

九龍東環保連接系統

詳細可行性研究

中期公眾諮詢

Detailed Feasibility Study for
Environmentally Friendly Linkage System
for Kowloon East
Interim Public Consultation



7 June 2017



Study Background

2012-2014

- Public Consultation for PFS
- Public generally agreed that there was a need to enhance the connectivity in KE.
- However, there were diversified views on the proposed elevated monorail system, alignment, coverage and the implications for Kwun Tong Typhoon Shelter.



2017

The first stage of the DFS was completed and Interim Public Consultation is launched.

2015

Detailed Feasibility Study (DFS) is being conducted



Interim Public Consultation

Purpose :

To address the public concerns raised during the preliminary feasibility study regarding the selection of other suitable transport modes for Environmentally Friendly Linkage System (EFLS) in Kowloon East.

Interim Public Consultation till **2nd July 2017**



Connectivity Needs in Kowloon East



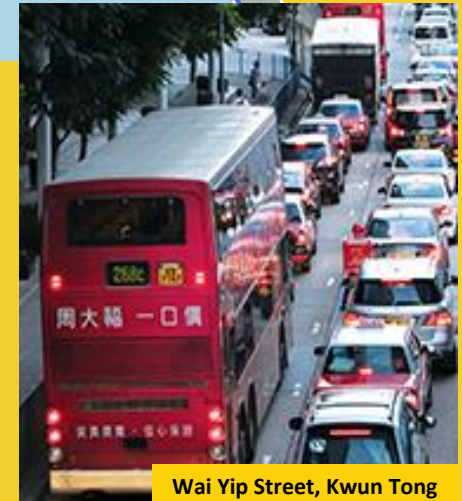
