



亞太區青年發展基金  
APAC Youth Development Foundation

6<sup>th</sup> July 2019

Mr. Simon H.W. Lau  
Chief Engineer  
Strategic Studies Division  
Transport Department  
The Government of the Hong Kong Special Administrative Region

Dear Mr. Lau,

### **Position Paper - Electronic Road Pricing Pilot Scheme in Central Core District**

Asia Pacific Youth Development Foundation (AYF) welcomed and appreciated the Transport Department's invitation earlier to a briefing and discussion session on the proposed pilot scheme of Electronic Road Pricing (ERP) in Central Core District. AYF is pleased to give our in-principle support to the pilot scheme.

#### Comments on the scheme

##### 1) Planning

Aside from this pilot scheme, AYF suggests that a long-term study and plan for ERP on Congestion Charge Scheme should be carried out.

In fact, we believe that a comprehensive study on Smart Mobility including the long-term plan for ERP on Congestion Charge Scheme, the prediction of future traffic flow, toll rationalisation of 3 cross harbour tunnels and other tunnels, future extension of congestion zone or establishment of other congestion zones, charging mechanism including the review of the mechanism, overall city's carbon emission target as well as many other Intelligent Transportation System (ITS) initiatives should be considered and contribute into a holistic solution for enhancing the mobility of Hong Kong.

##### 2) Technology

AYF suggests a more comprehensive technology study to be carried out to identify the feasibility on the use of other technologies which may be applicable to ERP, including but not limited to camera-based Automated License Plate Recognition (ALPR) or facial recognition,



or mobile app to replace RFID. Despite being a mature tool, RFID has been in use for over 20 years and there may be major disadvantages in the complexity and high cost incurred to install and maintain RFID boxes for all vehicles in town.

With reference to the below table, among the 5 cities which practise Congestion Charge, only Singapore (launched in 1998) is using RFID. The other cities which launched the scheme after Singapore adopted other technologies.

Location	Implementation Year	Pricing framework	Typical charge for cars	Traffic Volumes	Travel times	Environmental effects	Operating cost	Gross Revenue	Cost-Benefit Analysis	Technology
Singapore	1975 (technology change in 1998)	Charge per day, varied by time and location	1.9 CAD per passage	-44% (1975) and additional -10 to -15% when technology changed	Dynamic rates to maintain speeds between 45-65 km/h (Expressways) 20-30 km/h (other roads)	n.a.	16 million CAD/year	200 million CAD/year	63 million CAD/year	Paper license (1975) replaced by RFID in 1998
London	2003	Charge per day, additional charge for worst polluters	19.2 CAD per day	-16% all vehicles entering the zone, -30% chargeable vehicles, +25% busses, +13% taxis, +49% bicycles	-30% delays	CO2 -16.4%, NOx -13.4 %, PM10 -15.5% within the zone	170 million CAD/year	440 million CAD/year	140-190 million CAD /year	ALPR
Stockholm	2007	Charge per entry and exit, varied by time of day	5.3 CAD per passage, but max 15.9 CAD per day	-20 % across the cordon	-33% delays	CO2 -13%, NOx -8 %, PM10 -13% within the zone	25 million CAD/year	150 million CAD/year	100 million CAD/year	ALPR
Milan	2012 (replacing ECOPASS from 2008)	Charge per entry	7.4 CAD	-34% all vehicles (-49% of worst polluters)	-30% delays	CO2 -22%, NOx -10 %, PM2.5 -40%, PM10 -19.5%	34 million CAD/year	35 million CAD/year	20 million CAD/year	ALPR, DSRC
Gothenburg	2013	Charge per entry and exit, varied by time of day	3.3 CAD per passage, but max 9.1 CAD per day	-10% across cordon, -2.5% vehicle-km in Gothenburg region	-10% to -20% travel time reduction in corridors	CO2 -2.5% within the region of Gothenburg	30 million CAD/year	125 million CAD/year	2 million CAD/year	ALPR

Sources: Singapore Land Authority, Transport for London, Royal Institute of Technology, Swedish Transport Agency, Agenzia Mobilità Ambiente e Territorio, Comune di Milano, City of Gothenburg, CURACAO reports



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We understand that the existing use of RFID technology for Tseung Kwan O – Lam Tin Tunnel may have been the reason for choosing the same technology for this pilot scheme, however AYF would like to propose TD to conduct a further study on this front, to enable greater flexibility of the potential extension of the Congestion Charge scheme to a wider scope.

Yours sincerely,

Wilson Wong  
Founder and Chairperson  
Asia Pacific Youth Development Foundation

c.c. Secretary for Transport and Housing  
Commissioner for Transport  
Hon Frankie Yick, Member, Legislative Council