



# **Progress on Upgrading Signalling System for Railway Lines**

**Legislative Council Panel on Transport  
Subcommittee on Matters Relating to Railways**

**February 2019**

# Signalling replacement – Enhancing stability

**\$3.3billion** investment to replace systems of **7 rail lines**

## Signalling replacement vs Maintaining service



## Complex and challenging

### Purpose

- **Reduce faults**
- **Enhance stability** by strengthening back-up devices
- **Contribute to enhancing overall carrying capacity**

# Maintaining service while implementing works



**Tens of thousands  
of components**  
involved in relevant works

**Metros overseas – Partial or full suspension** of service  
**MTR – Service maintained**



# Maintaining service **vs** Signalling replacement



## Installing signalling equipment



## Installation work at equipment room



## Midnight 2-hour challenge

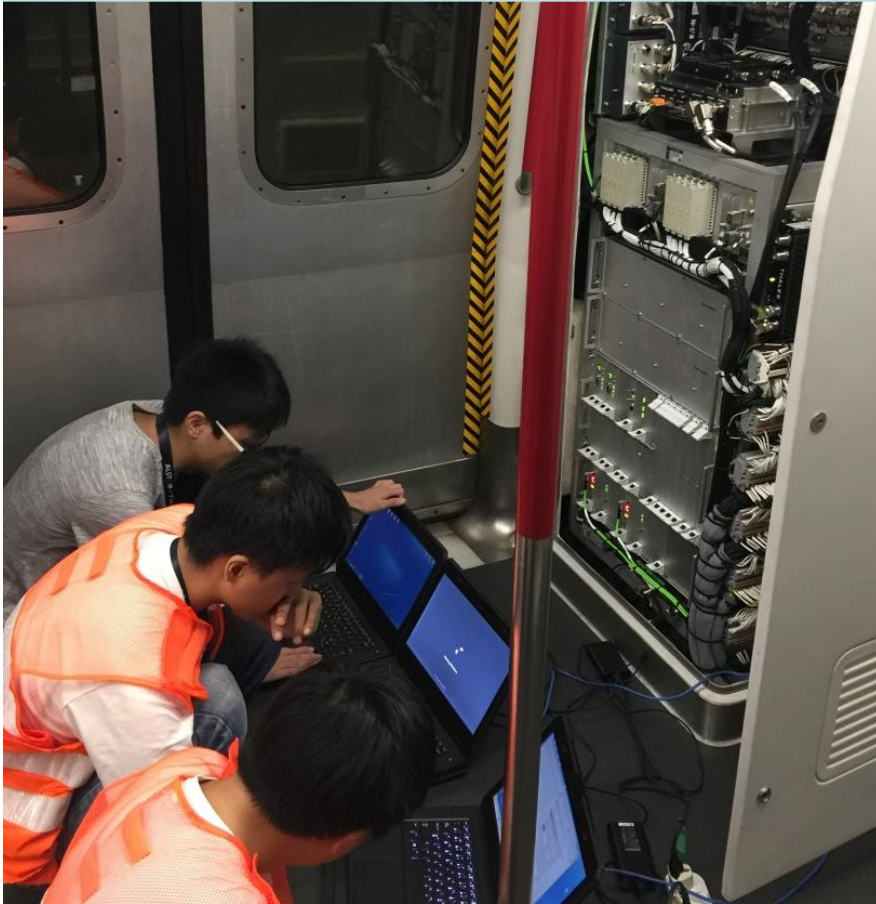
### Cabling and fibre wiring





# Maintaining service **vs** Signalling replacement

## Replacing relevant in-train equipment










## Train tests



- **Step-by-step** testing over a **long period of time**
- Tests conducted during **non-traffic hours (approx. two hours per shift)**

# Progress of Signalling Replacement

	Design	Installation	Test
<b>Tsuen Wan Line</b>			
<b>Island Line</b>			Commenced recently
<b>Kwun Tong Line</b>			
<b>Other rail lines</b>	Design and planning works commenced		

# Tsuen Wan Line – Test progress and staff training

Train runs on track  
over **10,000**km

Tests on system  
software  
over **10,000**times



**Mixed Mode Operation expected to start  
in second half of 2019**

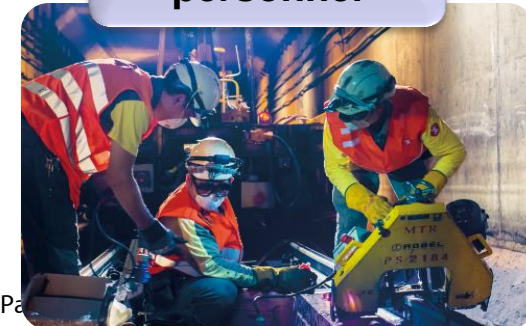
Staff in Operations  
Control Centre



Train captains



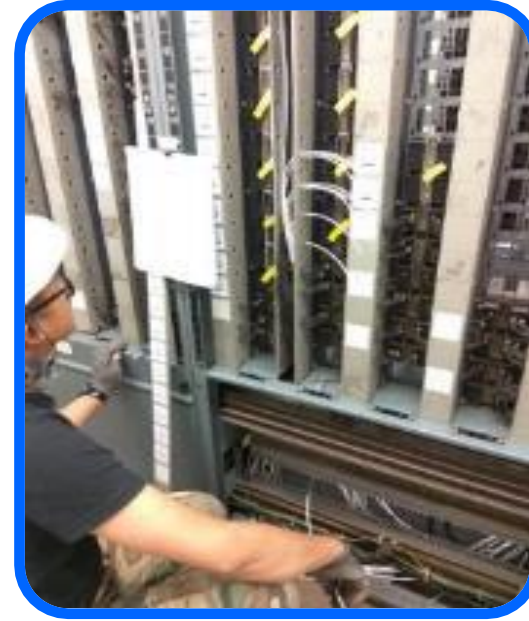
Maintenance  
personnel





# Progress of works on Island Line

- Installation of equipment completed along tracks and in stations, such as:  
**600** tags  
**200** wireless access points  
**Over 21,000** new wires
- Completed **500km train runs on track**



