Connecting Kowloon East - Environmentally Friendly Linkage System

連繫九龍東 - 環保連接系統

Task Force on Kai Tak Harbourfront Development
Harbourfront Commission

啓德海濱發展專責小組
海濱事務委員

Meeting on 12.3.2012

土木工程拓展署
CEDD Civil Engineering and Development Department

Consultation on Key Issues

(I) **Findings of the Feasibility Study** :

- Alignment of the Environmentally Friendly Linkage System (EFLS)
- Impact of Kwun Tong Transportation Link (KTTL) on Kwun Tong Typhoon Shelter (KTTS)
- Financial performance
- Economic benefits – Quantifiable and Non-quantifiable
- Other road-based green public transport modes

(II) **Implementation of EFLS project**

Energizing Kowloon East

The Hong Kong 2030 Study :

Development of new office nodes outside Core Business District (CBD)

2011 - 12 Policy Address :

"Hong Kong's traditional core business districts can no longer satisfy the growing demand for office space. We must develop another core business district — East Kowloon. "

Kowloon East Conceptual Master Plan

- **Connectivity**

Envisaged provision of EFLS in Kowloon East and enhancement to pedestrian facilities

- **Branding**

Opportunities of branding and innovation to be fully exploited

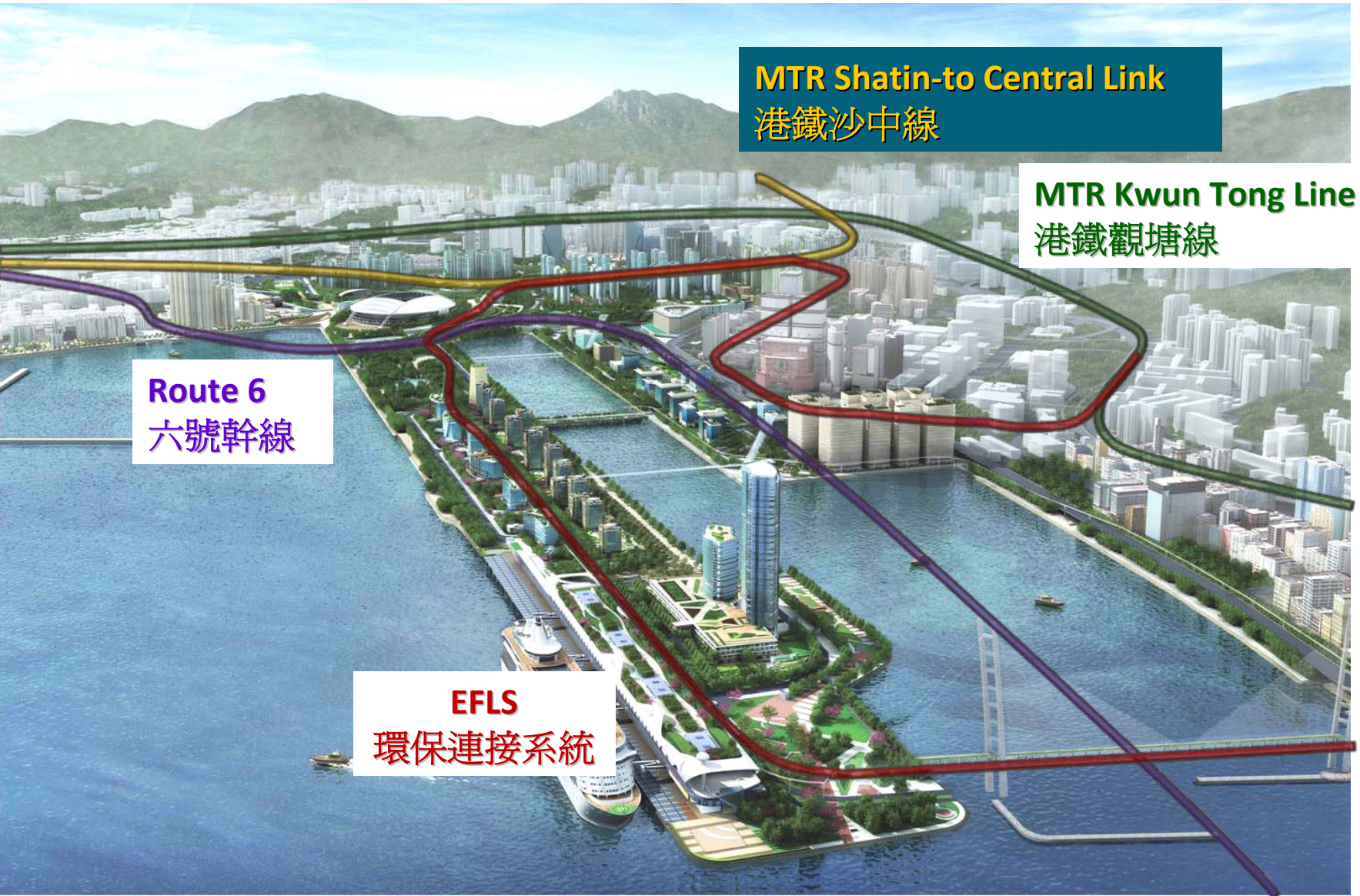
- **Design**

Improvement in streetscape greening and public open spaces

- **Diversity**

Provision of a variety of outdoor café, water sports and entertainment facilities to enhance vibrancy of the area

