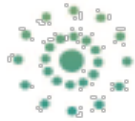


Taipei Metro: Improving Passenger Experience



Tsair-ming Kuo
Taipei Rapid Transit Corporation
November 29, 2013

Content

I. Introduction

II. Company Overview

III. Innovative Services

IV. Quality Metro Culture

V. Operations Performance



Introduction



Geographic Location

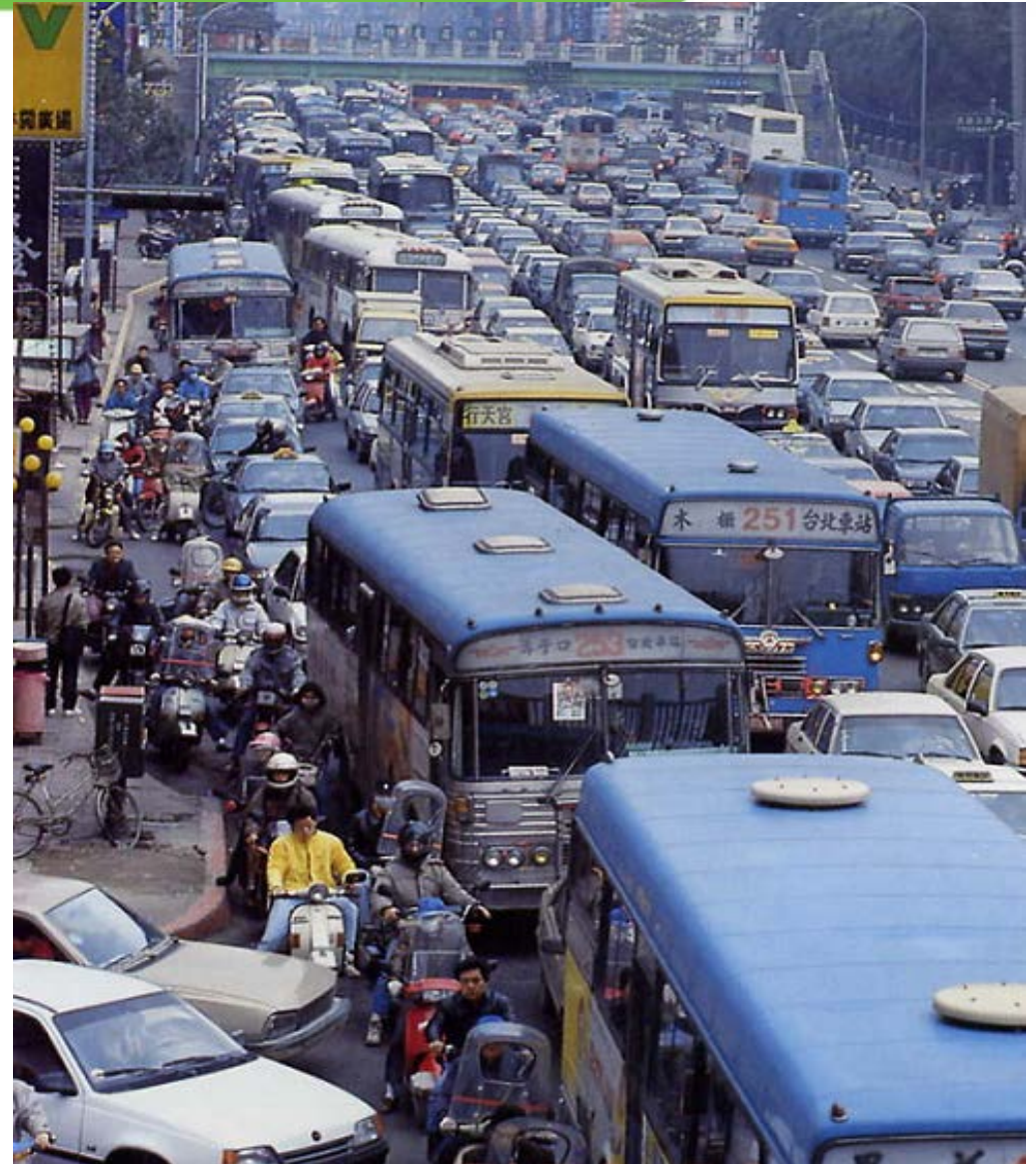


**Population in Metropolitan Taipei –
6.62 millions**

	Taipei City	New Taipei City
Area (km ²)	272	2,052
Population (M)	2.68	3.94

Taipei Traffic, Before Metro

*Congested
&
Chaotic*

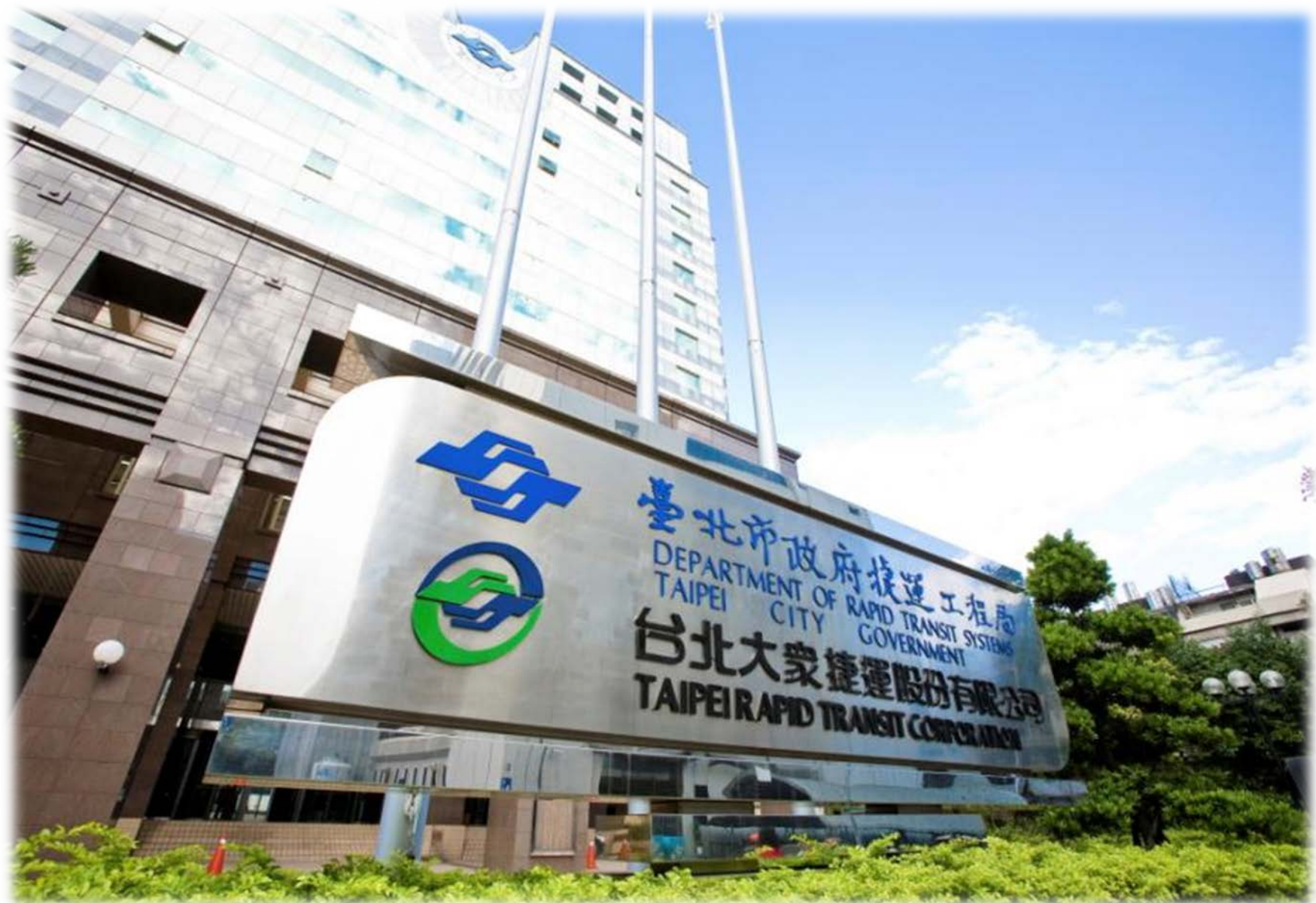


Taipei Traffic , After Metro

Free-flowing & Orderly



Company Overview



Background

- Independence between Construction & Operation
- First line launched on March 28, 1996

