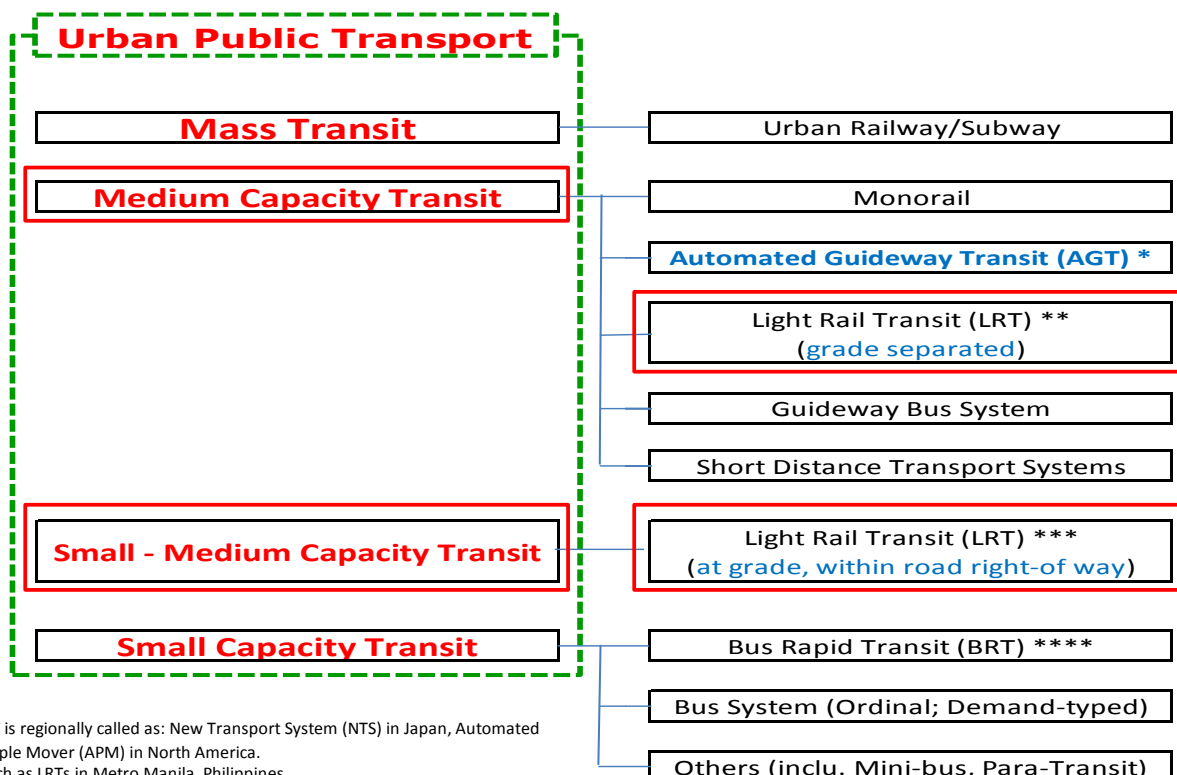


# JAPAN'S LIGHT-RAIL TRANSIT



## Classification of Urban Transportation Systems



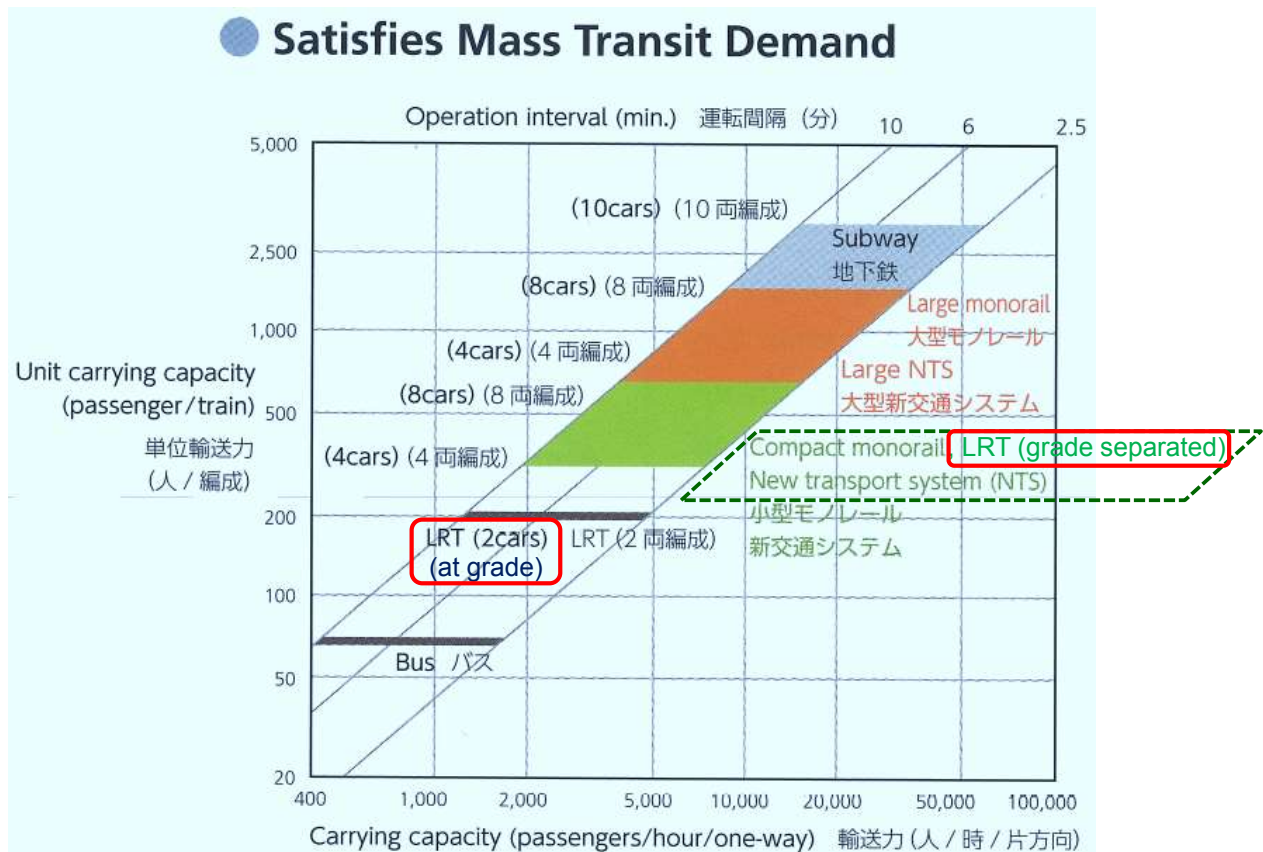
\* AGT is regionally called as: New Transport System (NTS) in Japan, Automated People Mover (APM) in North America.

\*\* such as LRTs in Metro Manila, Philippines

\*\*\* LRT is locally called such as Streetcar, Tram, Tramway, Light Rail or Light Railway.