Transport Infrastructures in Kowloon East



Kai Tak Outline Zoning Plan (2007)

Land reserved for possible provision of a rail-based EFLS

Feasibility subject to further investigation

Proposed EFLS Alignment

- Use elevated monorail, total length about 9 km and have 12 stations
- Commissioning year : around 2023
- Estimated daily patronage in 2031 : 0.2 million

Role of the EFLS

- Enhance inter- and intra-district connectivity of Kowloon East
- Provide catalytic effect for the regeneration of Kowloon Bay and Kwun Tong into a premier CBD

Convenient Intra-district Connector

- Link up Kai Tak commercial developments with two proposed Action Areas and Kowloon East CBD generating synergy effect

- Link up major tourism attractions/open areas

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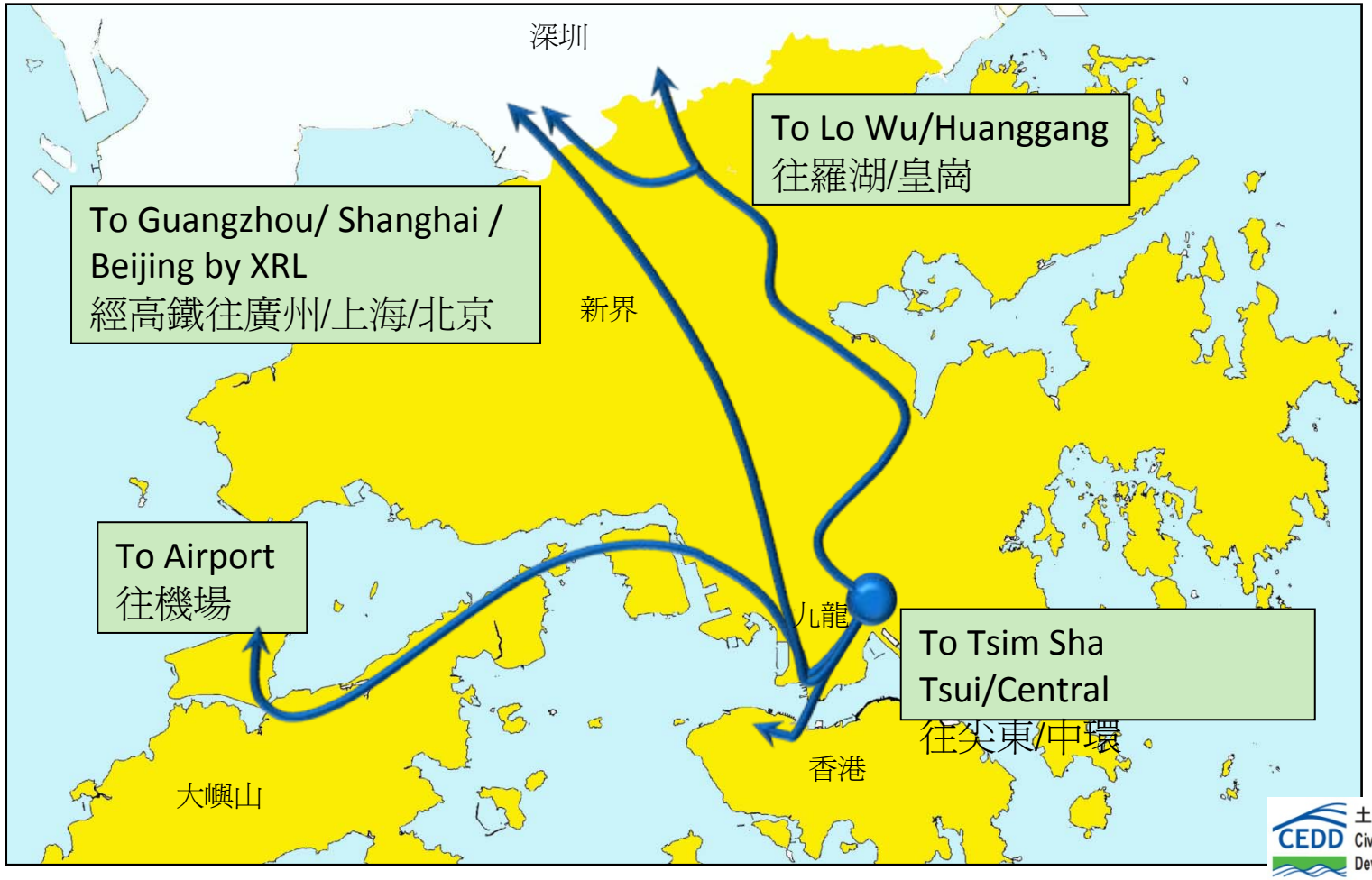
Connecting Kowloon East by Railway

