

Sustainable Railway Development and Safety in Hong Kong

20th International Railway Safety Conference

3 - 8 October 2010



The EMSD has a unique role to play in ensuring the safe operation of Hong Kong's railways, and in shaping a sustainable future for our railway development.

A Century of Railway Development in Hong Kong

- The KCR came into service in October 1910
- Single track system
- British Section: Tsim Sha Tsui to Lo Wu
- Chinese Section further to the Guangzhou one year later

A Century of Railway Development in Hong Kong

- A 10-year investment programme commenced in 1974 to electrify the KCR with double track from Hung Hom to Lo Wu
- Anticipated future demands in trade with China
- Increased passenger traffic arising from the planned construction of large towns in the New Territories

A Century of Railway Development in Hong Kong

- The first stage of double-tracking and electrification was completed in 1982 between Kowloon and Sha Tin
- The use of diesel trains for domestic passenger services came to an end in July 1983

A Century of Railway Development in Hong Kong

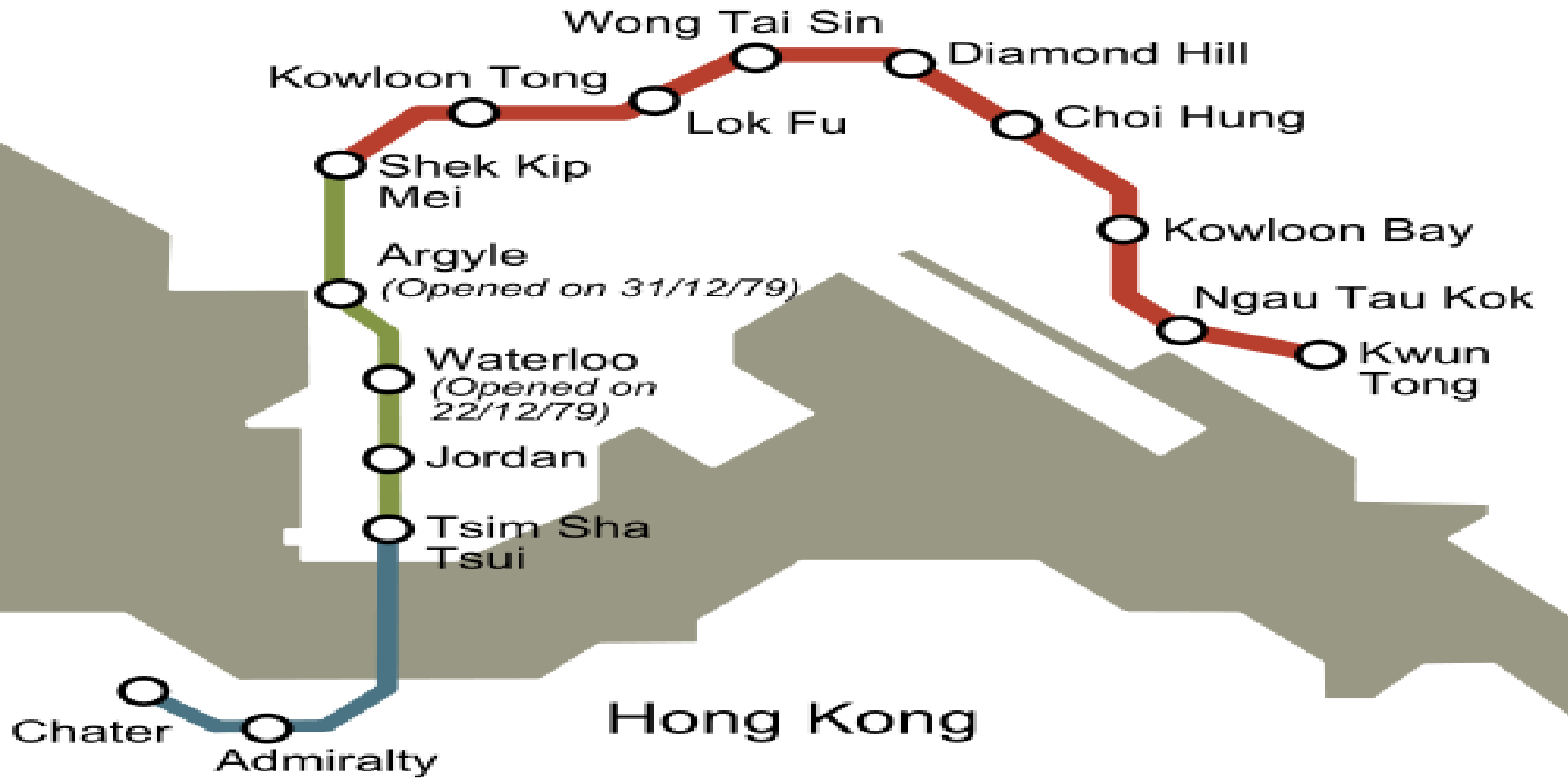
- The Kowloon-Canton Railway was corporatised in December 1982
- The KCRC was wholly owned by the government with the mandate to operate the Kowloon-Canton Railway