Construction

Department of Rapid Transit Systems (DORTS),
Taipei City Government

- Established in 1986
- System planning, design and construction



Operation

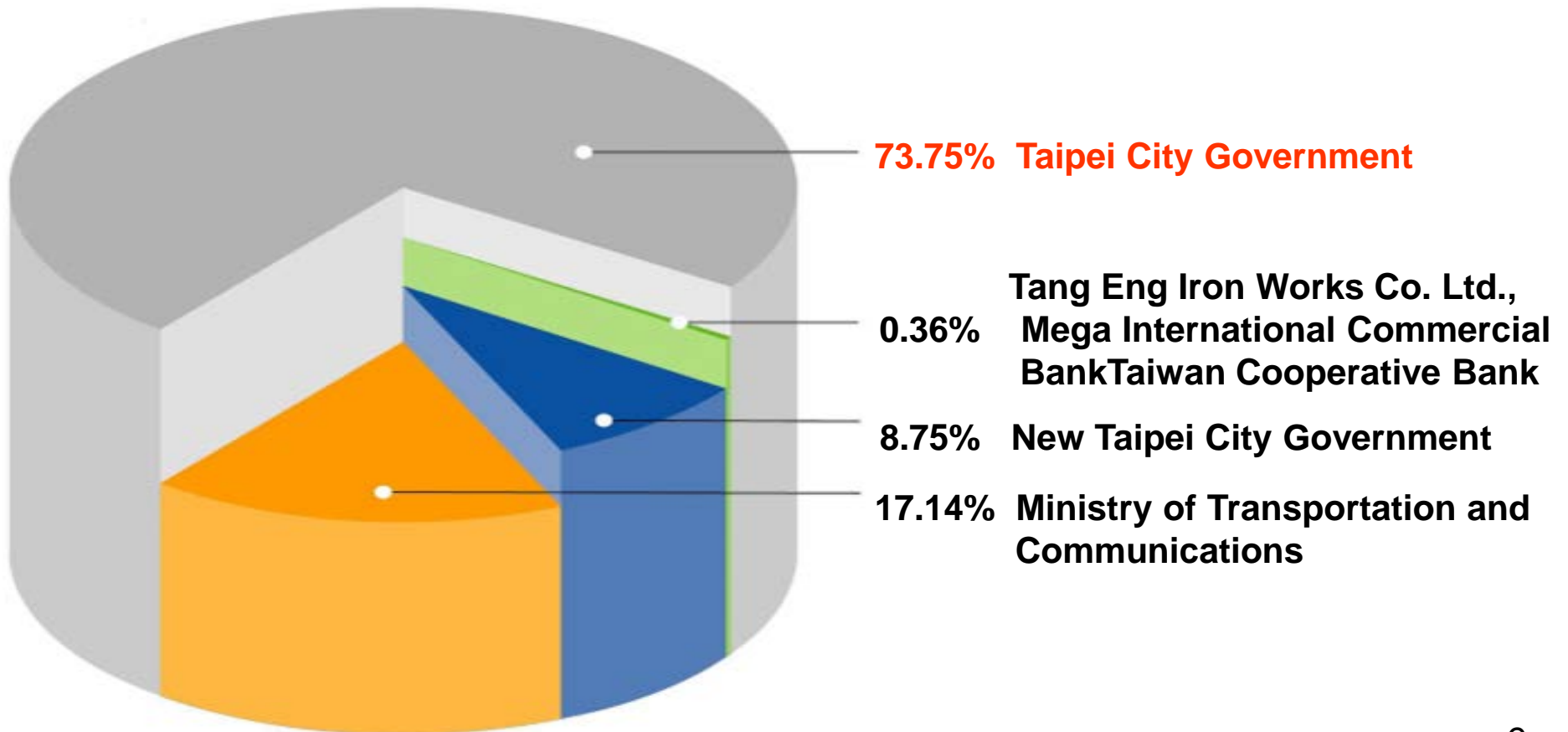
Taipei Rapid Transit Corporation

- Preparatory office established in 1990
- Incorporated in 1994
- System operation, maintenance and replacement of the system



Capital Structure

◆ Registered Capital : US \$ 333.3 Million (USD : NTD = 1:30)



Business Structure



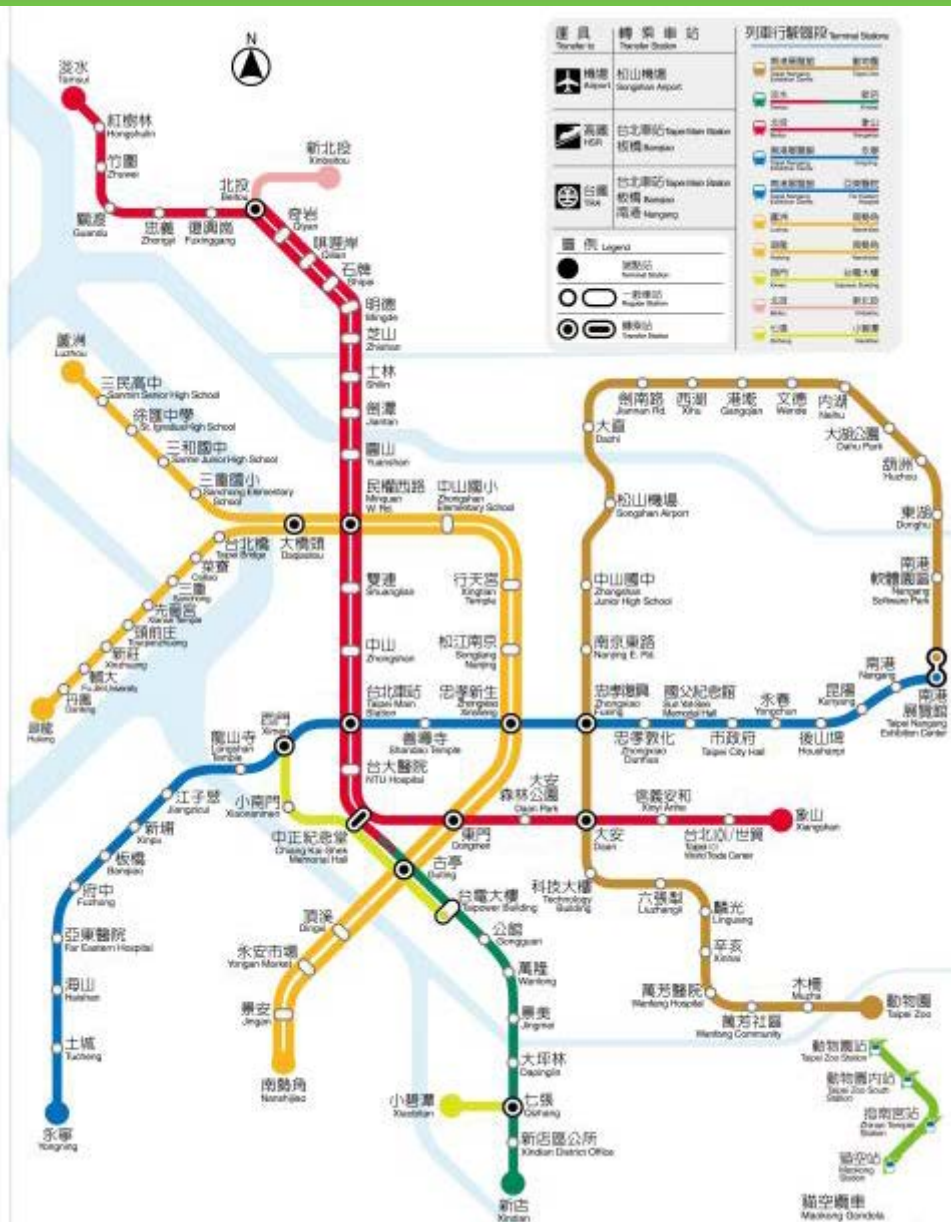
- Maokong Gondola
- Taipei Arena

- Advertising
- Merchandise
- Convenience Stores
- Parking Lots
- Underground Malls

