

### SE4ALL Sustainable Energy for All

Session 2

#### Smarter Urban Transport Infrastructure 都市交通インフラのスマート化

### Toward the compact city ~コンパクトシティを目指して~

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# Outline of Session 2

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- 1. Opening remarks by session moderator
- 2. Short presentation (60 min.)
  - 1. Toyama: City planning with LRT
  - 2. Toyota: City planning with new road transport
  - 3. Curitiba: City planning with BRT
  - 4. Bangkok: Challenge toward the upgrade
  - 5. Toshiba: Technologies for sustainable Transport
- 3. Discussion
- 4. Closing address



## Forming a compact city

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#### Strategies toward the Compact City



Source) MLIT

Source) WHITE PAPER ON LAND, INFRASTRUCTURE, TRANSPORT AND TOURISM IN JAPAN, 2012 p.91



# How can we change the city?

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Walking→Rail→Car

→New Transport Smart shrink

Urban Sprawl (Population increase)

### LRT、BRT、DRT、EV、Segway etc.



New Transport change the urban structure → New Transport based Planning



# New Transport based Planning

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Urban area aggregation through implementation of TOD

Road usage Personal vehicle Bicycle Next-generation vehicles



Public transport use LRT, BRT, DRT





# Light Rail Transit (LRT)

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#### Light Rail Transit

LRT systems provide transportation within a city.

Better integrated with other modes of transportation, and contributing to urban development by functioning as a comprehensive transportation system.



The first LRT system was developed in Edmonton, Canada, in 1978. Since then, LRT systems have been introduced in 111 cities (as of 2008) throughout the world.

Toyama is the first city to introduce the LRT in Japan



### LRT and landscape

Waseda University Houston: population :2 million (4<sup>th</sup> in USA), No zoning system





# Bus Rapid Transit (BRT)

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### **Bus Rapid Transit**

- BRT systems :large-scale, rapid transport of passengers by bus.
- Unlike traditional bus routes, these systems use dedicated traffic lanes to allow frequent and punctual service
  - Such systems are already in place in locations such as Ottawa (Canada), Curitiba (Brazil), and Bogota (Columbia).





# New transportation system

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Best balance between automobile and public transport

 Next-generation transportation systems must strike a balance between automobiles and public transportation, through a hierarchical differentiation of transportation functions.





## Discussion 1

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# Present situation and problems for making better coordination among transportation modes







## Discussion 2

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# Process and perspective to implement the private-public partnership for sustainable transport





Public sectors





Private sectors



# Closing address

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#### Keywords 1: diversity

- Coexist of various transport systems, and select it as the occasion demands.
- 多様な交通モードが存在し、それを自由に選択できる社会

#### Keywords 2: collaboration

 Enhancement of the multi collaboration among the transportation mode, public-private sectors.
交通モード間、産官学など多様な連携の強化