A Century of Railway Development in Hong Kong

- Two decades of KCRC network expansion through five major projects:
 - Light Rail System
 - West Rail
 - Tsim Sha Tsui Extension
 - Ma On Shan Rail
 - Lok Ma Chau Spur Line

MTR Modified Initial System Route Map

Kowloon



-  Kwun Tong - Shek Kip Mei
-  Shek Kip Mei - Tsim Sha Tsui
-  Tsim Sha Tsui - Chater

Date opened

1 October 1979

16 December 1979

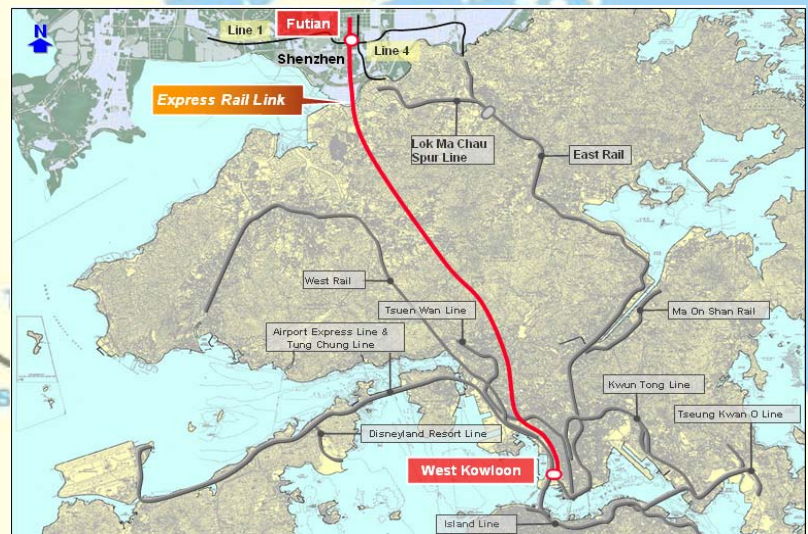
12 February 1980

Mass Transit Railway

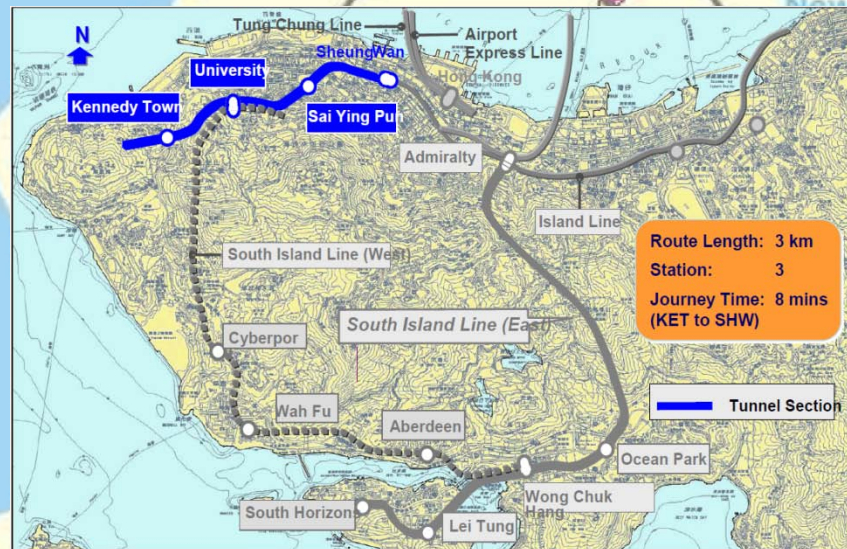
- Successive extensions over the next three decades
 - Tsuen Wan Line (1982)
 - Island Line (1986)
 - Airport Express Railway and Tung Chung Line (1998)
 - Tseung Kwan O Line (2002)
 - Disneyland Resort Line (2005)

Railway Development

- Population growth and dispersion
 - Demand for mass public transport
- Closer economic ties with the Mainland
 - Demand for inter-city links
- Technology advancements
 - Faster trains



Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link



West Island Line



Shatin To Central Link

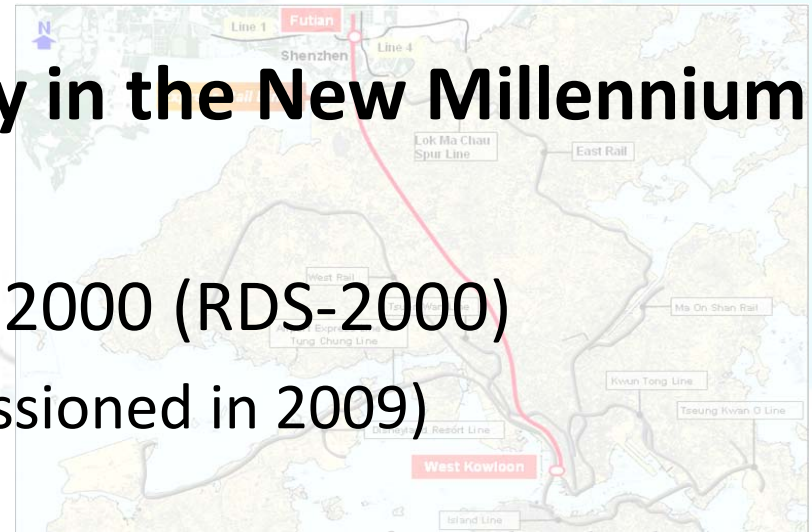
South Island Line (West)

North Hong Kong Island Line

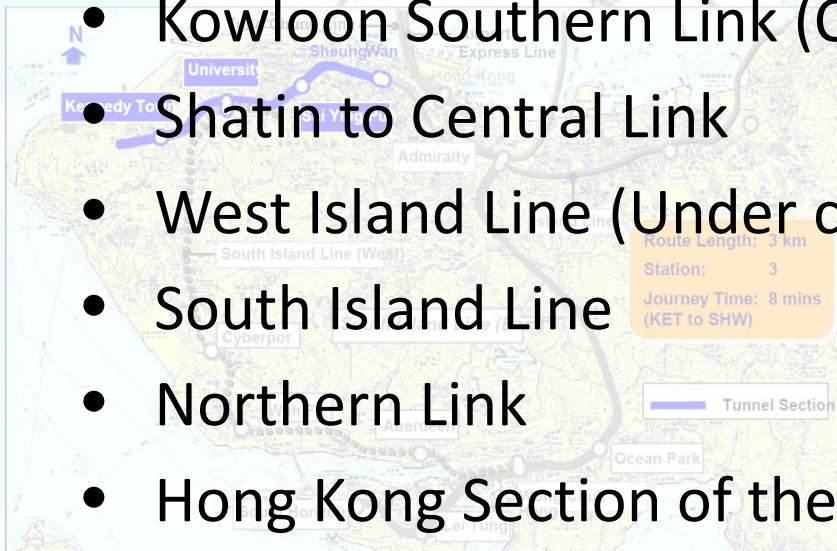
Railway Development Strategy in the New Millennium

Railway Development Strategy 2000 (RDS-2000)

- Kowloon Southern Link (Commissioned in 2009)
- Shatin to Central Link
- West Island Line (Under construction)
- South Island Line
- Northern Link
- Hong Kong Section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link (Under construction)
- North Hong Kong Island Line
- Port Rail Line



Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link



Shatin To Central Link

Merger and a New Era



Merger and a New Era

- Idea of MTRCL-KCRC merger initiated by government in February 2004
- Approved by two corporations' Managing Boards and shareholders in 2007
- MTRCL was granted a 50-year service concession for the operation of the KCR network