- EasyCard Investment Holding Company
- Metro Consulting Service Corporation



Metro Network



Length:

121.3km (Operational)

- Elevated: 32.6 km
- Ground level: 9.2 km
- Underground: 79.5 km

127.7 km (Constructed)

Number of stations: 111

System:

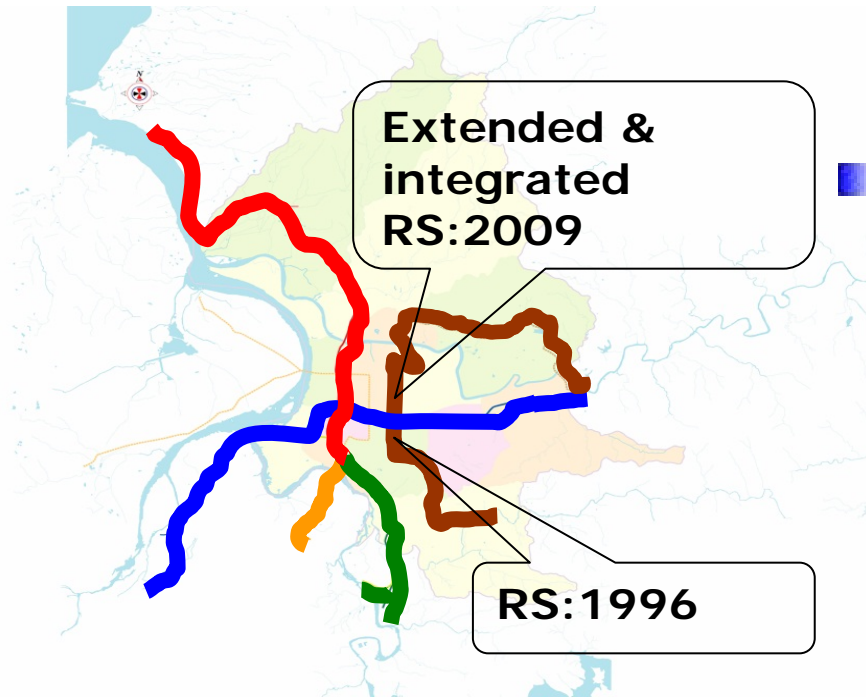
- Medium-capacity system (Brown Line- the first line)
- High-capacity system

Systems



	Medium Capacity Transit System (Unattended Train Operation)	High Capacity Transit System
Features	<ul style="list-style-type: none">▶ Fully automated▶ Driverless▶ Rubber tires▶ Moving block	<ul style="list-style-type: none">▶ Fully automated▶ Driver responsible for handling emergencies▶ Steel wheels
Capacity	4 car trains (424 passengers)	6 car trains (1,936 passengers)
Fleet size	304 cars	774 cars

Integration of the Brown Line



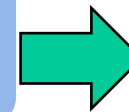
■ Brown Line (Muzha Line): Revenue service launched in **1996**

- ◆ 12 stations
- ◆ 10.5 Km

■ Extended and integrated Brown Line (Wenhu Line): Revenue service launched in 2009

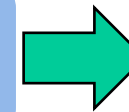
- ◆ 24 stations
- ◆ 25.2 Km

Fixed block



Moving block-CBTC

Matra VAL 256

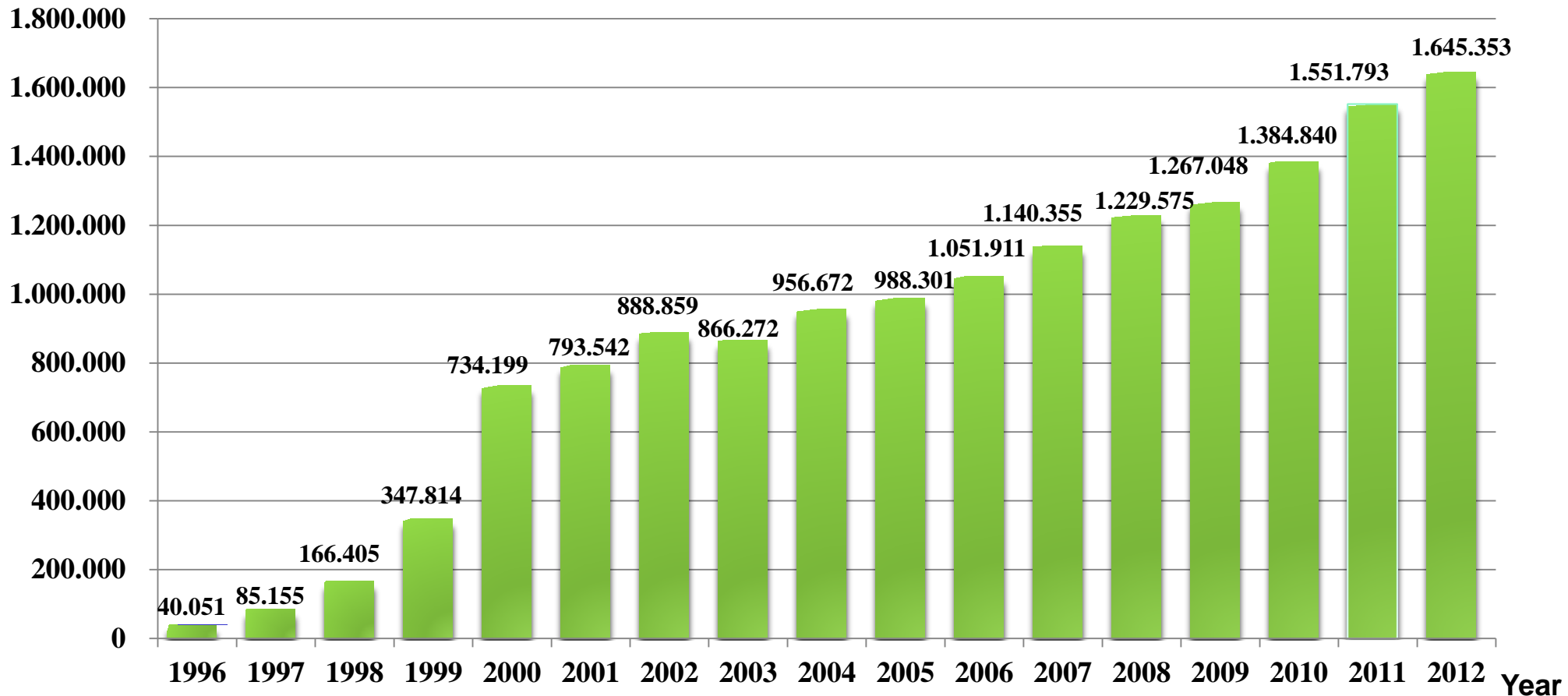


BT Cityflo 650

Average Daily Ridership

■ 1.80 million / day (as of Nov., 2013)