Connecting Kowloon East with other districts via MTR Network



Alternative Routes in Kwun Tong

- ✓ Closer to Kwun Tong MTR Station
- X Need to close one traffic lane
- X Need to divert some existing bus routes

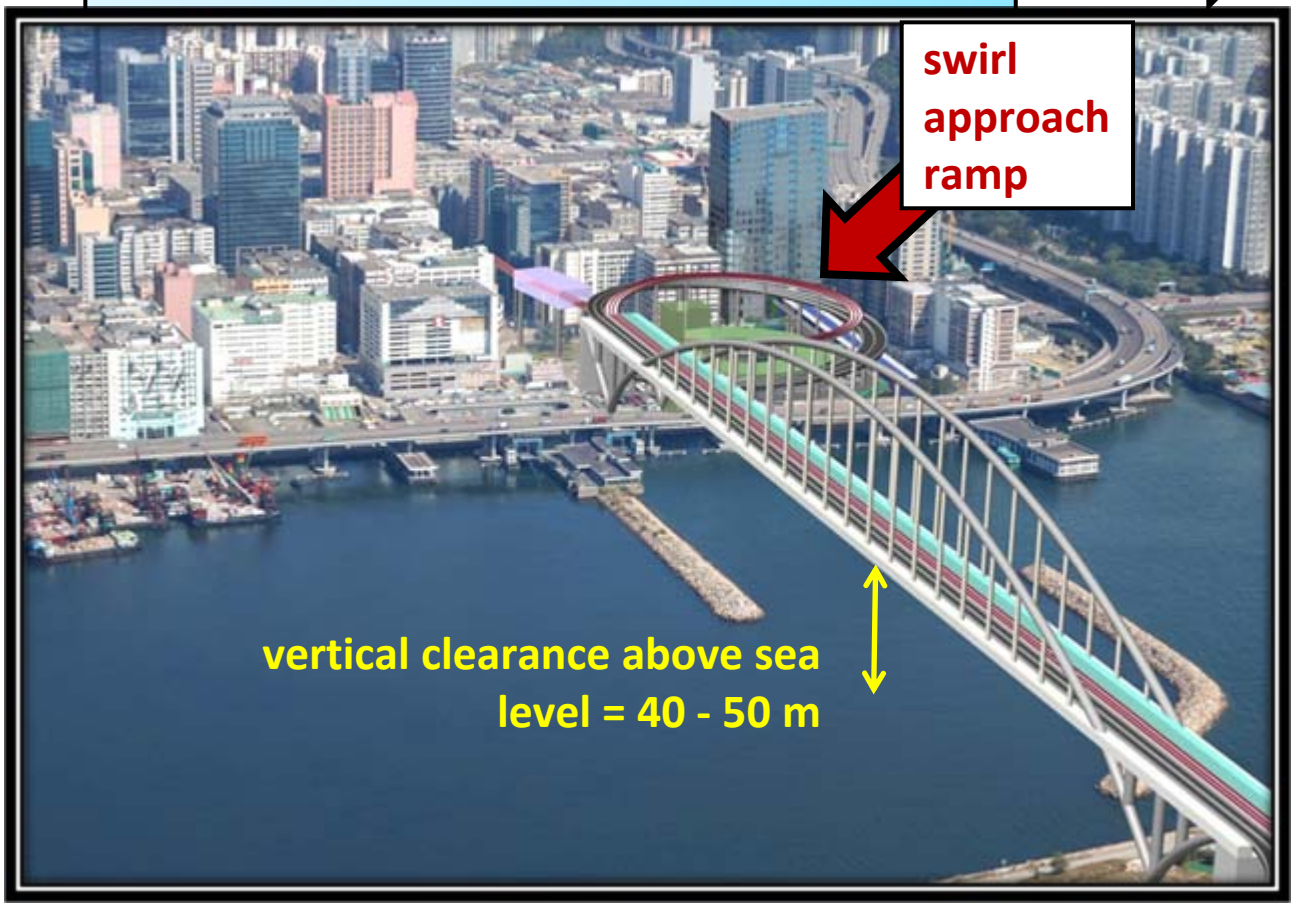
Along Hoi Yuen Road
沿開源道走線

Along King Yip Street
沿敬業街走線

- ✓ More space and less environmental impacts
- ✓ No traffic lane reduction
- X Away from Kwun Tong MTR Station