Muk Chui Street, Kai Tak



Kai Cheung Road, Kowloon Bay



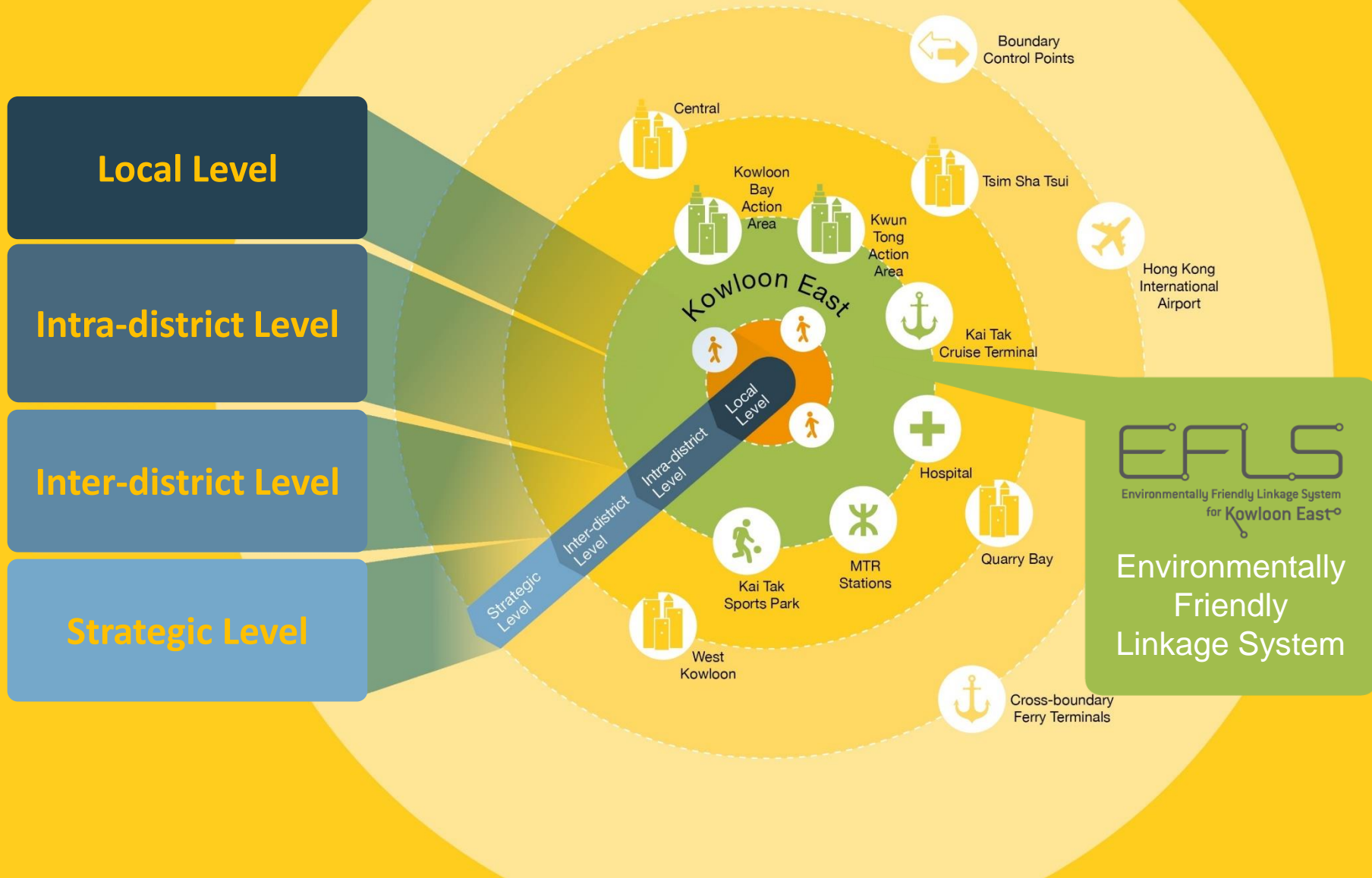
How Ming Street, Kwun Tong



Wai Yip Street, Kwun Tong



Connectivity Needs in Kowloon East



Connectivity Needs in Kowloon East

Commercial GFA sqm in CBD in KE

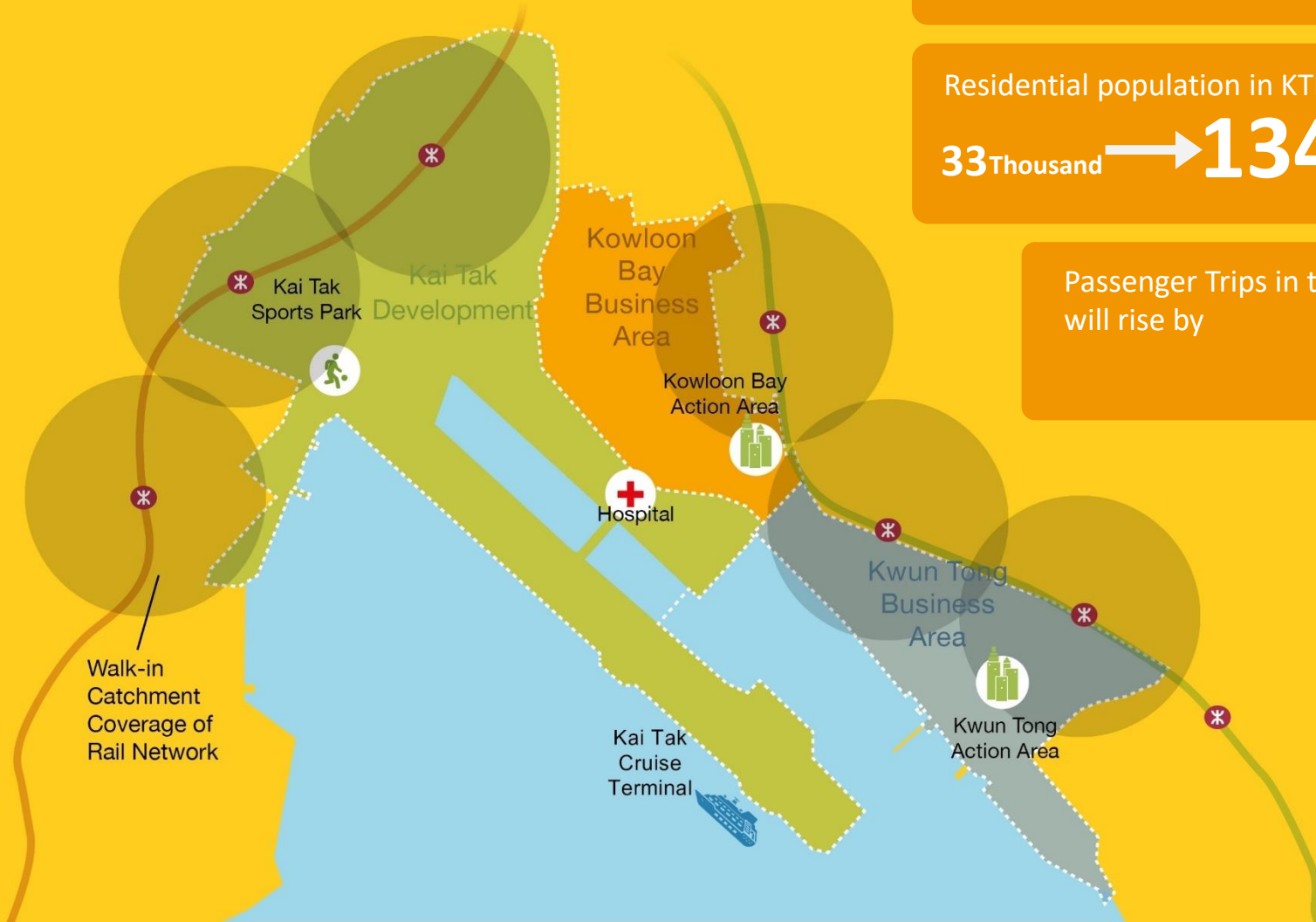
2.3 Million → 7 Million

Residential population in KTD

33 Thousand → 134 Thousand

Passenger Trips in the area
will rise by

1 fold



Visionary Criteria of EFLS for KE



Evaluation of Green Public Transport Modes



Visionary Criteria for EFLS



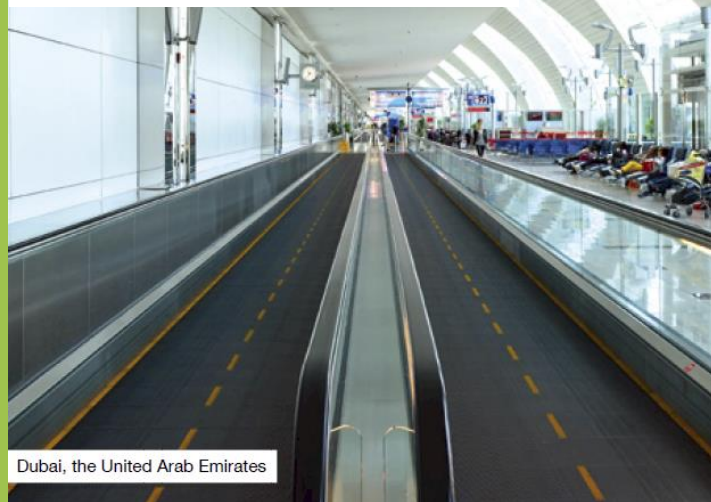
Evaluation of Green Public Transport Modes

Personal Rapid Transit (PRT)



Lower capacity

Travellator



Slow and for short-distance service



Long suspension period for maintenance

Cable Car



Service subject to weather conditions and long suspension period for maintenance



Slow



Lower capacity

Cable-liner



Lower flexibility in service



Evaluation of Green Public Transport Modes

Bus Rapid Transit (BRT)



Rio De Janeiro, Brazil

Monorail



Dubai, the United Arab Emirates

Modern Tramway (MT)



Brittany, France

Automated People Mover (APM)



Tokyo, Japan



Bus Rapid Transit (BRT)



Rio De Janeiro, Brazil

At-grade (dedicated)

Monorail



Dubai, the United Arab Emirates

Elevated

Modern Tramway (MT)



Brittany, France

At-grade (shared)

At-grade (dedicated)

Automated People Mover (APM)



Tokyo, Japan

Elevated



At-grade (Dedicated) / At-grade (Shared) System Assessment - **Benefits**

Bus Rapid Transit (BRT)



- Upgraded version of a conventional bus, length of vehicle can reach 24m.
- Segregated from other road transport, running on a dedicated corridor bus share same road space at junctions.
- Adopt prioritize traffic signal control, passengers pay fares before boarding, dedicated overtaking lanes and long station design to increase speed and system capacity.
- Low platform design, station is at-grade for easy boarding.
- No need to construct viaduct and less visual impact.