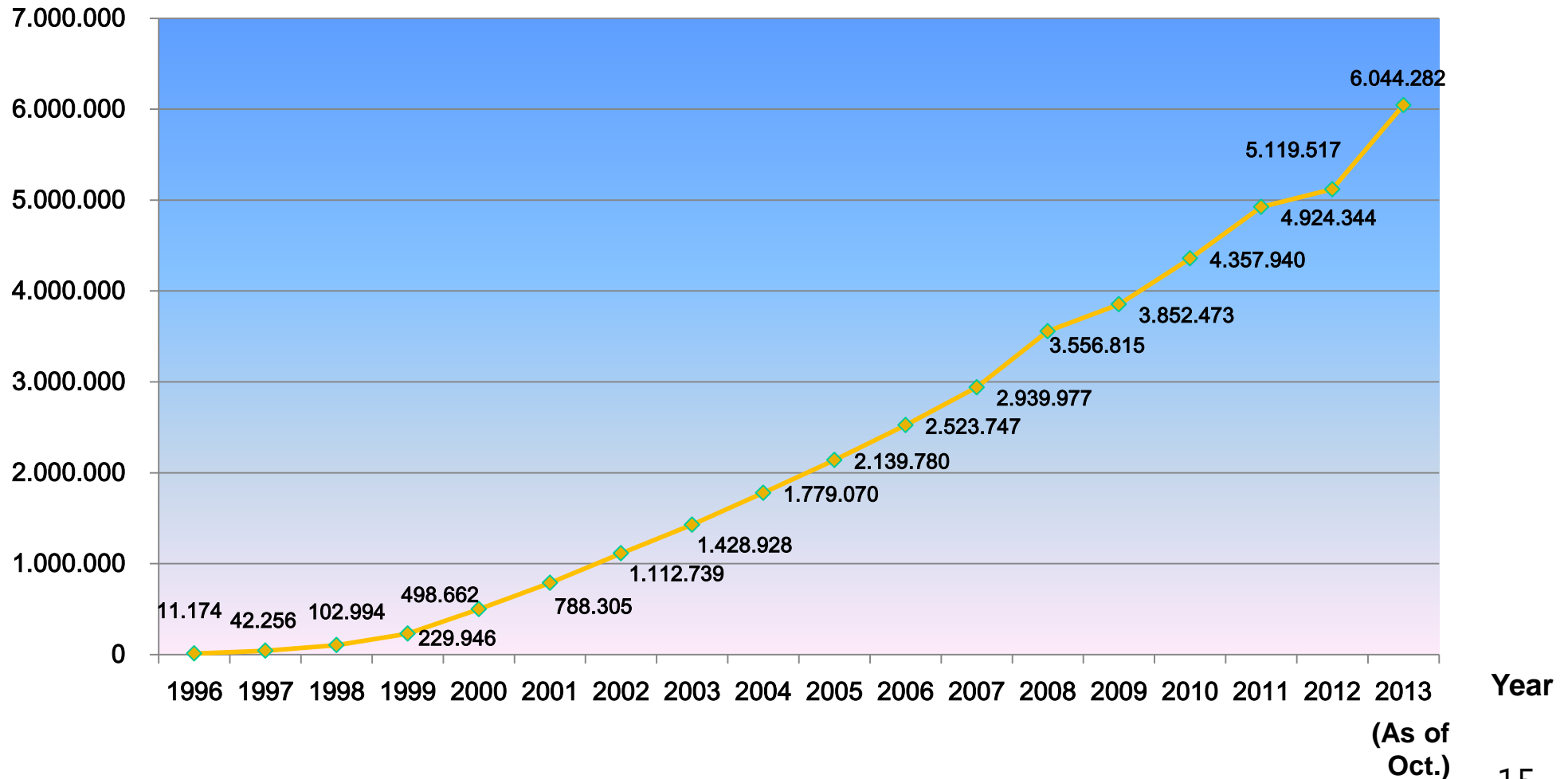
Ridership



Accumulated Ridership

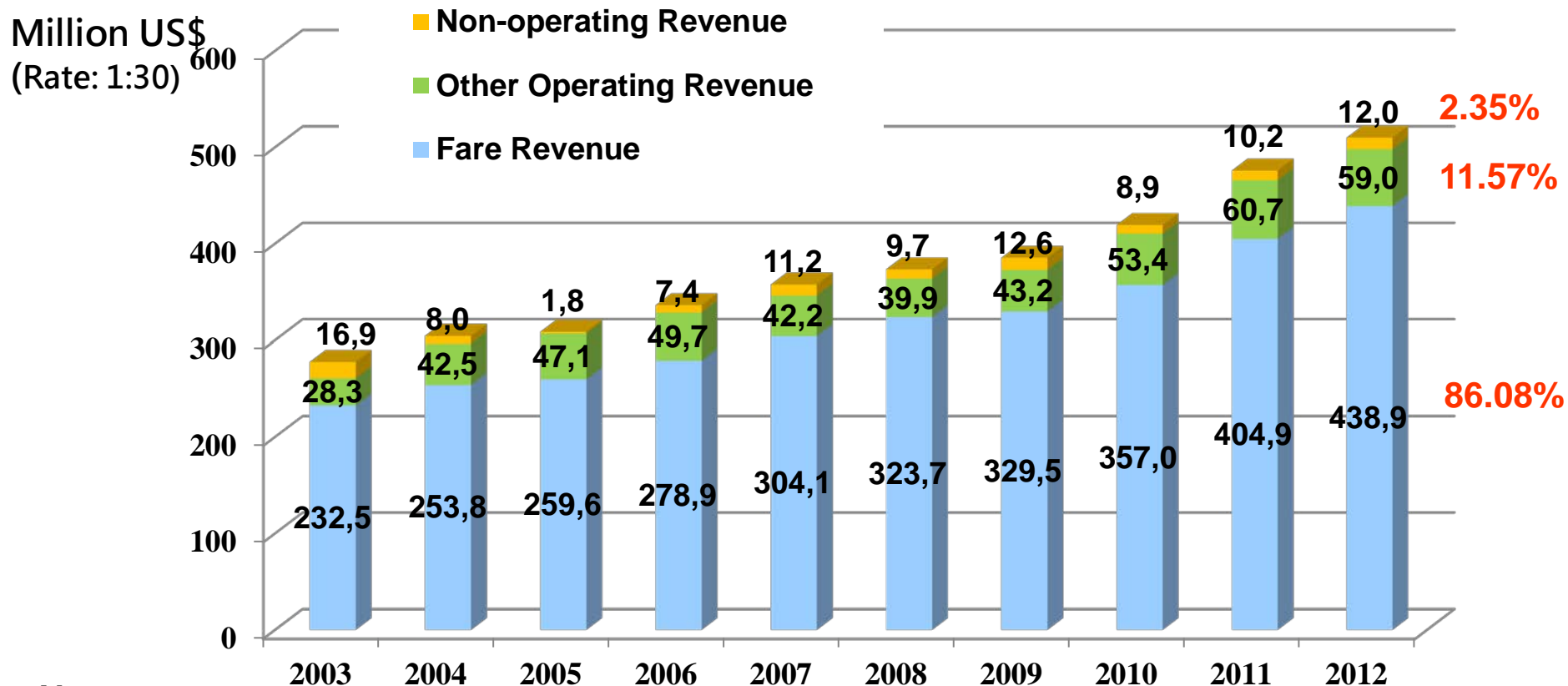
■ Reached 6 billion milestone on 7 October, 2013

