Global BRT Trends

COST Action Conference

Lloyd Wright

Brussels, Belgium

29 November 2011

Bus Rapid Transit Planning Guide

EU COST is a core partner in the production of the 4th Edition of the BRT Planning Guide

Freely distributed world-wide in both electronic and bound versions in multiple languages:

- ❑ Chinese
- ❑ English
- ❑ French
- ❑ Indonesian
- ❑ Korean
- ❑ Portuguese
- ❑ Spanish

Systems in operation

Latin America

1. Barranquilla
2. Belo Horizonte
3. Bogotá
4. Bucaramanga
5. Buenos Aires
6. Cali
7. Curitiba
8. Goiânia
9. Guadalajara
10. Guatemala City
11. Guayaquil
12. Joao Pessoa
13. León
14. Lima
15. Manaus
16. Merida
17. Mexico City
18. Mexico (state)
19. Monterrey
20. Pereira
21. Porto Alegre
22. Quito
23. Recife
24. São Paulo
25. Santiago
26. Uberlandia

Asia

1. Ahmedabad
2. Bangkok
3. Beijing
4. Changzhou
5. Chongqing
6. Dalian
7. Delhi
8. Guangzhou
9. Hangzhou
10. Hefei
11. Jaipur
12. Jakarta
13. Jinan
14. Kunming
15. Nagoya
16. Pune
17. Seoul
18. Taipei
19. Tehran
20. Xiamen
21. Xian
22. Yancheng
23. Zaozhuang
24. Zhengzhou

Europe

1. Almere
2. Amsterdam
3. Bradford
4. Cambridge
5. Castellon
6. Crawley
7. Douai
8. East London
9. Eindhoven
10. Edinburgh
11. Essen
12. Gothenburg
13. Hamburg
14. Istanbul
15. Jonkiping
16. Leeds
17. Lille
18. Lisbon
19. Lorient
20. Lund
21. Lyon
22. Madrid
23. Nantes
24. Nice
25. Oberhausen
26. Paris
27. Rennes
28. Rouen
29. Toulouse
30. Twente
31. Utrecht
32. Zurich

North America

1. Boston
2. Brampton
3. Cleveland
4. Eugene
5. Las Vegas
6. Los Angeles
7. Miami
8. Ottawa
9. Orlando
10. Pittsburgh
11. York

Africa

1. Cape Town
2. Johannesburg
3. Lagos

Oceania

1. Auckland
2. Adelaide
3. Brisbane
4. Melbourne
5. Sydney

Projects at the Asian Development Bank

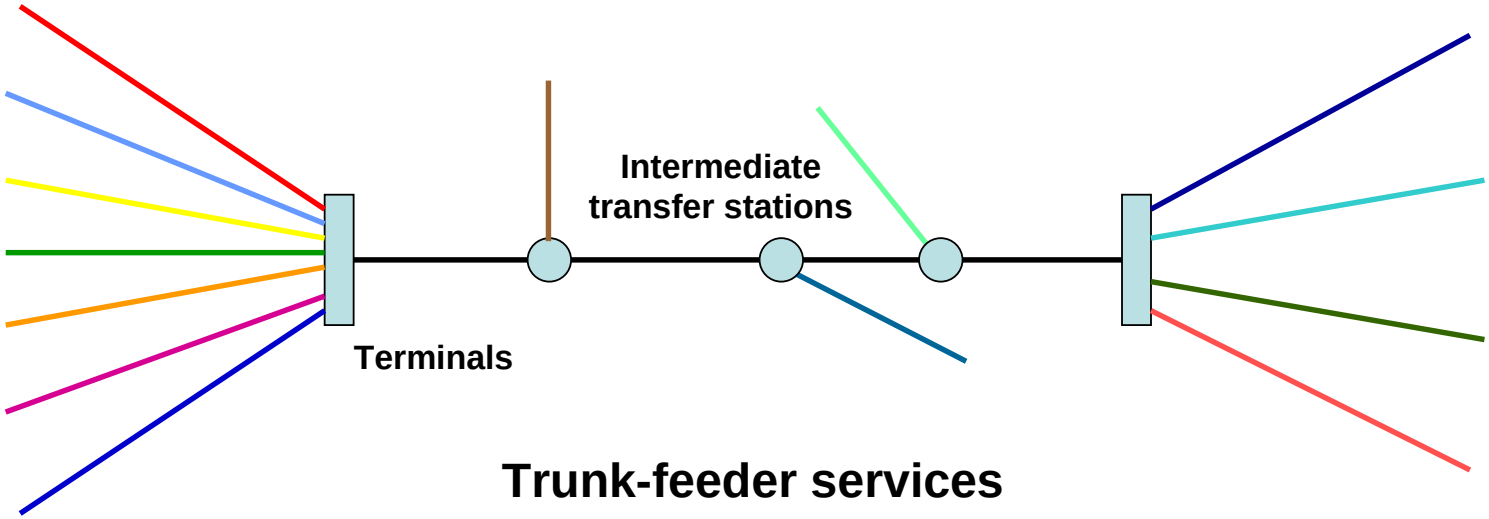
BRT projects in Dhaka, Ho Chi Minh City, Jiangxi Ji'an, Lanzhou, Pimpri-Chinchwad, Ulaanbaatar, Vientiane