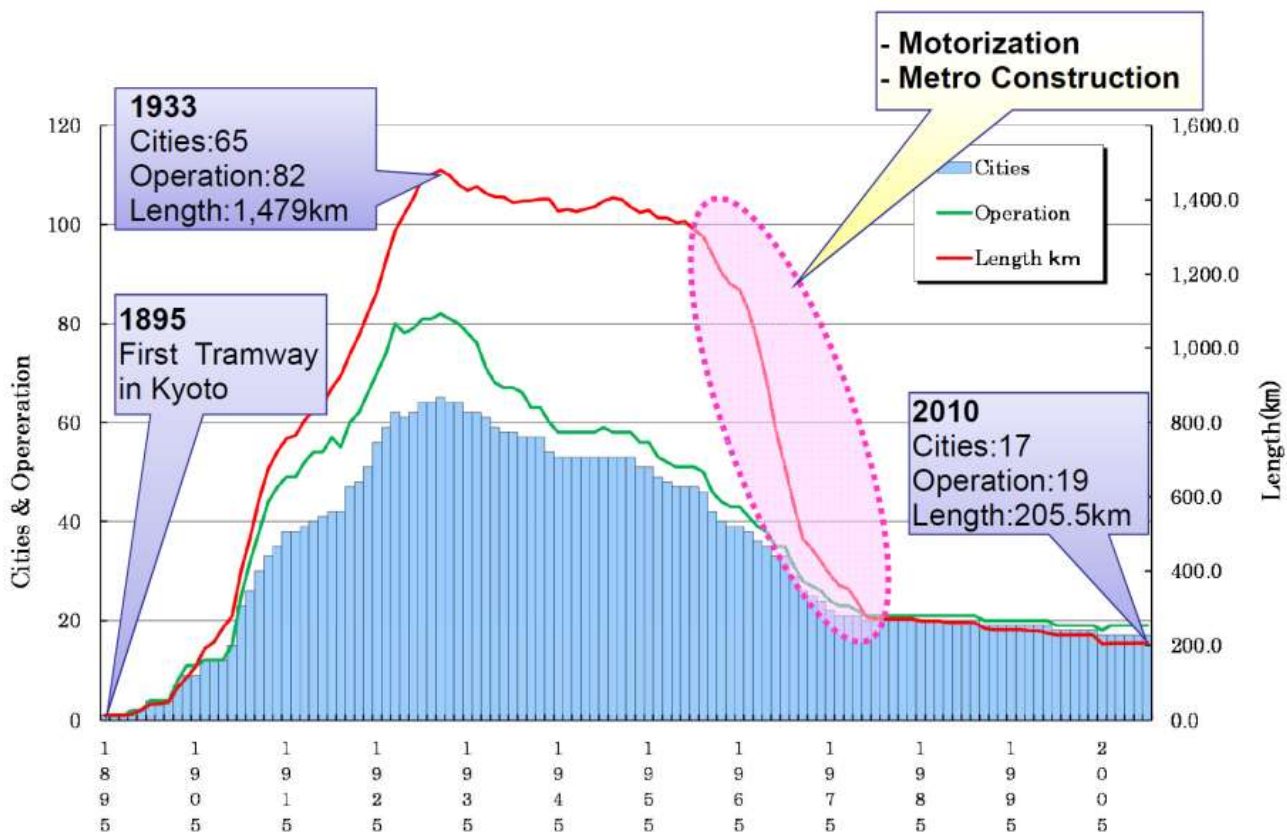
\*\*\*\* BRT is regionally called as Key Route Bus in Japan.

# Comparison of Transport Capacity



Source: MLIT, 2012

## Transition of LRT in Japan



Source: Yuichi AIDA, LRT System in Japan and Its Potential in India, 8 February 2013

# What are Roles of LRT ?



LRT provides passengers **quicker and more regular moving**, and realize **modal change** from private cars and other transport modes.

The **Toyama PORTRAM**, currently reconstructed LRT which had transformed from JR Toyama-port line, has realized to increase the **number of daily users by 2.2 times in weekdays and 5.3 times in weekend**; especially the number of **aged users of more than 60-year-old increased by 3.5 and 7.4 times** in each period.



LRT of the next generation, is more **environment-friendly** public transport system and more **accessible to aged and physically or socially handicapped passengers**.



Hiroshima  
**Greenmover**

Pictures : *JTPA*



## Current Status of Japan's LRTs **RAKKURU**

Operated by Hakodate City Tram Department

The Ordinal Car has Reformed to LRV



Source : Hakodate City Tram Department

Picture source: <http://ja.wikipedia.org/wiki>

# PORTRAM

Operated by Toyama Light Rail Co., Ltd.



Source: Toyama Light Rail Co., Ltd. ⇒ <http://www.t-lr.co.jp/about/portram.html>

# MOMO

Operated by Okayama Electric Tramway Co.,Ltd.



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# Greenmover Max

Operated by Hiroshima Electric Railway Co.,Ltd.

Car length = 30.5 meters, longest in Japan



**Inner Urban area**



**Outer Urban area**

Source : Hiroshima Electric Railway Co.,Ltd.

# HEARTRAM

Operated by Tosa Electric Railway Co.,Ltd.



Source : Tosa Electric Railway Co.,Ltd.