Modern Tramway (MT)



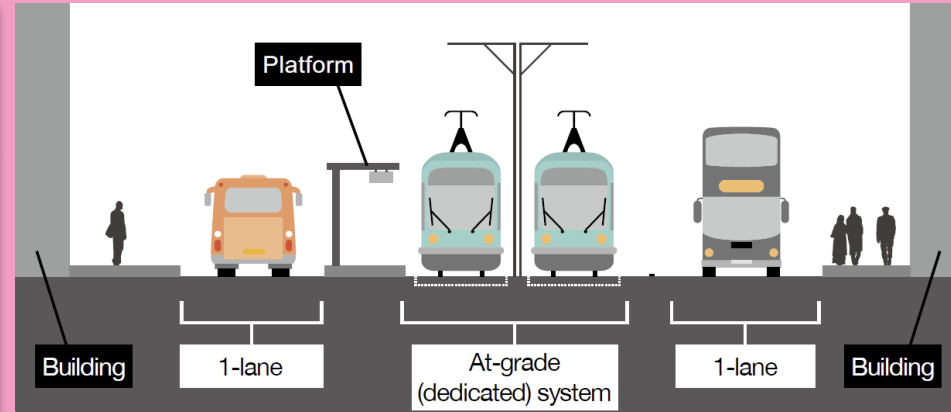
- Similar to the Light Rail.
- Runs on either dedicated or shared road corridor.
- Adopt prioritize traffic signal control to increase speed
- Low platform design, station is at-grade for easy boarding.
- New system can adopt the at-grade embedded power supply system.
- No need to construct viaduct and less visual impact.



At-grade (Dedicated) System Assessment - Limitations



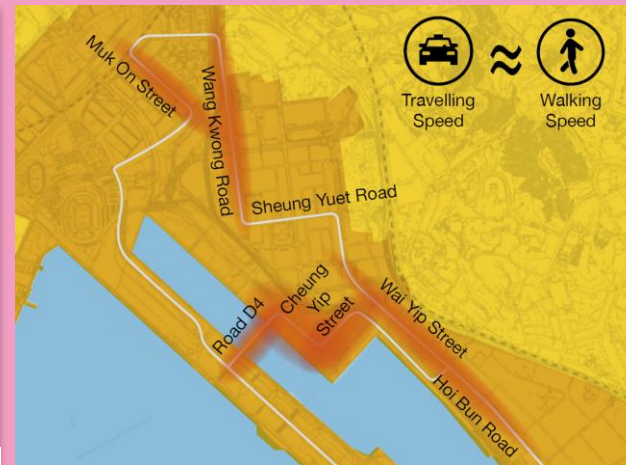
Need to completely relocate underground utilities underneath the dedicated corridor



At least one traffic lane per direction will be occupied, with more space needed at station locations



Additional pedestrian crossing facility at station, large-scale modification to all traffic lights along the corridor, system operated by drivers and the speed will be managed by the driver according to road conditions.



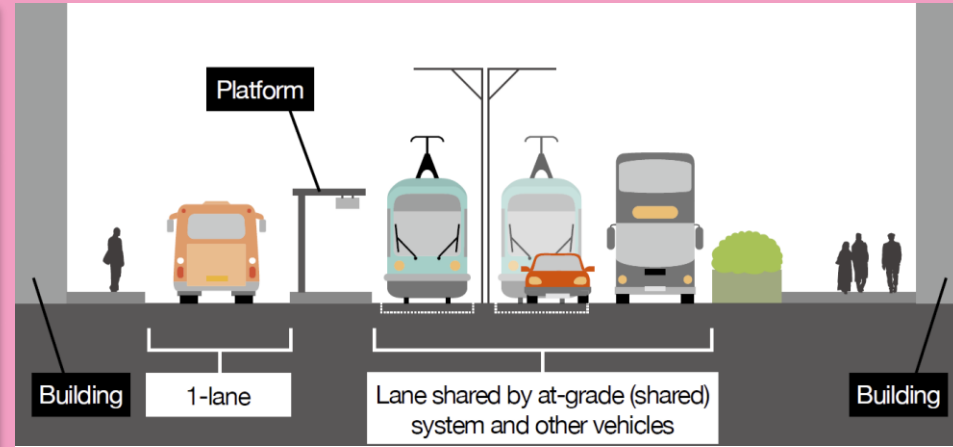
Reduction of traffic lanes of other vehicles and prioritization of EFLS to pass junction would increase the travel time of other vehicles significantly and affect the traffic.