Thousand



Revenue

■ Total revenue in 2012: 509.9 million USD

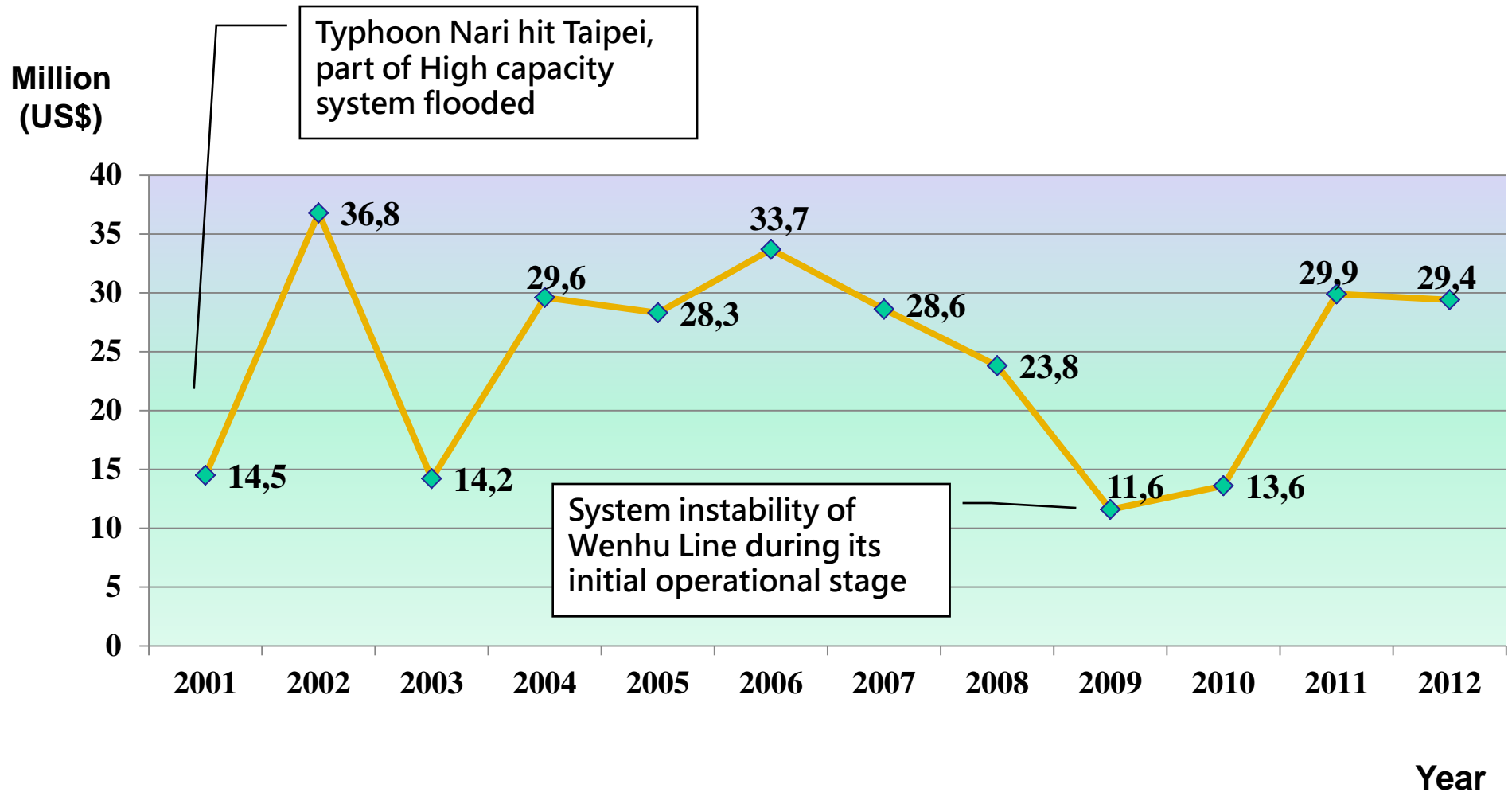


Note:

A. Other operating revenue include affiliated businesses (station shops, parking, advertising, underground malls, souvenirs, mobile phone leases), Taipei Arena and EasyCard, consignment sales of IC fare card and station services

B. Operating income includes interest income, investment income, dividend income, etc. 16

Pre-tax Profit



Innovative Services



Platform Screen Door

- Prevent people and objects from falling onto the track area at peak times
- Currently installed at 8 heavy-traffic stations
- System-wide installation planned: completion for additional 13 stations expected by 2014, and 37 more stations by 2018



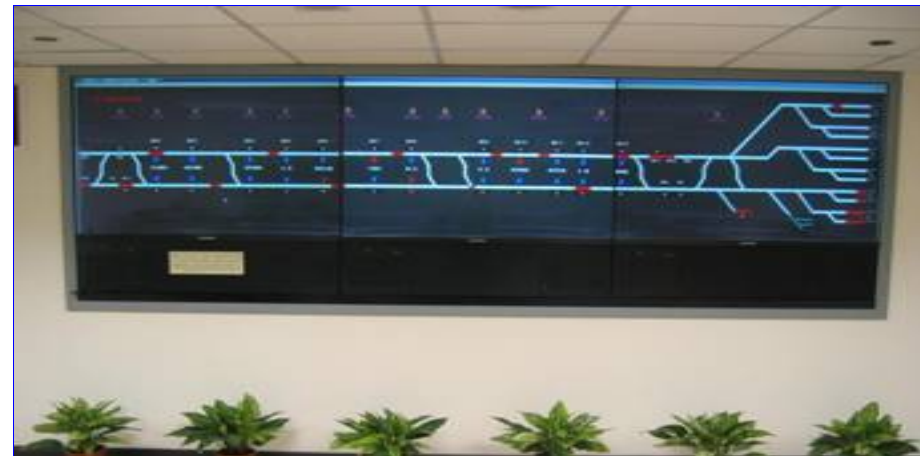
Emergency Evacuation Exhibition Center

- Considering severe injuries and deaths caused by the accidents in Moscow, Daegu, Hong Kong, Madrid, London Underground, Taipei Metro developed an emergency evacuation simulation plan for the public and staff to safely respond to such situations
- 18 scenarios constructed over 2,468m² area
- Open to the public since June 3, 2008 (Open Tuesday-Saturday)
- 120,000 people have visited so far



24hr Customer Service

- (02)218-12345
- Launched on July 29, 2004
- Call-in capacity: 21 lines at any time
- Received an average of 602 calls a day (2012)
- Under special circumstances, more than 2,800 calls are answered over a 24-hour period



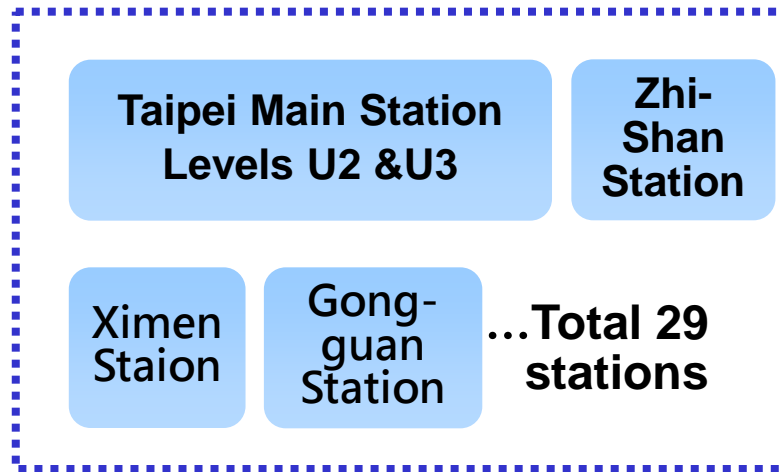
Bringing Bikes onto the Metro

- Launched on Jan., 2004
- Access times: Weekends & Holidays
- Number of stations : 76 (90%)
- Fare: USD 2.7 (Flat Rate)
- Average Daily Ridership: 738 (2012)



Restroom Refurbishment

Completed before 2012



Refurbished in 2013



- Ratio of men's to women's restrooms now **1:2.31**, from 1:1.55
- Eventual goal of **1:5** planned



Restroom Real-time Display System

- The system was Installed in December 2009 at Taipei Main Station. Passengers could save the time for searching for available stalls
- Stalls occupied over 30 minutes would automatically alert the security to inspect
- Since the latter half of 2010, more stalls have used this system

Patent granted in
2010 by Taiwan
Intellectual
Property Office



Brest-feeding Room

- The first nursery rooms were open in 2006. Now they are available at **25** MRT stations. Mothers used them on an average of **1,648** times in 2012
- They are installed in interchange stations, terminals, high capacity and tourist traffic stations



Barrier-free Environment

- Since April, 2011, all stations provide free electric wheelchair charging service



Wheelchair
Charging
Service

Guide
Service for
Visually-
impaired

- Since January, 2012, visually-impaired passengers can call for guide service 10 minutes prior to arrival at MRT station (appointment line received 398 requests in 2012)
- Since April, 2012, 44 stations have installed "Waiting Chairs for Visually-impaired"

Barrier-free
Environment
Improve-
ment

Free
Paratransit
Shuttle
Service

- 3 elevators added to Taipei Main Station, one elevator modified
- Saving 630 m and 15 mins of travel distance and time



- Alternate transport during the period of elevator upgrade project
- On June, 2012, 2 paratransits were purchased to provide free shuttle service



Wireless Broadband Connectivity

- Since July 2011, free Wi-Fi available at all Metro Stations
- Since August 2012, free battery charging stations available at all Metro Stations (including Maokong Gondola, Taipei Arena and underground malls)
 - ◆ 259 charging stations system-wide
 - ◆ Average daily use – 300 times (~15 minutes)



Quality Metro Culture



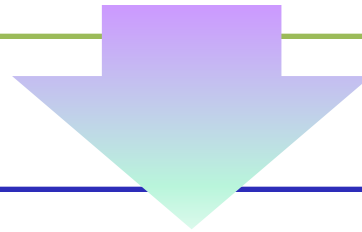
Development of Metro Culture

Origin

- Promote safety and courteous service, in accordance to the Mass Rapid Transit Act, following the operation of Taiwan's first MRT Line – the Muzha Line, in March, 1996
- Promote “Heart” of Metro Culture, starting in 2004