# Type-0800

Operated by Kumamoto City Transportation Bureau  
Introduced Japan's first LRV



Source: Kumamoto City Transportation Bureau

# YOUTRAM I & II

Operated by Kagoshima City Transportation Bureau



Source: Kagoshima City Transportation Bureau

YOUTRAM

YOUTRAM II

Picture: JTPA

# LRT grade separated

## Manila MRT Line 3

**Scope by Japan's maker:**  
System Integration,  
Train, E&M System, Civil,  
Maintenance

System Overview	
Speed	Max 65km/h
Number of Cars	73 cars
Passenger Capacity	28,500 pphpd * (600 thousand/day)

\* Passengers per hour per direction

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## Japan's Maker has:

- Completed Successfully a Full Turnkey Project
- taken a role as System Integrator
- Provided continuously Higher Service Availability since opening in 1999
- Provided more than 10 years of Maintenance by promoting Technical Transfer & Localization



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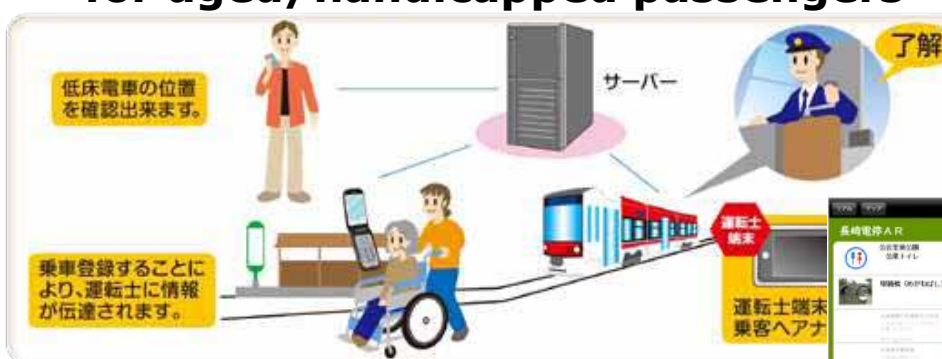


## Information Services with Smart-phone

- 1 Finding Current Location of LRVs
- 2 Getting Information on Tourism, Barriers around the Stop, etc.
- 3 Ride-reservation services for aged/handicapped passengers



A 102-year-old wooden LRV is also used for those services!



Source : Nagasaki City LRT Navigation Promotion Association



LRT Operation with Tablet PC thru GPS



Mobile phone Instruction for handicapped passengers



Smooth riding with Stroller

Integrated Service of Transport, Information Network & Grid

GPS

<STING>

WiFi

Electric Bus



Charging EV



Shared-Taxi



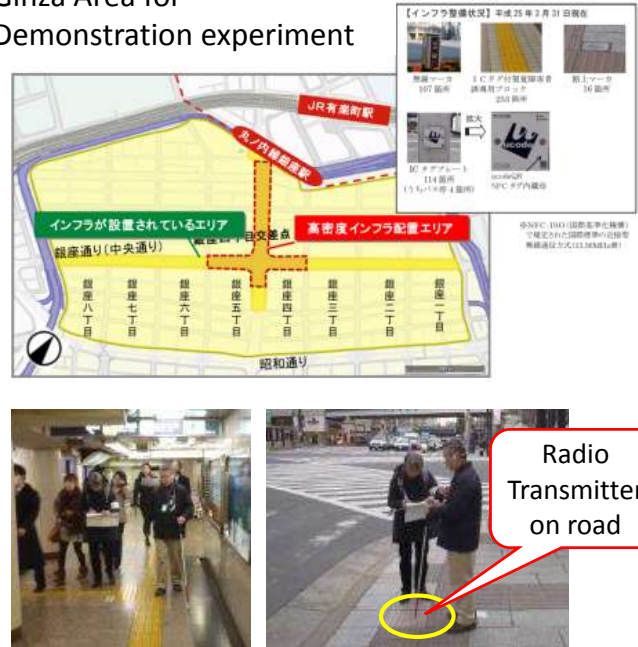
# Reference: Information Services in Tokyo

## Tokyo Ubiquitous Technology Project



Information Services for Handicapped persons

### Ginza Area for Demonstration experiment



Source: MLIT, [http://www.tokyo-ubinavi.jp/index\\_en.html](http://www.tokyo-ubinavi.jp/index_en.html)

## Ideas for Shifting Transport Modes to More Advanced Systems following increasing in passenger needs

