

Trafinz - Transport Connections
15-17 September 2014

Planning for transport choices Lessons from Curitiba, Brazil

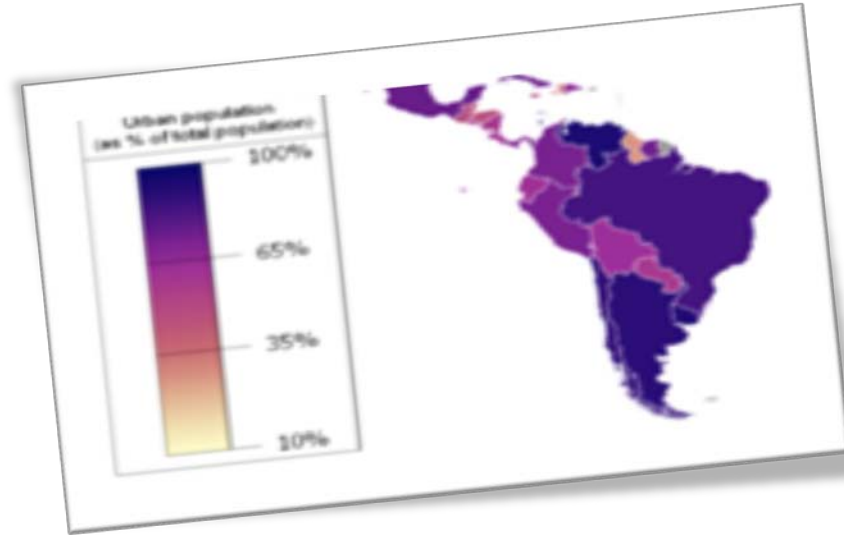
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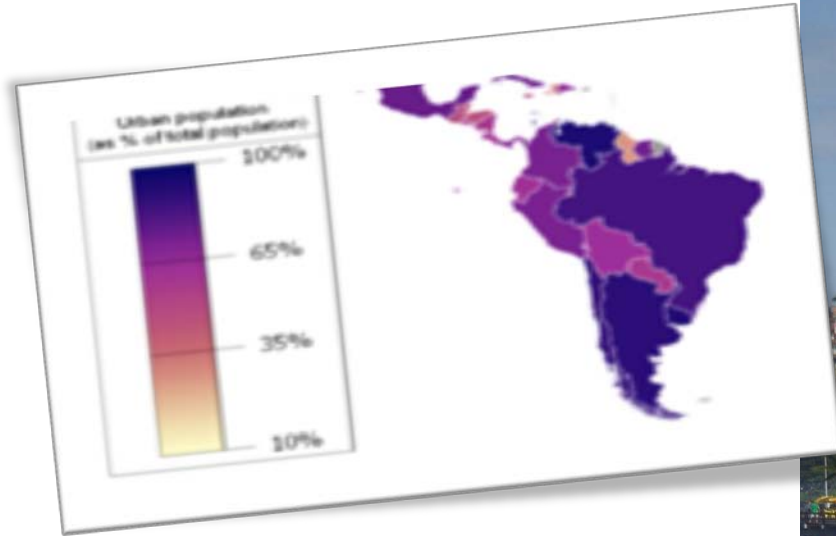
- ❑ Urbanisation challenges in Brazil
- ❑ Curitiba integrated transport network
- ❑ Why Curitiba has become successful?
- ❑ Lessons learned from Curitiba

Urbanisation challenges in Brazil

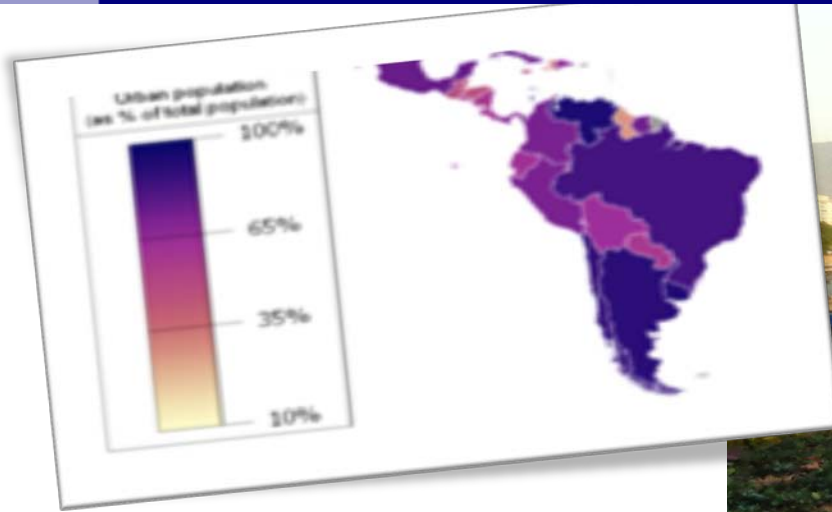
- ❑ Slums, unplanned settlements, crowded flats, luxury villas and apartments
- ❑ Inequality and crimes
- ❑ Congestion and traffic jams
- ❑ Deteriorating urban environment