Vision

Through 17 years of hard work, Taipei Metro has developed a quality culture that has spread beyond the system into the society



On March 28, 2013, the anniversary of the opening of the Muzha Line, **the first Taipei Metro Culture Festival** was held to promote courtesy, concern for older and disabled passengers, and convenience of public transportation

■ 2013 Metro Culture Festival Activities

Public recognition in appreciation of Volunteers' participation over the years



Decorate elevators to promote "giving priority to those in need"

Volunteers Recognition

Looking for Metro-riders

Priority Elevators Design Competition

Promotion Video Clips

Riders encouraged to submit pictures relating to the "Taipei Metro Culture Festival" for prize drawing



Two video clips to be viewed in stations for promoting a caring Metro environment



Priority Elevators

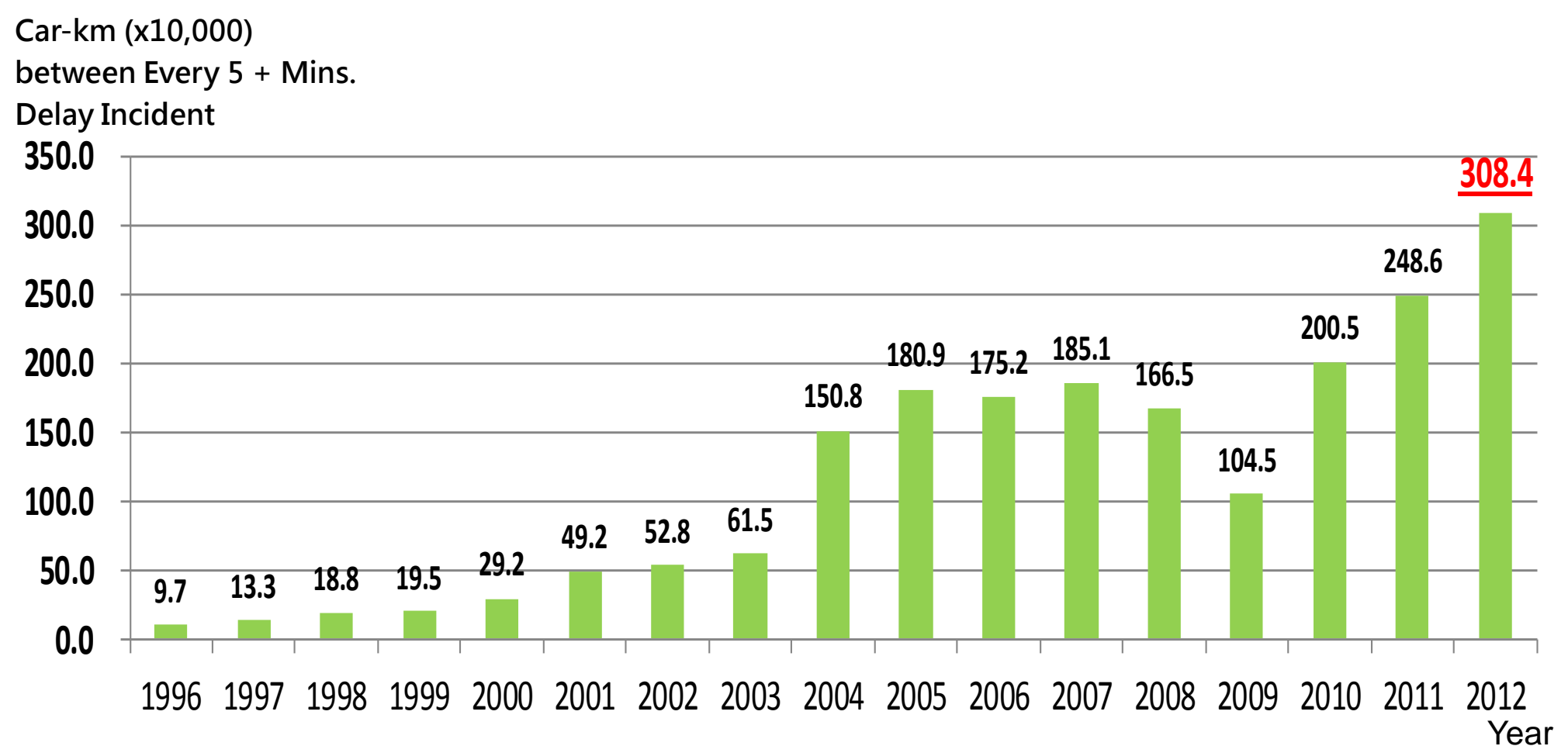


Operations Performance



System Reliability

■ Mean car-Kilometers Between service-delay Failure of more than 5 mins (MKBF)





- 

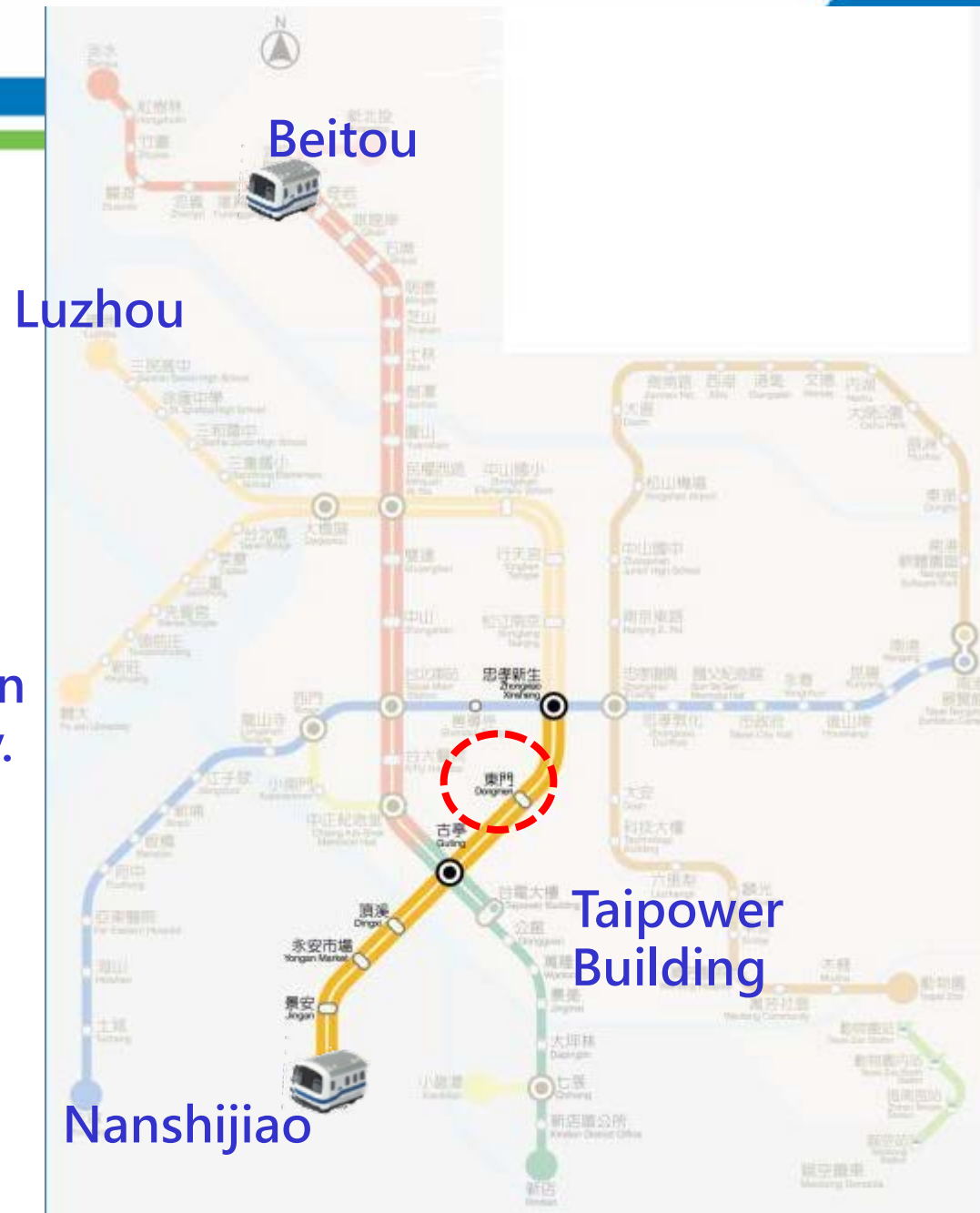


■ **Dongmen Station**
opened on September
30, 2012

■ **Line Operation
Changes**

- ◆ Beitou–Nanshijiao was re-routed as Beitou–Taipower Building
- ◆ Nanshijiao passengers can now directly travel to Luzhou/Fujen University area via Dongmen Station

Fujen
Univ.