Implications of KTTL on KTTS

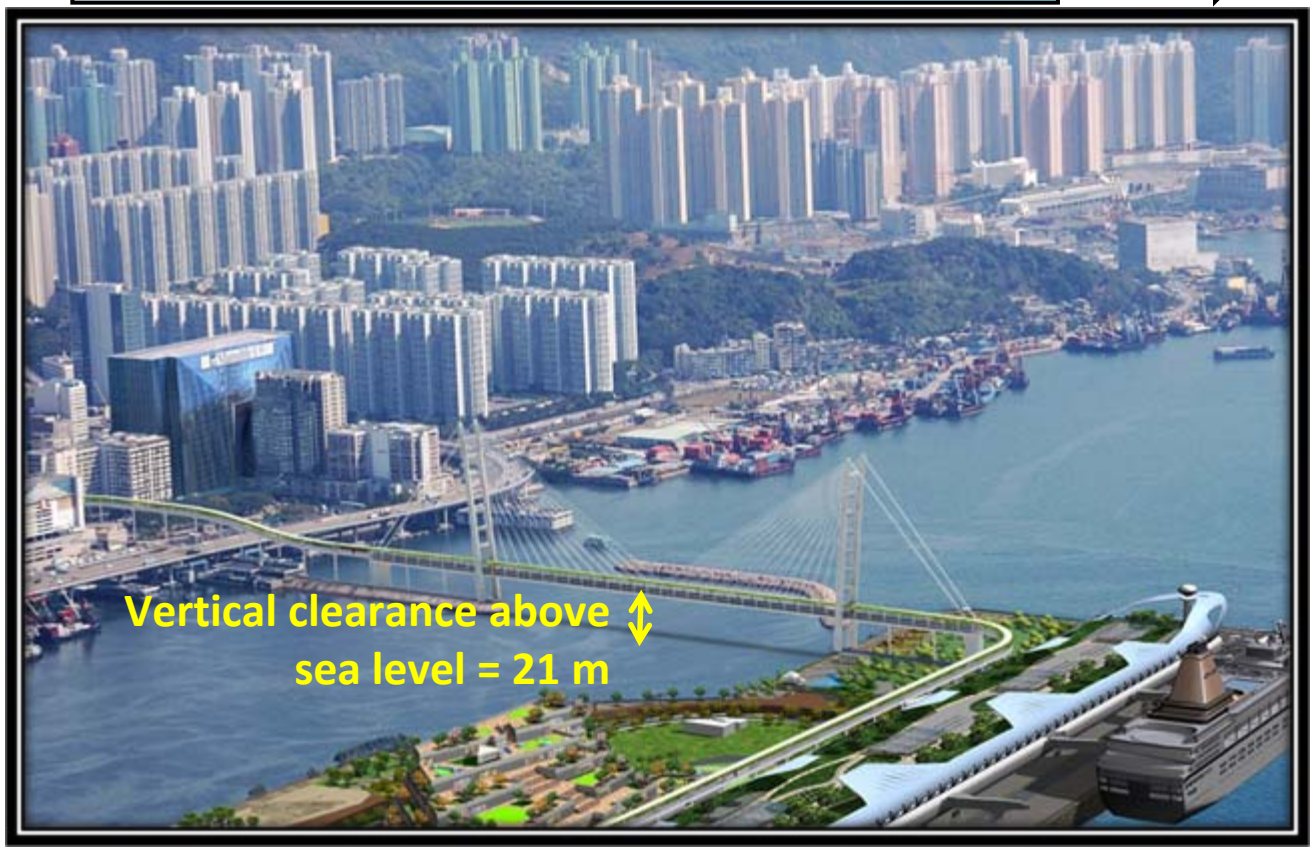
KTTL at 40-50 m height to keep KTTS intact



- a mammoth structure, extremely visually intrusive
- bridge piers may infringe PHO
- approach ramp encroach upon Action Area 2, affect redevelopment opportunity
- sharp turning radius of approach ramp adversely affect EFLS operation efficiency
- extremely windy environment at height, not suitable for pedestrians and cyclists ➔ cannot meet public aspiration

Implications of KTTL on KTTS

The Study suggests a vertical clearance of 21 m



- Slimmer structure, less visual impact
- Bridge supports rest on existing breakwater
- Accommodate EFLS, pedestrians and cyclists, meet public aspiration
- A direct linkage between KTD and Kwun Tong, generate synergy effect
- No impact to Action Area 2
- Height restriction on KTTS ➔ affecting high-mast cargo lighters

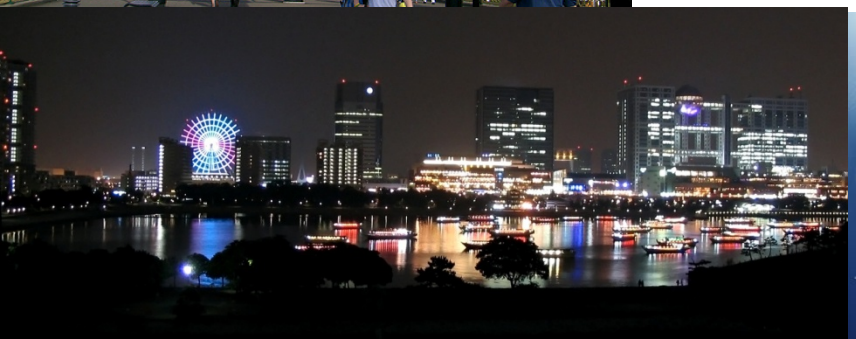
Financial and Economic Performance

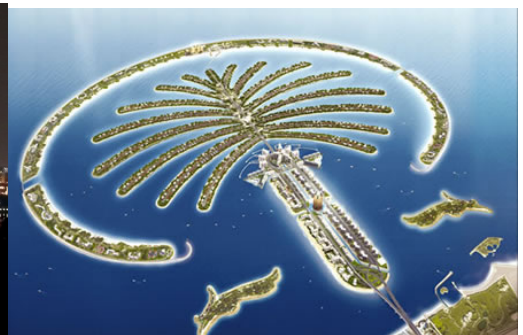
- Capital cost broadly estimated to be $12 billion (2010 prices), comprising