At-grade (Shared) System Assessment - Limitations



Need to completely relocate underground utilities underneath the dedicated corridor



Share lane with other vehicles except at station areas being dedicated or system



Manual operated by drivers with no centralize system to control speed. The speed will be managed by the driver according to road conditions.



Subject to traffic conditions, the system would be operated under co-ordination with other vehicles. The advantage of travelling efficiency is not obvious and speed is comparable to other vehicles.



Elevated System – Benefits / Limitations

Monorail



Dubai, the United Arab Emirates

Benefits

- Operate on elevated dedicated corridor and segregated with other road traffic.
- Viaduct columns to be constructed at the central divider of carriageway
- Less impact on underground utilities.
- Speed controlled by centralized system, fully automated and driverless.
- Fast speed and reduce journey time
- Not affected by road traffic, with a reliable and on-time service

Automated People Mover (APM)



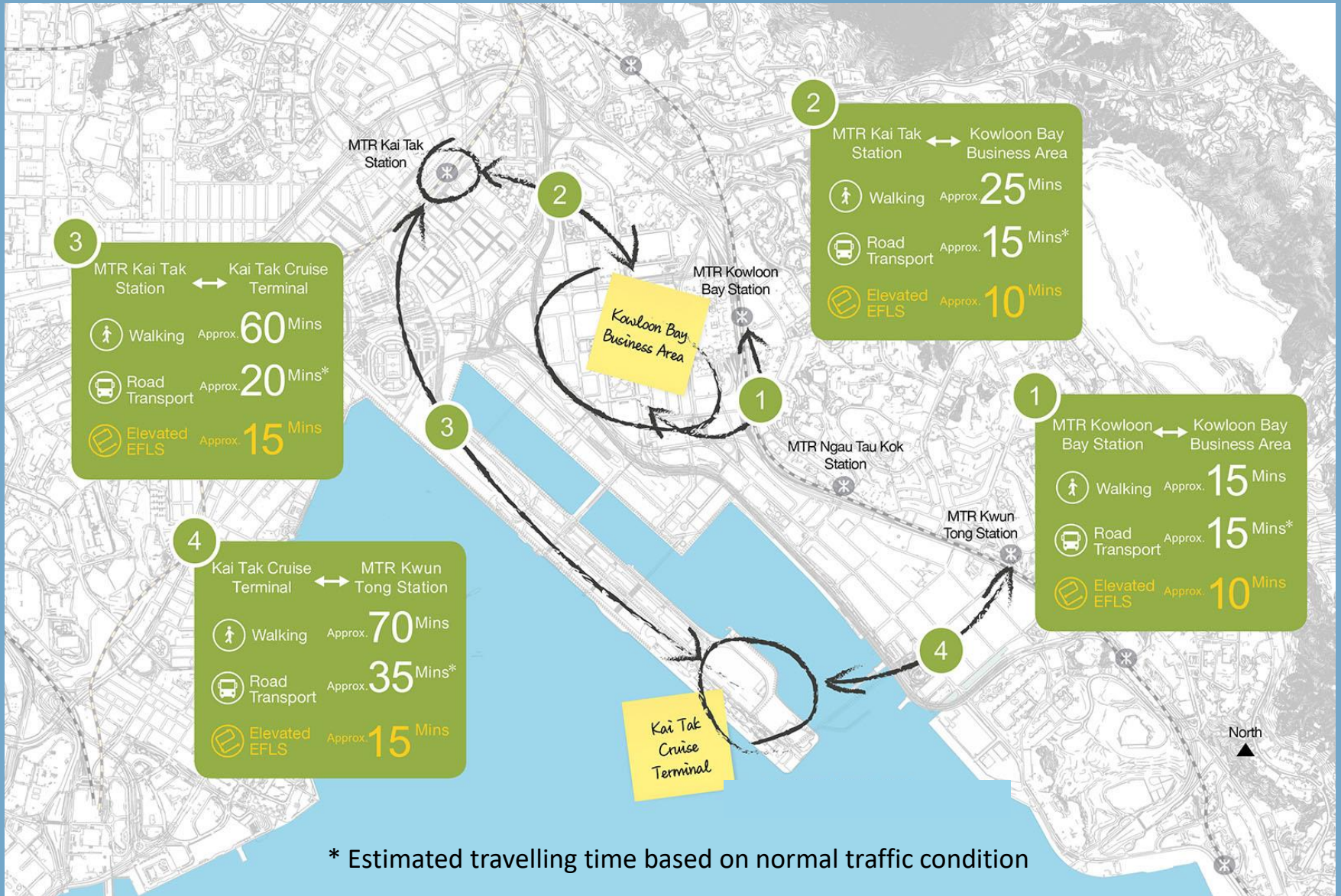
Tokyo, Japan

Limitations



























- Cost factor - Operates on viaduct, higher construction cost
- Environmental factor - May have visual impact



Travel Time Comparison



Evaluation of Green Public Transport Modes

Items for Detailed Assessment	Occupation of Existing Road Space	Impact on Underground Utilities	Modifications of Junctions, Traffic Signals and Pedestrian Facilities	Construction Cost	Travelling Time of All Passengers	Visual Impact	Overall Benefit
  <p>At-grade (dedicated)</p>	Considerable 	Extensive 	Large-scale 	Low 	Lengthened 	Minor 	Negative 
 <p>At-grade (shared)</p>	Moderate 	Extensive 	Localised 	Low 	Generally no change 	Minor 	Negative 
  <p>Elevated</p>	Moderate 	Localised 	Minor 	High 	Shortened 	Considerable 	Positive 