Public Awareness Campaign Before and After Re-routing

Highly-visible Transfer Signs



Station Transfer Advisor

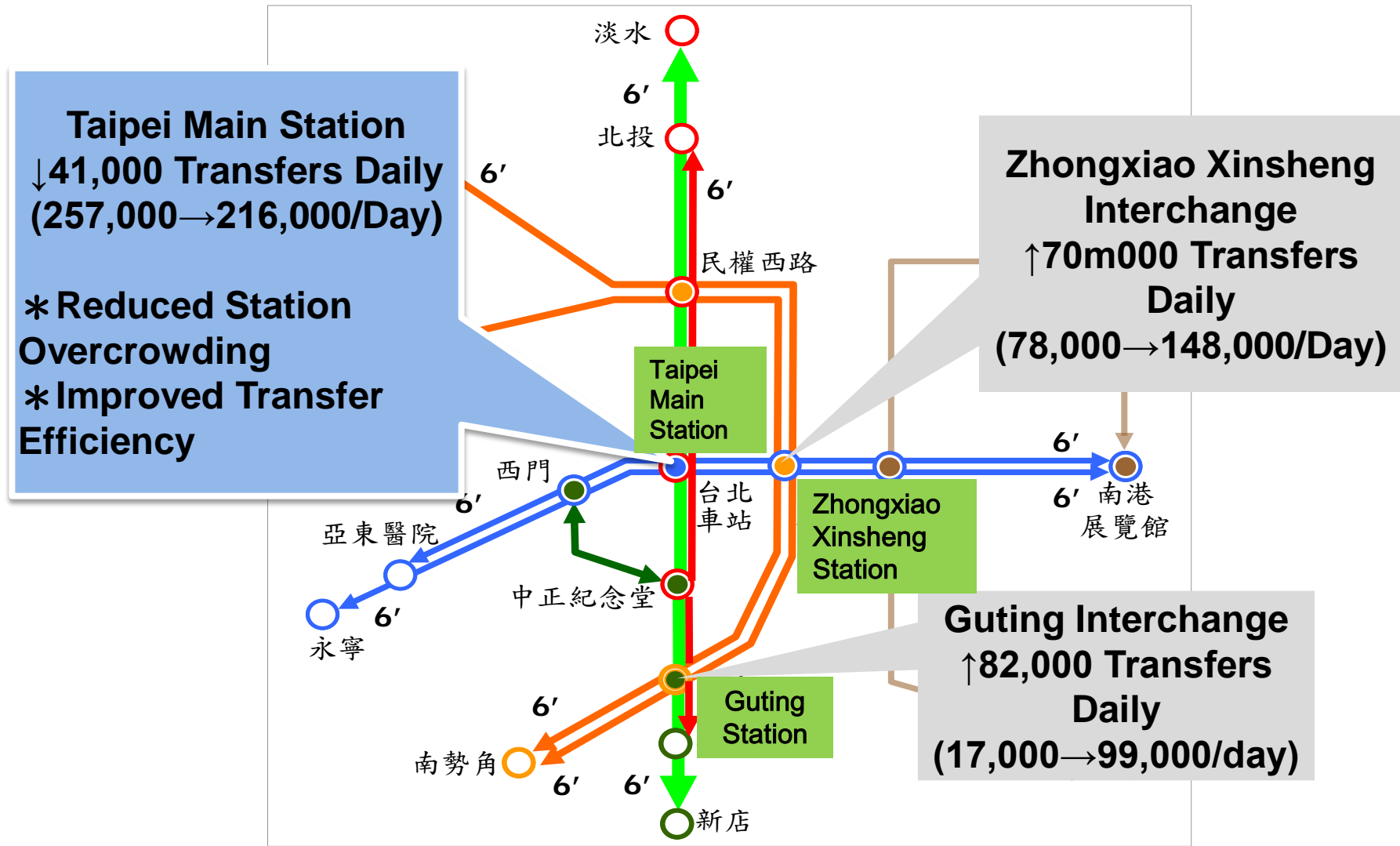


Station Tour Guide



Printed Transfer Information

■ Successfully Redistributing Transfer Load





■ Passengers Satisfied with Redistribution of Transfer Load

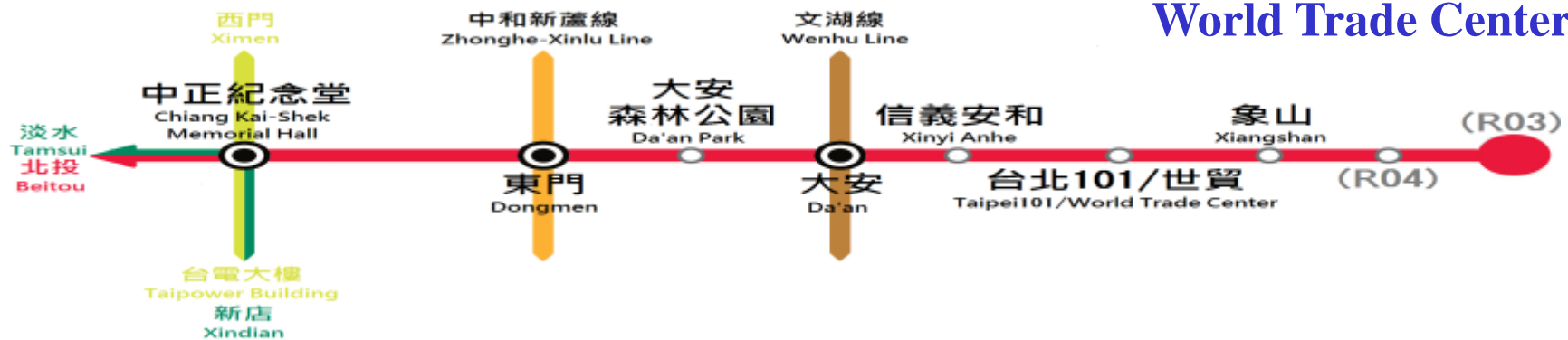
- ◆ “MRT Transfer Redistribution Public Awareness Survey,” reported on October 2012 by Department of Transportation of Taipei City
 - Overall Satisfaction of Frequent Riders: 91%
- ◆ 2012 Taipei Metro Passenger Satisfaction Survey
 - Overall Satisfaction of Passengers System-wide: 92.9%
 - Overall Satisfaction of Passengers directly affected by Transfer Redistribution: Above 92%

Xinyi Line Opening

- Opened on November 24, 2013, the Xinyin Line adds:
 - ◆ 5 stations
 - ◆ 5.7 kilometers
 - Connects with 3 other lines, enabling passengers to reach Taipei 101 from Taipei Main Station in only 11 minutes