Item	Estimated Cost (HK$ Billion)	% of Overall Capital Cost
Civil works and stations 基礎建設及車站	6	50%
Railway E&M works and rolling stocks 鐵路機電工程及列車	3	25%
Depot 車廠	1	8%
KTTL 觀塘連接橋	2	17%

- Anticipated revenue unable to meet capital cost and operating/maintenance expenses
- Government may need to fund the capital cost and subsidize operation and maintenance deficits
- Relatively low quantifiable EIRR (i.e. about +1%)

Non-quantifiable Economic Benefits





- ✓ Enhance intra- and inter-district connectivity
- ✓ Uplift Kowloon East's tourism appeal
- ✓ Improve air quality
- ✓ Have catalytic effect on the regeneration of adjoining old districts and promoting a premier CBD in Kowloon East

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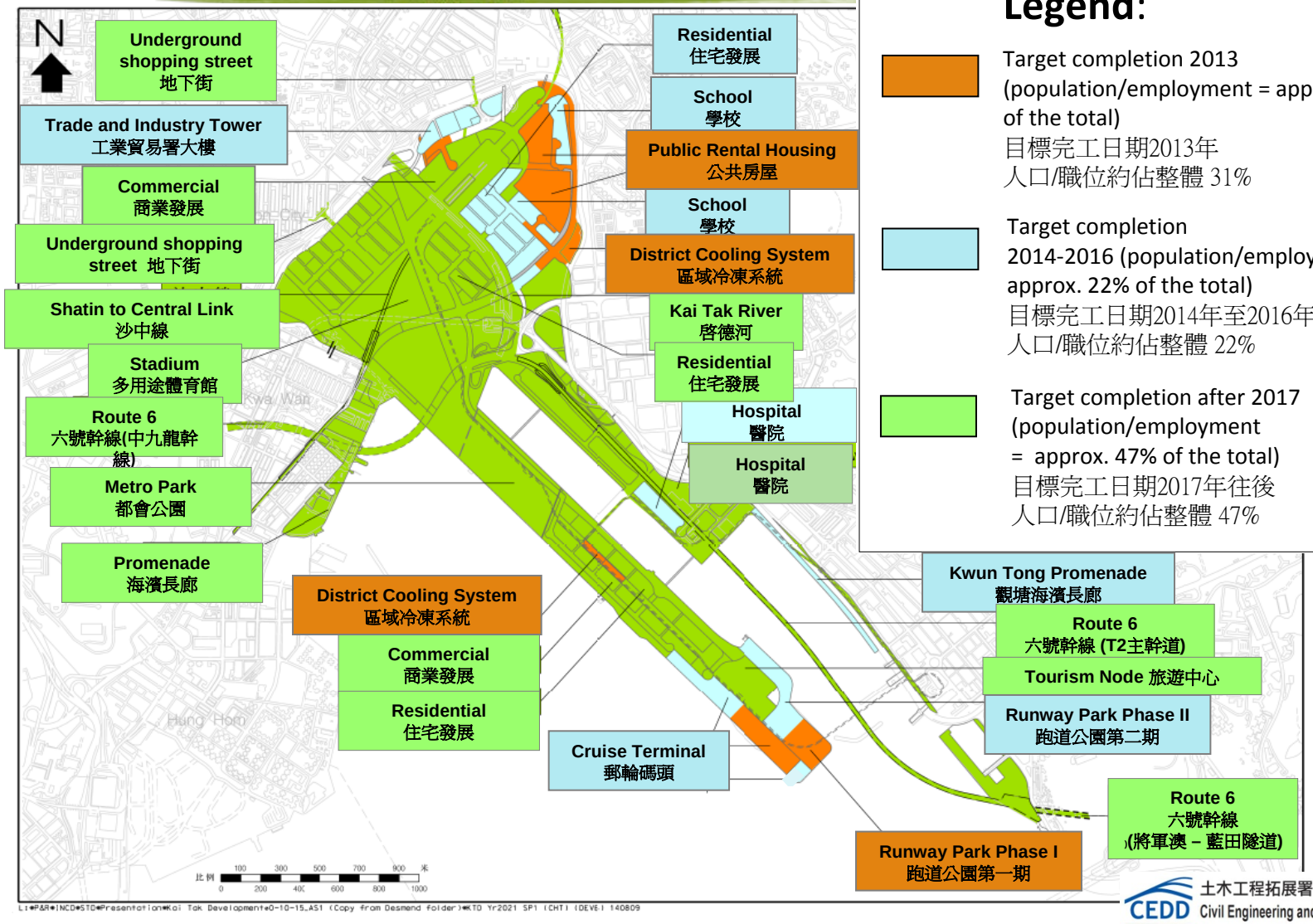
KTD Implementation Programme