Urbanisation challenges - Slums



Urbanisation challenges - unplanned housings



Urbanisation challenges - crowded flats



Urbanisation challenges - rich suburbs



Urbanisation challenges - luxury apartments



Urbanisation challenges - traffic jams

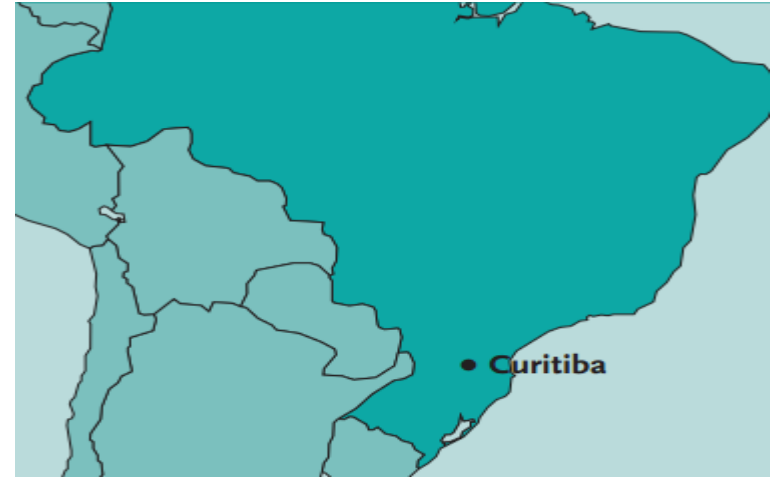


Urbanisation challenges - pedestrians crossings

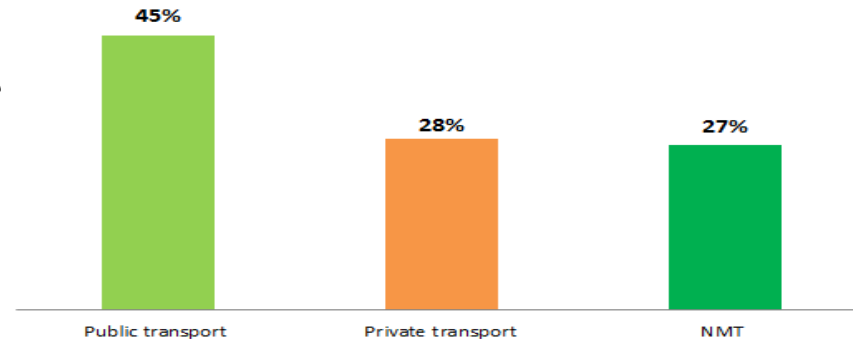


Curitiba - Some facts

- 8th largest city in Brazil
- 1.8 million population (2010) living in 12 municipalities
- Over 70 % mode share comprise sustainable transport
- Car ownership 700 vehicles per 1000 inhabitants



Mode Share in Curitiba



RIT - Rede Integrada de Transporte (Integrated Transport Network)



- Simple but integrated bus system
- Routes have different colours and vehicle type depending on the function
- Forget a timetable principle
- No printed map and timetable
- 2.4 million passengers per day
- 95% of the city is covered by the public transport system

RIT - Rede Integrada de Transporte (Integrated Transport Network)



- Multi-modal integration
- Land use integration
- Social integration



a. Multi-modal integration

1. BRT integration with cars

- Re-allocation of road spaces in favour of buses
- High capacity, high frequency 2200 Bi-articulated buses on 355 routes