**More frequent train tests in 2019**  
**Replacement work expected to complete in 2021**



# Progress of works on Kwun Tong Line

- Installation of relevant equipment started in 2018
- Building on experience of Tsuen Wan Line and Island Line to smoothen works progress

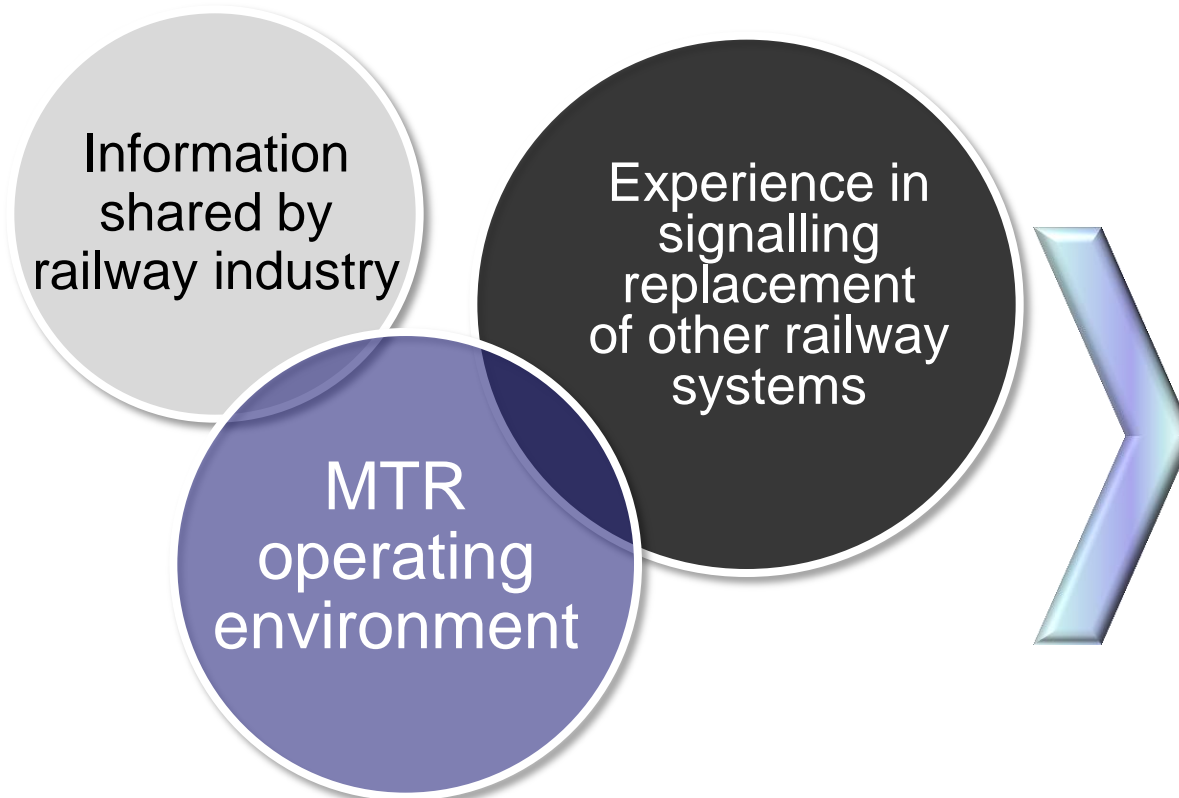
Installation work  
**commenced**



**Signalling replacement work  
expected to complete in 2020**

# Stringent risk management

- System switching → potential instability in operations
- Stringent management and assessment of risks
- Experience shared by industry → strengthened test requirement



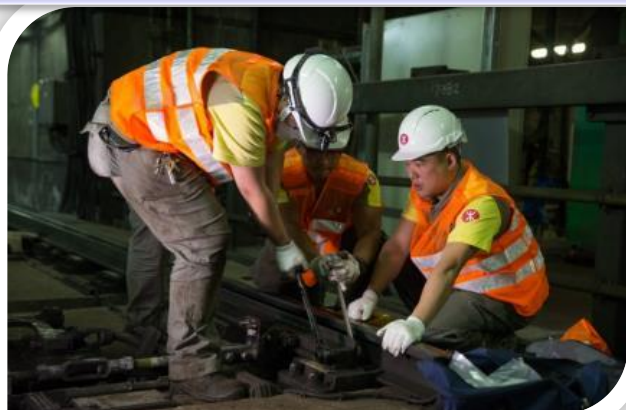
Aim at  
**Maintaining  
stable railway  
service**

**Contingency plan**  
in place to cope with  
potential risks

**Strengthened test  
requirements for  
higher reliability and  
stability**

# Well prepared for contingencies

- Close communications between operating and engineering staff
- Contractors and maintenance personnel standing by



Providing latest service information



透過Traffic News功能  
and accessible via "Traffic News Multilingual"



Citymapper

Review on shuttle bus arrangement with Transport Department



1 MTR train



~40 shuttle buses





# Thank you