Legend:

Target completion 2013 (population/employment = approx. 31% of the total)
目標完工日期2013年
人口/職位約佔整體 31%

Target completion 2014-2016 (population/employment = approx. 22% of the total)
目標完工日期2014年至2016年
人口/職位約佔整體 22%

Target completion after 2017 (population/employment = approx. 47% of the total)
目標完工日期2017年往後
人口/職位約佔整體 47%

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Road-based Green Public Transport

Ultra-low-sulphur diesel bus (Euro V Standard)
超低硫柴油巴士 (歐盟V期標準)

Supercapacitor Bus
超級電容巴士

Battery-electric Bus
電池電動巴士

Hybrid Bus
混合動力巴士

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Pros and Cons

Advantages:

- Lower capital cost and running cost
- Higher flexibility for route planning

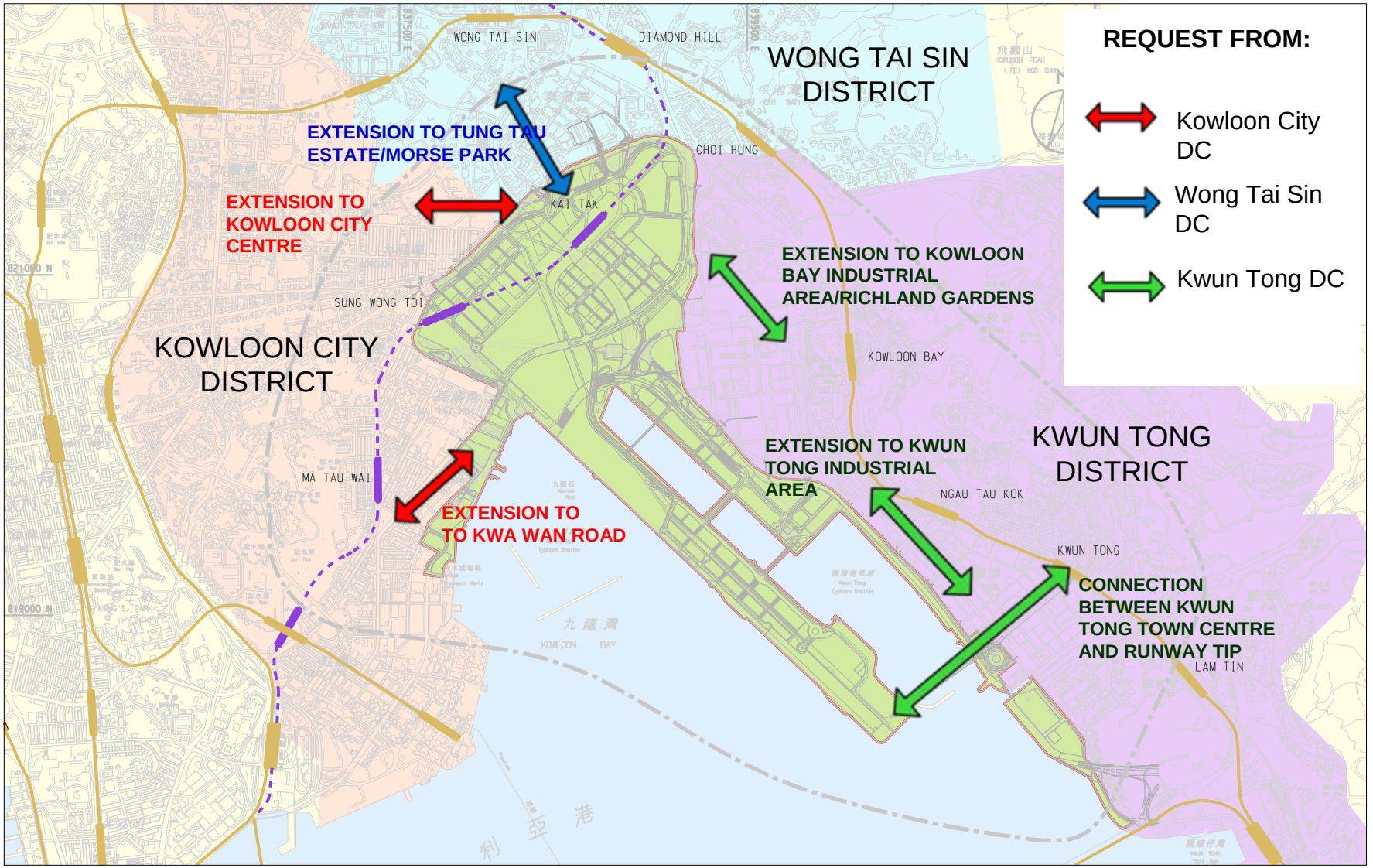
Disadvantages:

- Occupy/share road space ➔ pressure on busy roads in hinterland
- Potential traffic delay due to congestion
- Inferior to the rail-based EFLS in :
  - ① tourism appeal
  - ② carrying capacity
  - ③ convenient interchange with MTR lines
  - ④ synergy effects for developments
  - ⑤ visionary image of Kowloon East CBD

