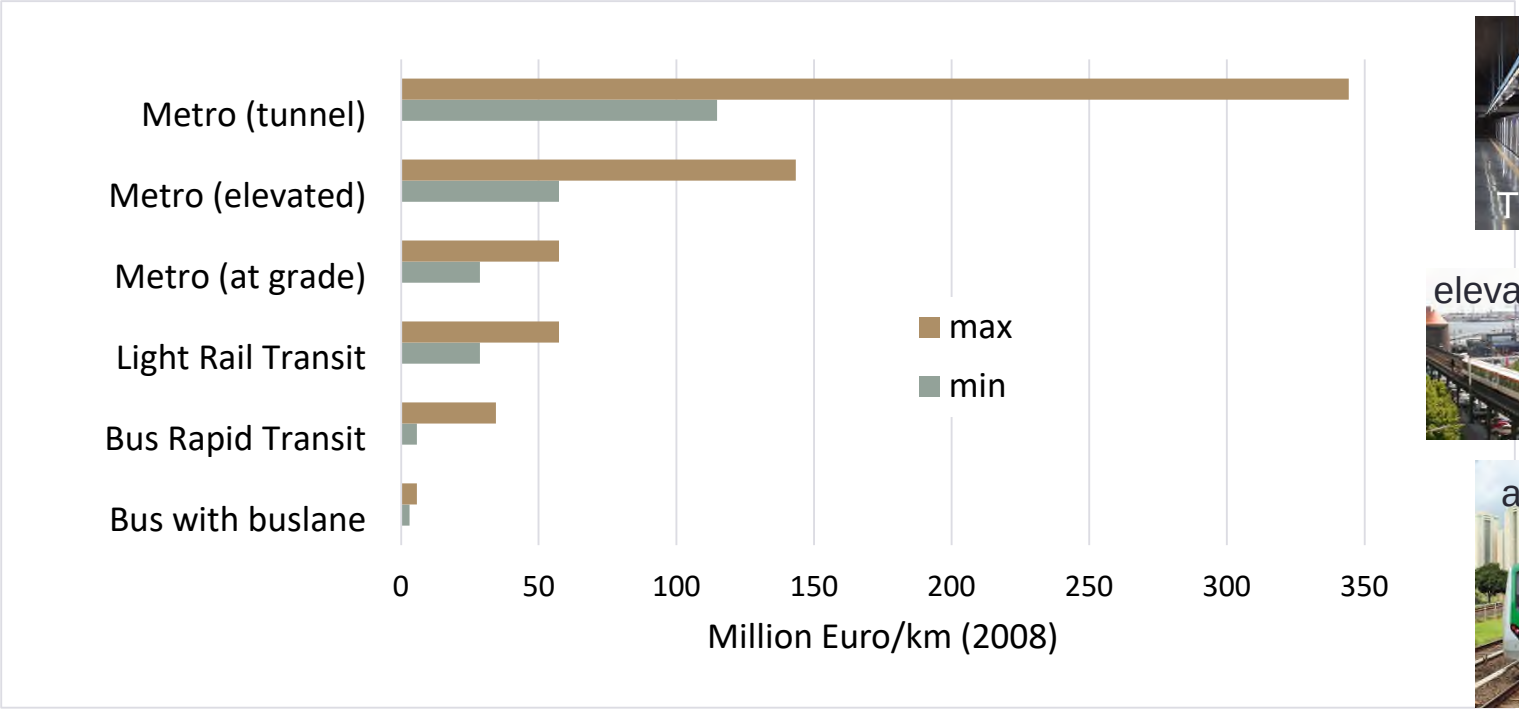
System and urban size

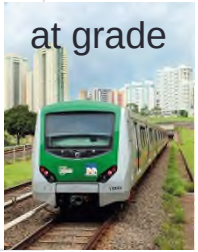
	Transport Capacity	Urban Size			
		Small	Medium	Large	Metropolis
Bus		●	●	●	●
Tram			●	●	●
BRT			●	●	●
Light Rail			●	●	●
Metro				●	●
Commuter Rail					●

Infrastructure Costs of PT Systems



Costs of PT Systems in Brasil (2008)