Taipei 101/
World Trade Center Station





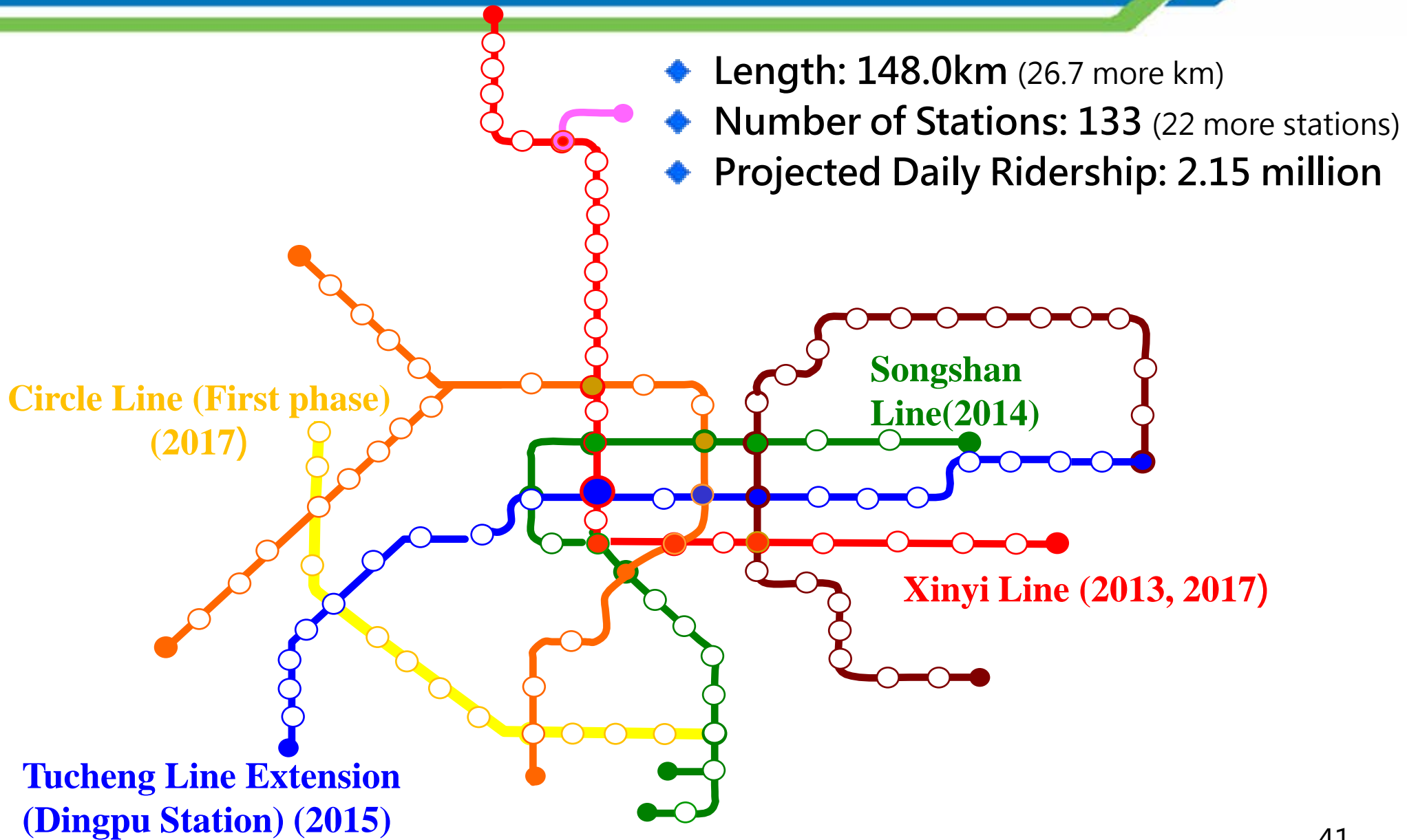
Sunken Garden



Daan Park Station

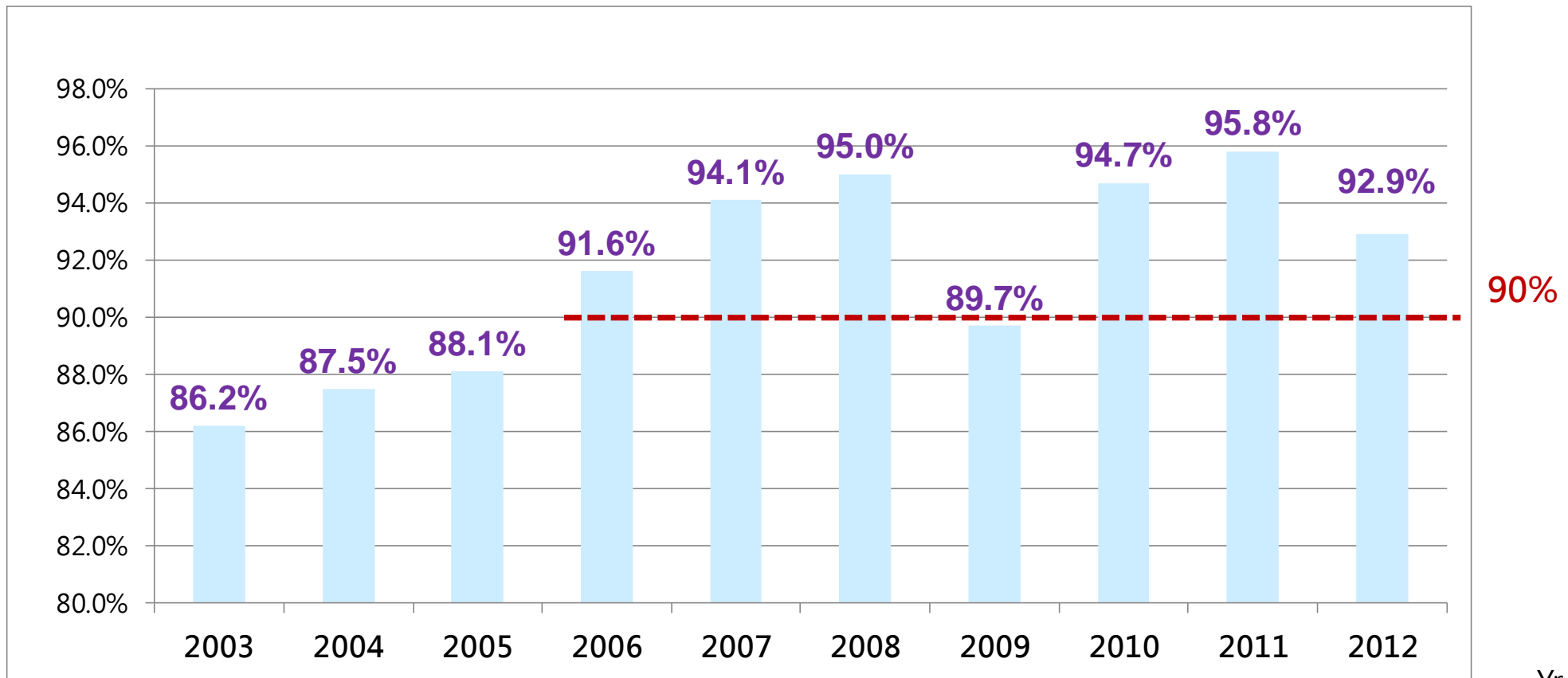


Network by 2017



Passenger Satisfaction

■ For the past few years, overall satisfaction has surpassed 90%, with the only exception of 2009



International and National Recognition

Operations & Quality

- **UITP (The International Association of Public Transport)- Winner of the 2013 Asia-Pacific Customer Service Innovation Award. Final 3 of the Global Customer Service Innovation Award.**
- 2013 Chinese Institute of Engineering “Excellence in Business Award”
- 2012 ANQ Recognition for Excellence in Quality Practice
- 2010 The second best in reliability among all the Nova and CoMET members

QCC

- Both Golden Tower and Silver Tower from the 25th National Quality Control Circle (QCC) Competition Corporate Competition by Ministry of Economics Affairs

Innovation

- Taipei City Government -Innovation Award Champion,” for “The Transformer” (a Makong Gondola maintenance tool)

Station Environment

- 2012Ministry of Transportation and Communications –Golden Road Award (in both Station Maintenance and System Maintenance categories)
- 2012 Taipei Healthy Cities Alliance “Appealing Spatial Innovation Results Award”

Human Resources

- **2012 International Federation of Training & Development Organizations “Global Human Resource Development Awards 2012 (Certificate of Merit)**
- 2012Council of Labor Affairs, Executive Yuan “TTQS Training Quality Assessment - Silver Medal for Corporate Organization”

Information Technology

- 2012 Taipei City Government- “Agency Information Service Assessment Service - Honorary Award for Innovation”



Winning Project



Ensuring Accessibility- Innovative Services for Groups with Special Need

Content :

- Improvement of Barrier-free Pathways and Infrastructure
- Wheelchair Accessibility
- Age-friendliness
- Promotion of a “Caring, Courteous, Convenient, and Joyful” MRT Culture
- Visually-impaired Accessibility
- Women and Child-friendliness



Thank you