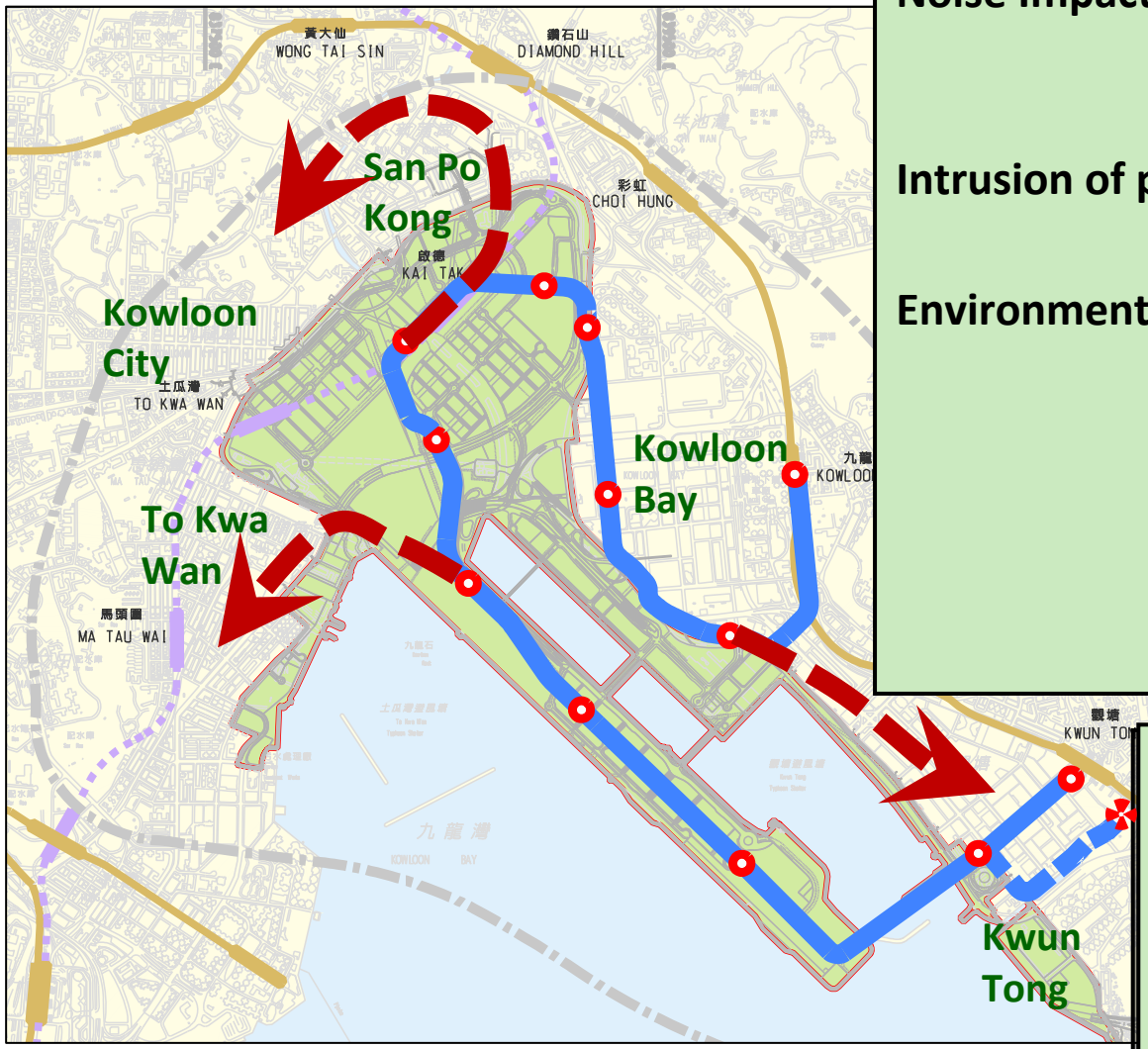
Comparison of Train Systems

	Monorail	Rubber-tyred APM
System		
Aesthetics	aesthetically more appealing	aesthetically less appealing
Min. turning radius	larger turning radius (46 m)	smaller turning radius (30 m) helps penetration into congested areas
Shared track arrangement	more suitable for simple alignment	more flexible and convenient for track sharing in multi-line services
Visual and other impacts	slim beam girder guideway; less visual impact and blockage to daylight/ventilation	a more bulky slab structure for mounting guideway; more severe environmental impacts
Evacuation	exit to emergency walkway at side	frontal/rear evacuation from train