Source: GUIA TPC, ORIENTAÇÕES PARA SELEÇÃO DE TECNOLOGIAS E IMPLEMENTAÇÃO DE PROJETOS DE TRANSPORTE PÚBLICO COLETIVO

IMPACTS OF IMPROVED PUBLIC TRANSPORT

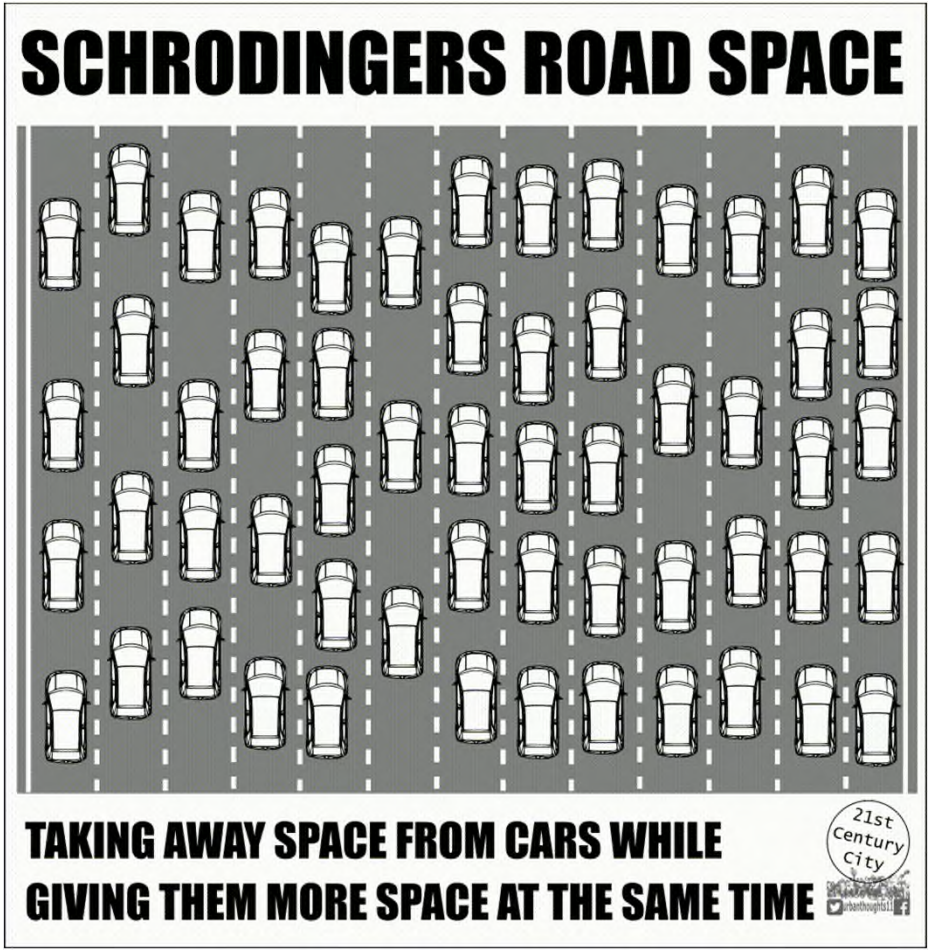
Impacts of improved PT Systems

Socio-economic impacts

- Jobs and employment
- Income growth
- Travel time gains
- Travel cost savings
- Accessibility of jobs, markets and services
- Accessibility of educational institutions
- Travel options and new opportunities
- Reduction of accidents

Macroeconomic analysis

- Construction and operating costs
- Improved accessibility to jobs, services and goods
- Reduced transport costs, particularly for the poor
- Lower environmental costs due to the shift to the environmental network
- Reduced congestion by easing road congestion
- Improved road safety



Important:
Convert the road surface into attractive public space not into parking areas.

=> Push effect

Blumenstraße in Heidelberg

Quality criteria for Public Transport

Frequency of service
= *Waiting time*

Accessibility of stops + Spatial coverage
= walking time to stops

Reliability + Punctuality

Operational safety

Travel speed

Cost of travel
(in relation to household income)

Convenience
= Difficulties in accessing or using public transport, such as transferring between lines or accessing stops