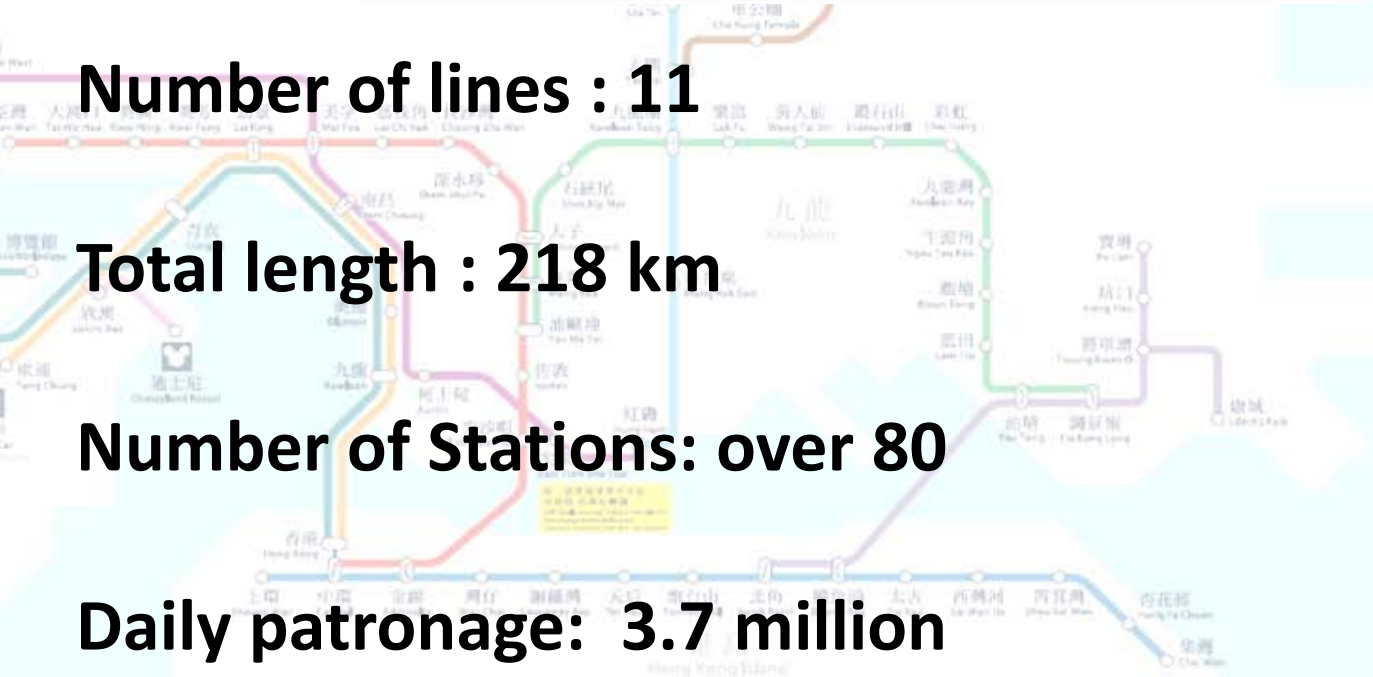
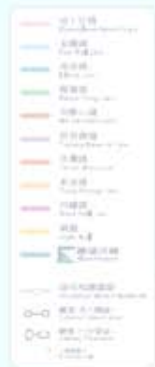
Now

Number of lines : 11

Total length : 218 km

Number of Stations: over 80

Daily patronage: 3.7 million



Regulating Railway Safety in Hong Kong

- **Before 1990**

Railway Inspectorate duties performed by the UK government

- **December 1990**

Hong Kong Railway Inspectorate (**HKRI**)

Establishment of Railways Branch in EMSD

- HKRI integrated into EMSD following a consultancy review study concluded in 2007
- The **Railways Branch, EMSD** established in February 2008
- Strengthened the technical and professional support

Establishment of Railways Branch in EMSD

- Regulatory control over all railway systems including tramway, peak tram, MTR and the Automatic People Movers of the Airport Authority
- A single jurisdiction monitoring the safe operation of railway systems in Hong Kong

Railways Branch Role and Functions

☀ Regulatory Framework:

- Mass Transit Railway Ordinance (Cap. 556)
- Mass Transit Railway Regulations (Cap. 556A)
- Tramway Ordinance (Cap. 107)
- Peak Tram Ordinance (Cap. 265)
- Airport Authority (Automated People Mover)
(Safety) Regulation (Cap. 483C)

Comparing with Overseas Railway Regulatory Bodies

- Railway regulatory framework developed in Europe is well established and serves as a good reference for Hong Kong
- Railways Branch being a railway safety regulator having a role similar to the **ORR** of the UK and the **ITSRR** of Australia

Comparing with Overseas Railway Regulatory Bodies

- Similar aspects of regulatory role
 - Manage the railways by ensuring that safety risks are duly controlled by railway project proponent and operator – MTRCL
 - A safety management system be established, implemented and subject to audit
 - Operation procedures to contain residual risks

Comparing with Overseas Railway Regulatory Bodies

- The Railways Branch by itself does not have the following regulatory role
 - Economics
 - Licensing or accreditation for commercial operations
 - Occupational safety and health of staff or contractor of railway operators

Railway Accident Investigation

- Both the Rail Accident Investigation Branch (RAIB) of the UK and the Office of Transport Safety Investigations (OTSI) of Australia are independent from their respective regulatory bodies
- Railway Branch plays both the regulatory and accident investigation roles

Railway Safety and Standard

- Good reference made from the Rail Safety and Standard Board (RSSB), UK and the European Railway Agency on the adoption of railway safety standard and indicators
- Undertaking safety performance, risk, data and trends analysis

Working towards a safe and sustainable future

- Fast growing rail networks
- Complex railway operating environment
- Large number of stakeholders
- A high level of railway safety very much hinges on the collaboration of designers, suppliers, operators and regulators and indeed every railway user

Working towards a safe and sustainable future

- As Hong Kong's railway regulator, we are keenly aware of our responsibility in shaping a safe and sustainable future for our city's railway development

Thank you !