International Trends and Innovations in 2011

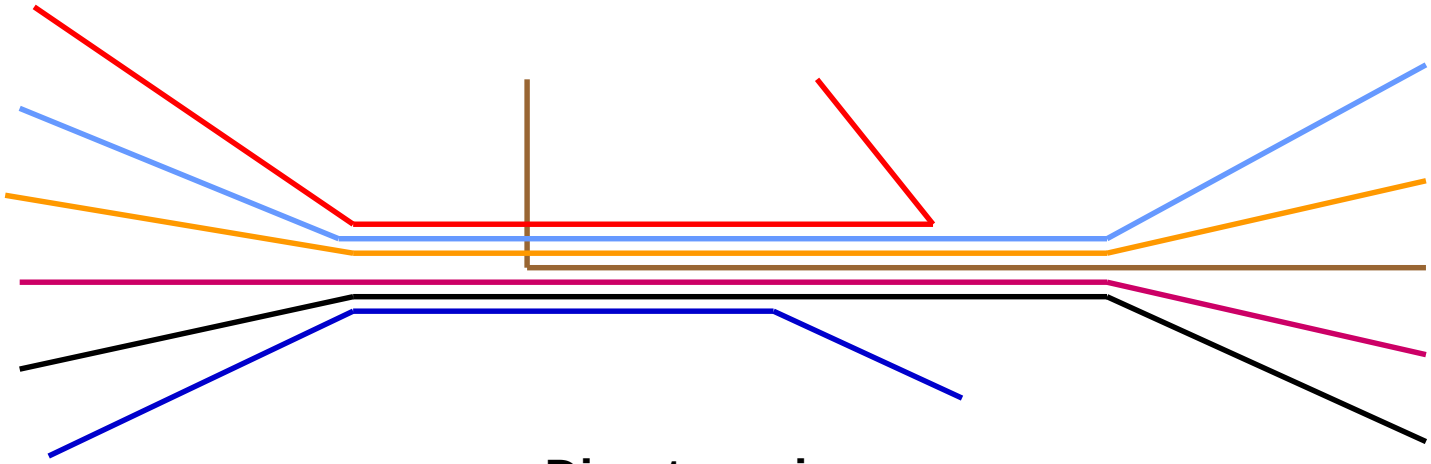
1. Operations
2. Infrastructure
3. Vehicles