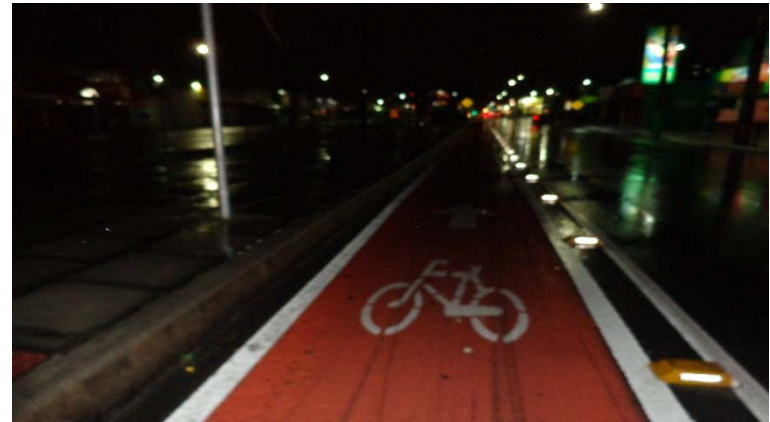
2. BRT integration with feeder buses



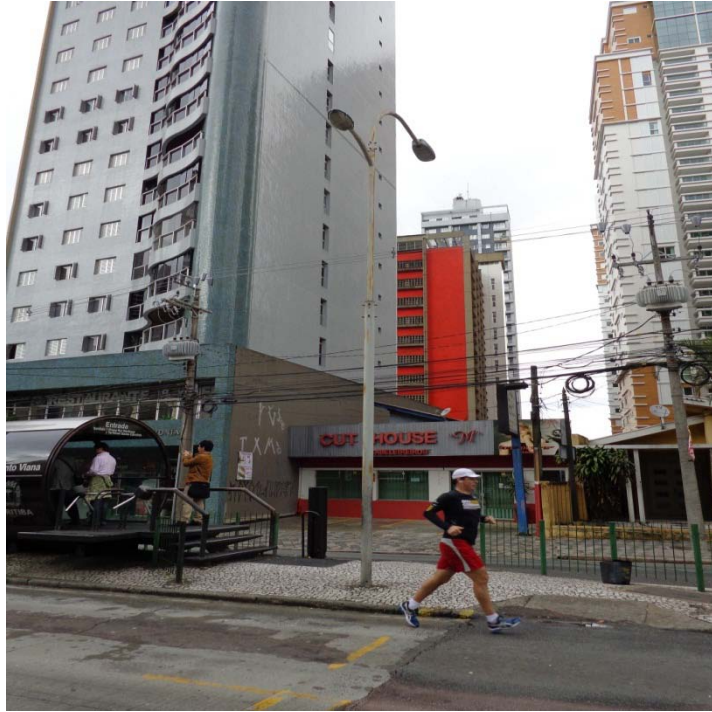
2. BRT integration with feeder buses



3. BRT integration with cycles



4. BRT integration with pedestrians





b. Land use integration

1. BRT integration with urban form

- A 'trinary' road system – three parallel streets having different urban form and public transport and car priority measures
 - Tackle congestion by greater connectivity rather than increasing road capacity



1. BRT integration with urban form





c. Social integration

1. BRT integration with disable persons



2. BRT integration with youth





Results

High patronage even on Sunday morning



BRT - Catalyst for urban development



BRT - Catalyst for urban spaces



BRT - Marketing & city identity





Why Curitiba has become successful?

1. Role of urban/development planning

- Master Plan of 1966 shaped urban spatial structure / implemented integrated planning over last 40 years
- Integration of land use with low cost PT
 - Growth along public transport corridors with high density urban development and mixed use
 - 5 transit corridor dedicated for the city development
 - Development bonuses for affordable housing
 - Cohab - CT - responsible for affordable housing complexes and relocation of informal settlements

1. Role of urban/development planning

- Consistent planning - all plans followed the 1966 Master Plan
 - Belief - physical planning could solve urban problems
- Provision for pedestrian areas and preferences over cars
 - Formation of city's busiest street into a pedestrian mall in 1972
- Environmental conservation on sensitive land
 - Some turn into recreational parks

1. Role of urban/development planning

- Historic preservation
- Symbol of sustainable planning before sustainability concept appears in debates
- Declared the ecological capital of the world in the World Urban Forum 1992

2. Role of research/academic institute

- APPUC / IPPUC - Instituto de Pesquisa e Planejamento Urbano de Curitiba (Curitiba Research and Urban Planning Institute)
- Platform for the creative initiatives / the place where ideas are generated / the catalyst for all planning initiatives / commitment to constant innovation / continued care
- Used Curitiba as a laboratory for creativity, innovation and flexibility to generate alternative solutions to urban problems

2. Role of research/academic institute

- IPPUC - (Curitiba Research and Urban Planning Institute)
 - Interdisciplinary collaboration between engineers, planners, architects, development experts long before this approach appear - why? Lack of professionals
 - IPPUC directors become Mayors of Curitiba



3. Role of communities

- Planning as a participatory process
 - Public participation is an integral part of the plan development
 - Public participation through a series of seminars (Curitiba of Tomorrow)
 - Celebrating Urbanism Month
- People are proud to show off their city
- Sense of pride and ownership among communities
- Pride and trust gave the city identity

4. Role of local industry

- Curitiba metropolitan area is Brazil's second largest automobile producer
 - Annual manufacturing of 400,000 cars, trucks and buses
 - Volvo, Chrysler, Renault, Volkswagen-Audi, and New Holland factories
 - BRT link with automotive industry
 - Buses have doors on both side - specially manufacture for Curitiba
- Tube/Bus station design with the help of
 - Local steel industry / Local glass industry

5. Role of institutions

- Political will, commitments, dedication and continuity - regardless of democracy and military ruling at the national level - why?
 - Technocrats of IPPUC turned politicians in Curitiba
 - Political linkages to international consultants and development agencies put Curitiba on the international map
- Funding - Inter-American Development Bank (financed Curitiba's public transport); Brazilian Development Bank - (financed bus operation affordable); URBS - Urbanisation company - responsible for operating buses

Lessons learned from Curitiba

- Visionary but participatory urban/development planning - different from Brasilia
- Political will, continuity, perseverance
- Creative roles of IPPUC/research/academic institutes, local communities and local industry
- Simplicity, integration (land use, network and people) are key characteristics in making Curitiba transport system sustainable