DC's Requests on EFLS Extensions



EFLS Extensions to Hinterland



Considerations

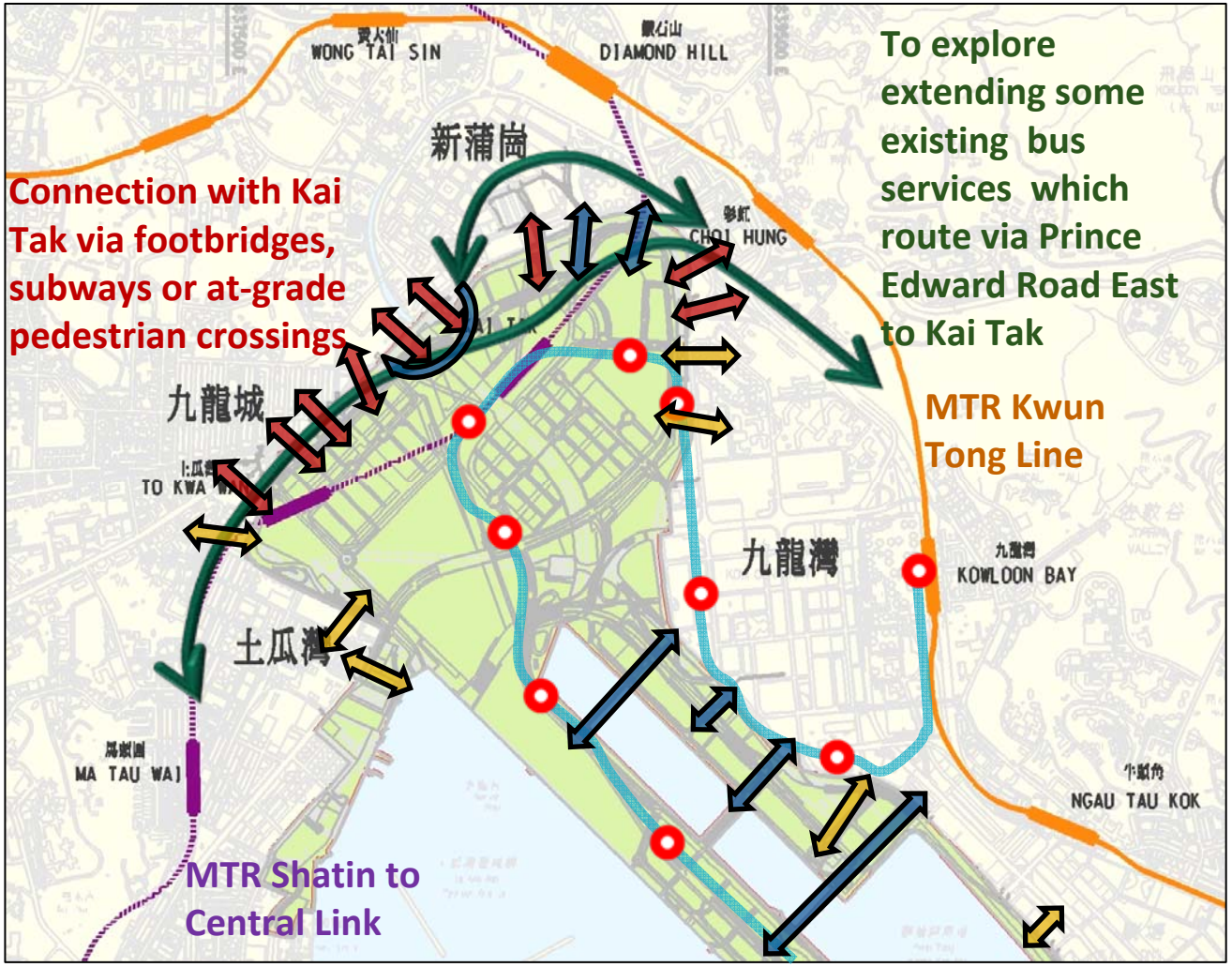
Noise Impact: Close proximity to some residential buildings, noise nuisance

Intrusion of privacy: concerns of residents of premises at track level

Environmental impacts : occupying narrow street , visual impact and blockage to daylight/ventilation

EFLS – a development strategy for Kowloon East CBD, not in line with the current planning intention for the land use in To Kwa Wan /Kowloon City

Connection via Pedestrian Facilities/Buses



Footbridge
Subway
At-grade pedestrian crossing
Bus service

Public Consultation Plan

Stage 1 Public Consultation : Understanding Concerns and Visions	
Tentative schedule	**Parties to be consulted**
Feb - Mar 2012	Kwun Tong, Kowloon City and Wong Tai Sin District Councils Local Vessels Advisory Committee Task Force on Kai Tak Harbourfront Development
Mar 2012	Kai Tak Newsletter and an EFLS website to disseminate the study findings and invite public views
Apr 2012	LegCo Panel on Development Meeting
Apr - Jun 2012	Concern/focus Groups, public engagement workshops, interested professional institutions
Stage 2 Public Consultation : Building Consensus on a Preferred Option	
late 2012	Report Stage 1 public consultation results and the preferred revised option to all stakeholders in Stage 1 public consultation exercise and Town Planning Board

Invite views on Key Issues

a) Alignment -

   1. overall network coverage
   2. alternative alignments in Kwun Tong
   3. need for KTTL

b) Locations/adequacy of stations

c) The long term role of road-based green public transport modes in Kowloon East

d) EFLS implementation timetable


Thank You