Part I: Operations

Traditional operational models



Trunk-feeder services



Direct services

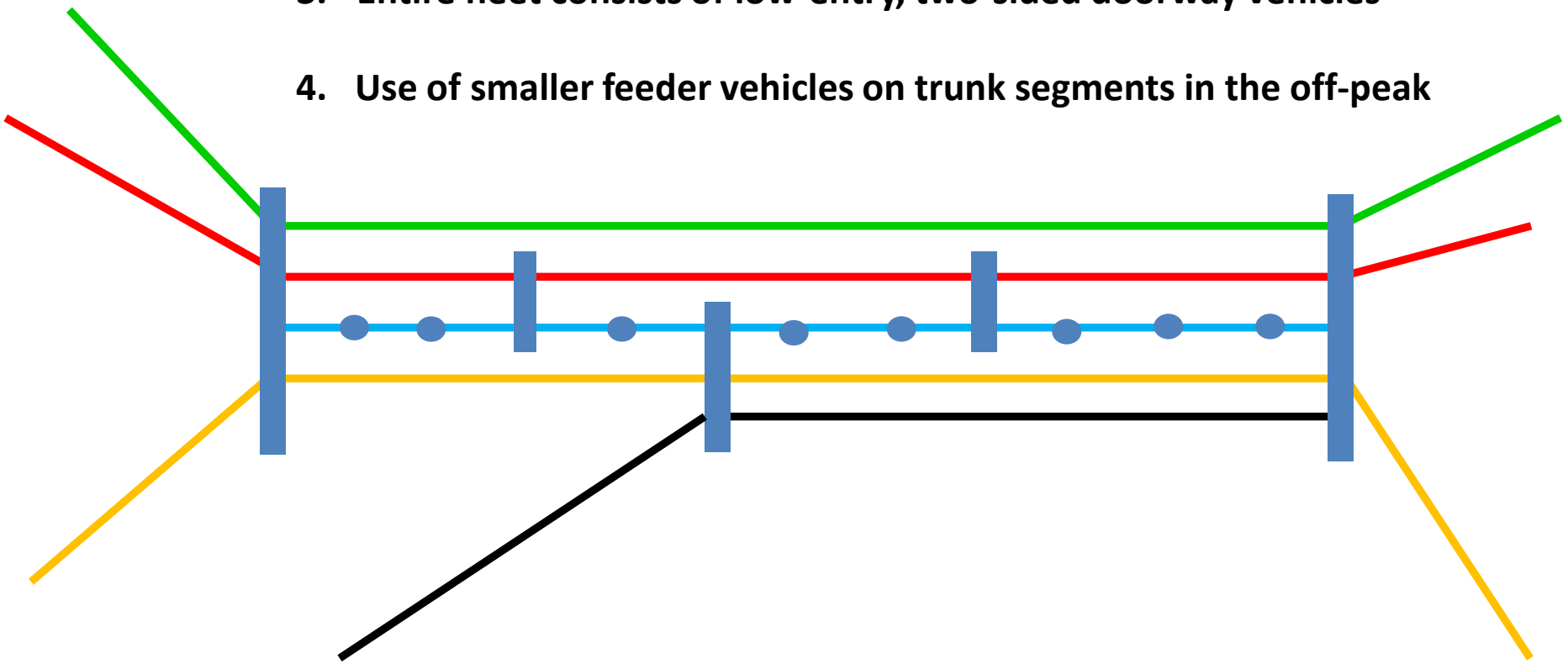
“Full-Flex” model

1. Hybrid between trunk-feeder and direct services
   - Direct services at peak periods
   - Trunk-feeder at non-peak periods

2. Use of express, semi-express, and local services
   - Express and semi-express at peak only
   - Local services for entire day