Evaluation of Green Public Transport Modes



At-grade
(dedicated)



At-grade
(shared)



Efficiency



Serious delay to other road users



Efficiency



Speed is comparable to bus and no obvious advantage of travelling efficiency, cannot reduce journey time effectively.



Reliability



System operated by drivers and shared lane with other vehicles. Subject to traffic conditions, the service frequency is not stable



Reliability



System operated by drivers and shared lane with other vehicles. Subject to traffic conditions, the service frequency is not stable



Sustainability



Serious delay to other traffic during construction and operation stage. The journey time of other road user would be increased.



Sustainability



Serious delay to other traffic during construction stage. Accidents during operation stage would also affect other traffic.



Evaluation of Green Public Transport Modes



Sufficient to cater for long-term traffic demand in Kowloon East



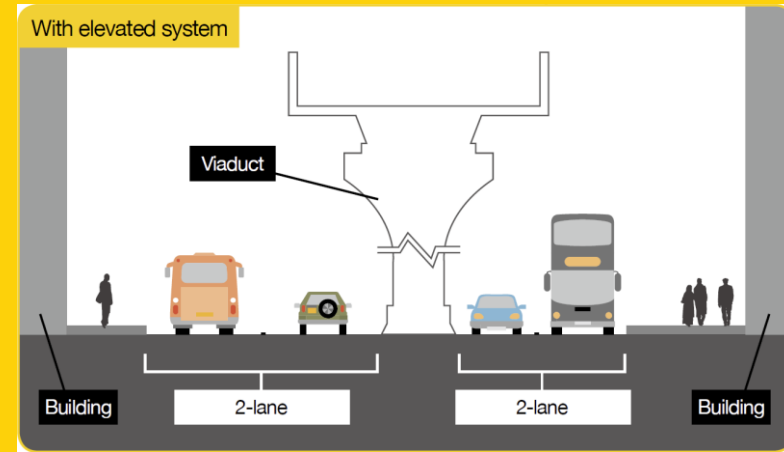
No interference with other traffic. Provide quick and time beneficial journey



Provide reliable and on-time service



Sustainable to environment and community development. Less impact during construction and operation stage



Evaluation Conclusion: Elevated System is the most suitable transport mode



Way Forward



Alignment study



Future extension design



Procurement approach



Operation plan



Locations and layout of
depot



Station locations and
connections



Cost and financial
analysis



Kwun Tong
Transportation Link
(KTTL)



Interim Public Consultation

- You are cordially invited to express your views by 2 July 2017 via mail, fax, e-mail or phone.
- You may refer to public consultation digest, project website and poster for more details.



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