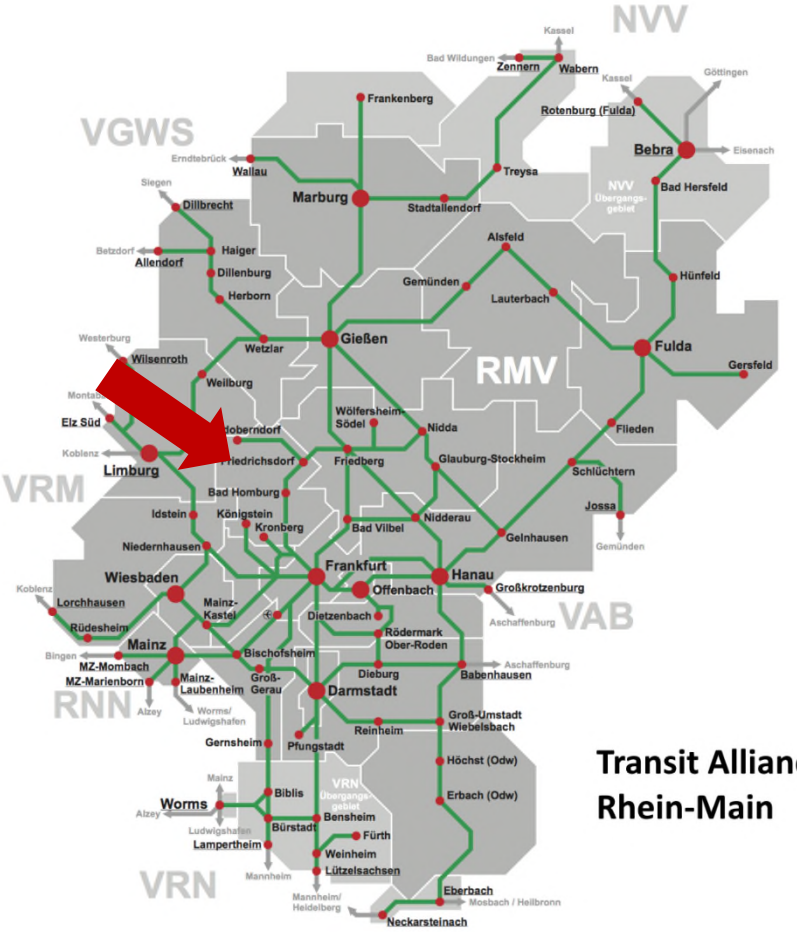
ORGANISATION AND FINANCING

Transit Alliances

One Schedule → One Ticket → One Fare

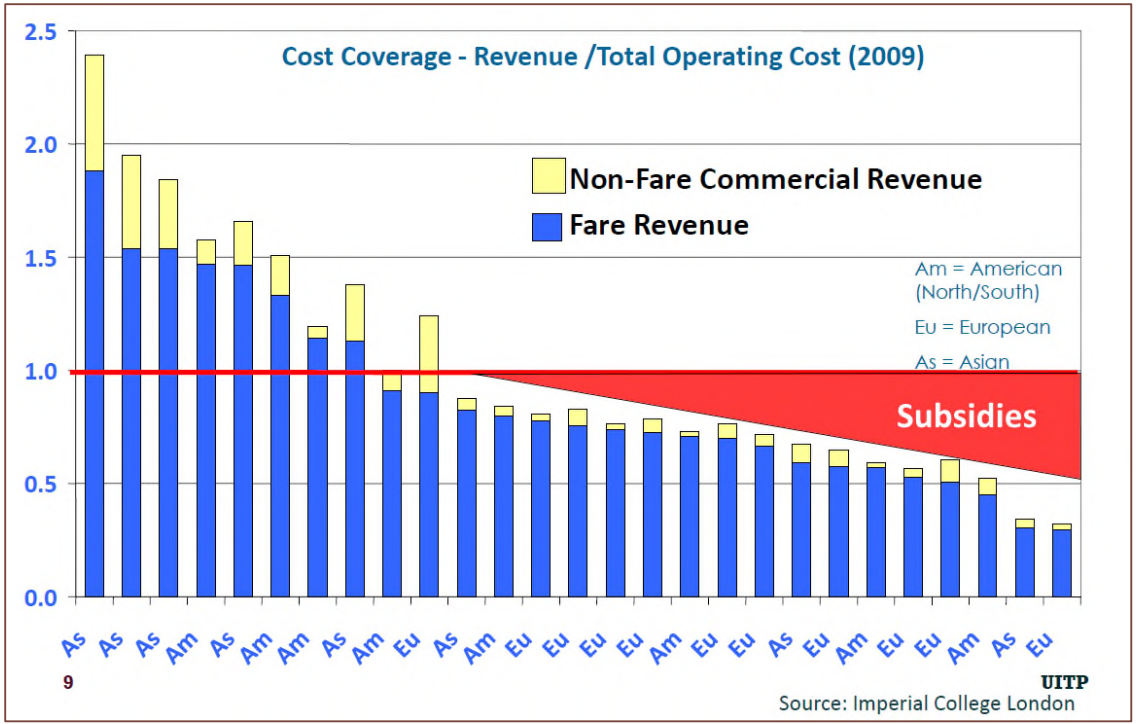
Integration of

Network Tarifs Operations



Transit Alliance Rhein-Main

Cost Coverage of PT Systems



- Cost coverage in Asia and America
- Subsidies in Europe
- Cost coverage is a political decision
- Optional: targeted subsidies for selected passenger segments

Thank you for your attention

Picture: Paul Starkey

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