3. Entire fleet consists of low-entry, two-sided doorway vehicles

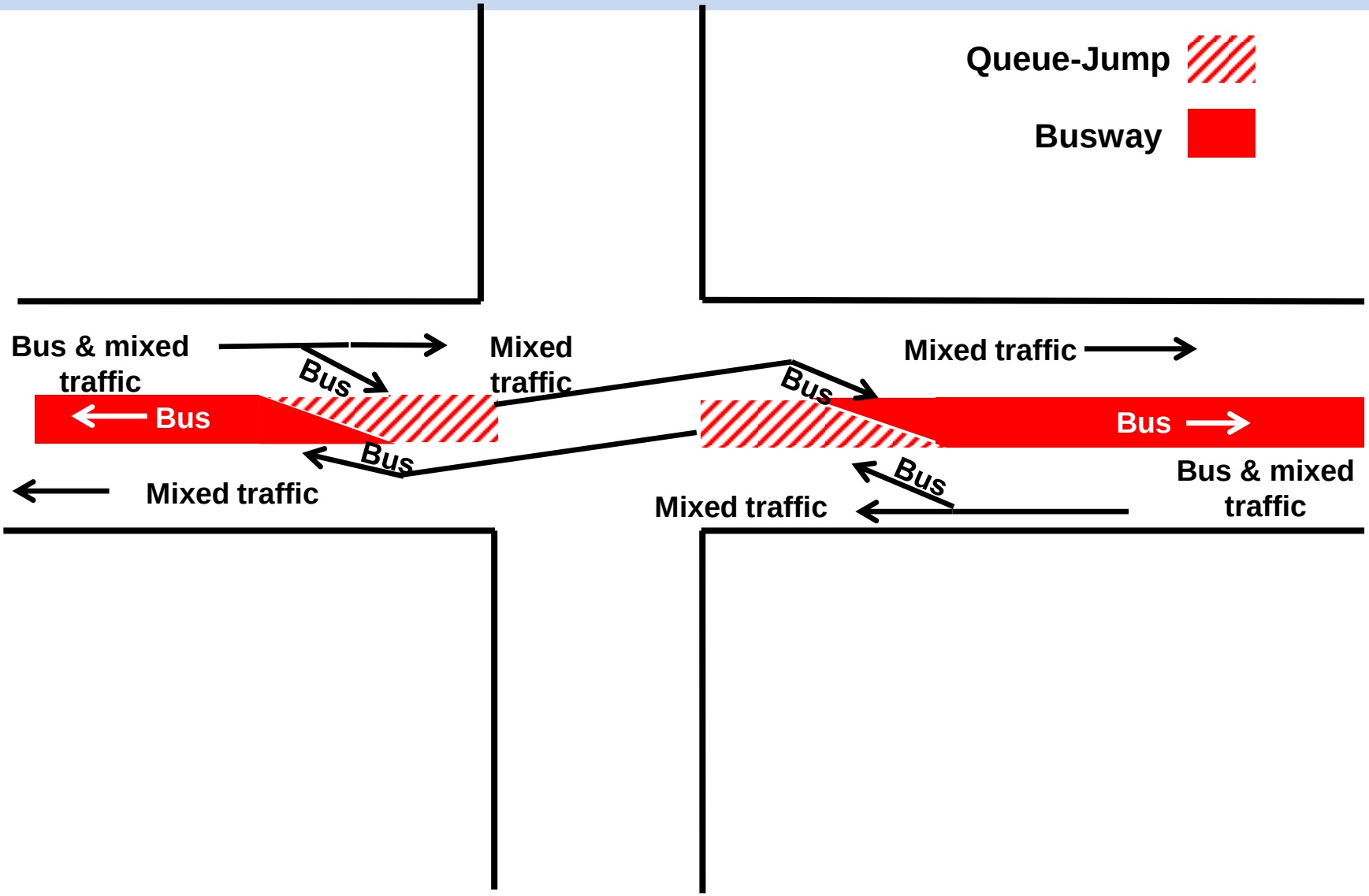
4. Use of smaller feeder vehicles on trunk segments in the off-peak



Virtual lanes

Using queue-jump techniques to provide free-flow operations for public transport, even on corridors with narrow right-of-ways

Virtual lanes and physical lanes



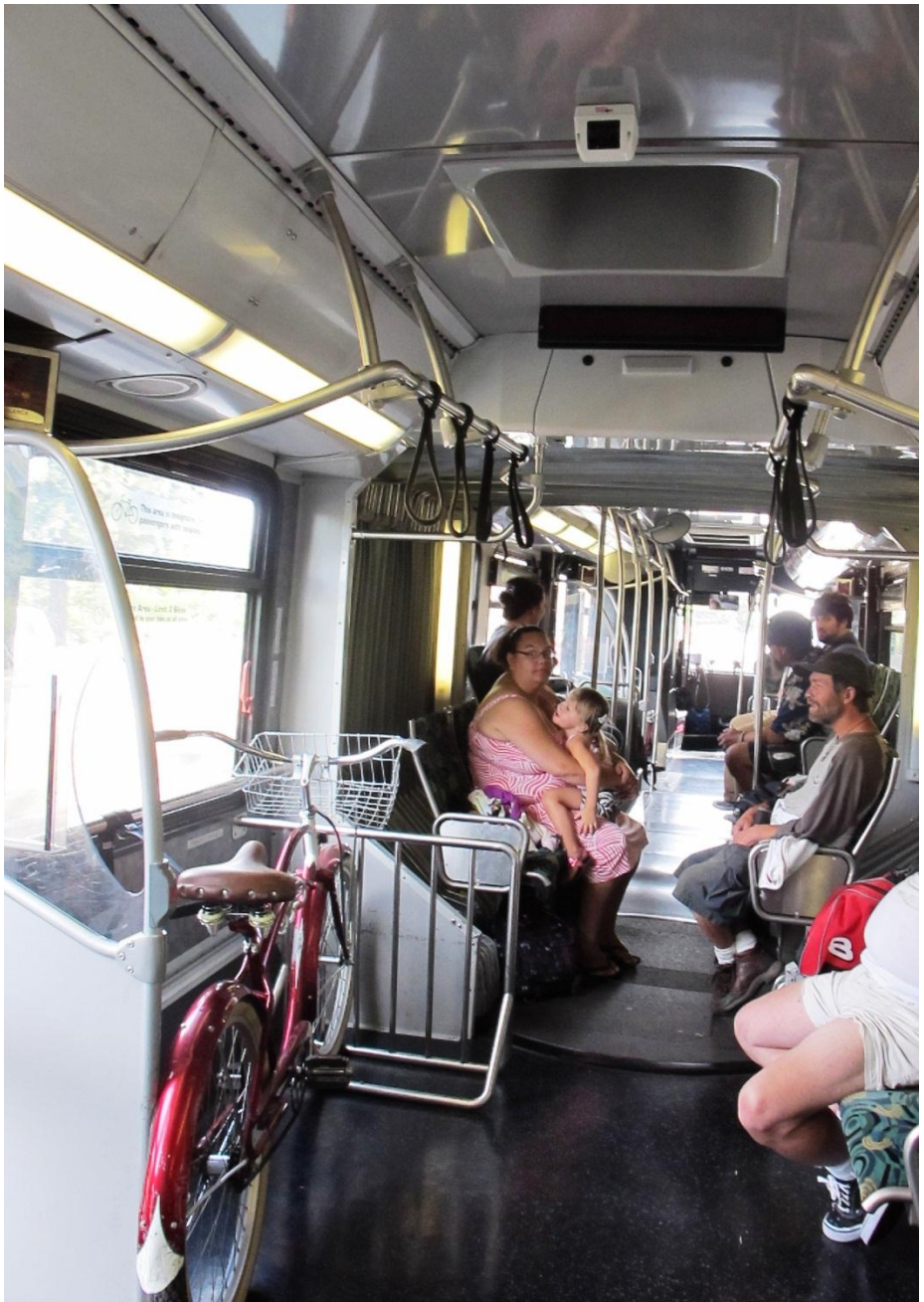
Uni-Directional Dedicated Lane and Uni-Directional Virtual Lane
(Dedicated directions swap at signalised intersections)
Intersection view

Tidal / reversible lanes

- Cape Town, South Africa
- Eugene, US
- Montgomery County, US


Secure bicycle parking station
6122
T2
NOTRE-DAME
DE-BONDEVILLE
TEOR
356 YY 76

Eugene: Bicycles on board



Cape Town: Bicycles on board

BRT and bicycle sharing systems

Guangzhou: Bicycle sharing system

Pedicabs as feeder services

Part II: Infrastructure

Lane Legibility and Enforcement

Colourisation serve two key purposes for BRT systems:

- **Lane enforcement in terms of discouraging infringement by private vehicles**
- **System legibility for customers**

Busway construction

- Use of 5% red oxide mix into the concrete as a cost-effective colorization option
- Continuously-reinforced concrete rather than jointed concrete

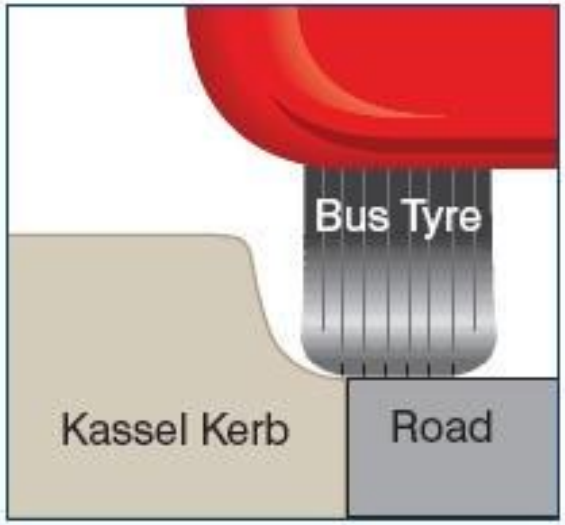
Lane strips

Previous use of lane strips was exclusively on guided busways

Lane strips: Eugene

Kassel kerbs

Smooth contact face



Boot shaped profile

HHO

Part III: Vehicles

Tram-like vehicles

12-meter vehicles

Advantages

- Lower vehicle cost per passenger carried
- Higher percentage of passengers with seats
- Improved fuel economy
- Increased ease in vehicle docking
- Superior ride comfort
- Improved acceleration and deceleration

City of Brisbane

Guangzhou and 12-metre vehicles

Boarding bridges

- Eliminates many of the platform interface problems
- Provides greater customer ease in boarding, especially for the physically disabled, the elderly, and children

Lloyd Wright

Move towards low-entry vehicles

Volvo

High floor

Lloyd Wright

Low entry

Business-friendly vehicles

Thank you

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