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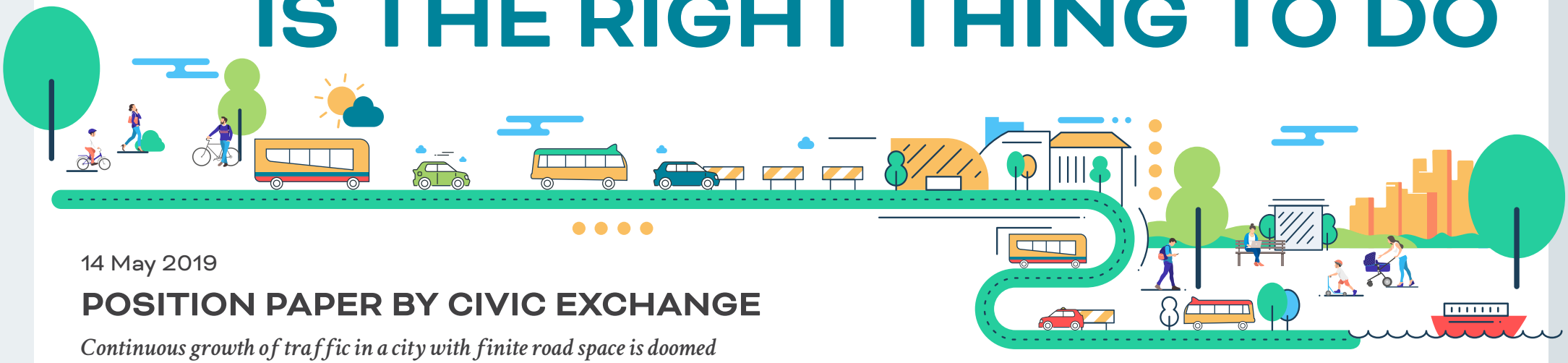
ELECTRONIC ROAD PRICING IS THE RIGHT THING TO DO



14 May 2019

POSITION PAPER BY CIVIC EXCHANGE

Continuous growth of traffic in a city with finite road space is doomed to fail. It can either fail when the situation gets so bad that citizens' patience runs out, or fades away as a bad memory through smart and proactive transportation policy.

A LONG TIME COMING

Electronic Road Pricing (ERP) has been up for discussion in Hong Kong since the 1980s. Hong Kong was very prescient and forward thinking back then when it was among the first in the world to see the potential in Electronic Road Pricing to keep people and goods flowing in urban environments. After more than 30 years, while ERP has failed to get implemented in Hong Kong, many major cities – equals to Hong Kong in influence and affluence - have gone ahead with ERP as a means to improve their citizens' quality of life through improved mobility. Here in Hong Kong, the traffic situation has, instead, worsened, and the need for active traffic management is now more urgent than ever before.

Because of this, Civic Exchange strongly supports the Government in its ambition to implement the Electronic Road Pricing Pilot Scheme in Central.

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PUT IN PLACE THE TOOLS THAT CAN ENABLE A MORE LIVEABLE HONG KONG

Travel Time Improvements, Air Pollution Reduction, Global Role Models

The core benefit of ERP is its proven[1] capability of enhancing the mobility of people in a traffic system, thus having a positive impact on the quality of life for the majority of a city's population. It achieves this by assigning a cost to road-users based on their individual impact on travel-time and air pollution. Currently, however, road usage is essentially governed solely by first registration tax and petrol tax to discourage ownership and usage of vehicles respectively. As these measures target all road users indiscriminately, ERP has been regarded as a complementary tool which targets specific areas that have the most severe congestion challenges.

- **ERP assigns the costs of congestion and pollution to the individuals responsible for creating them,** thus sparing a majority of road-users the costs incurred by a few. This "user-pays principle" is what positively improves travel times, while also reducing air pollution by a significant amount[2], which benefits all residents and visitors alike in the areas covered by ERP.

- **Internationally proven.** By now Hong Kong has been preceded in implementing ERP by major cities like London, Singapore, Milan, Stockholm, and most recently the planned implementation in New York – all of which are significantly more car-dependent than Hong Kong. This should give confidence to the Hong Kong citizens that ERP will bring benefits here as well. Studies[3] have also shown that initial resistance to ERP has subsided after implementation when the extent of benefits have become visible and that resistance has not been due to negative expectations on personal car usage but rather the belief that the improvements to congestion and environmental quality would not materialize.

1 Reports from Singapore, London (the United Kingdom) and Stockholm (Sweden) found that the number of chargeable vehicles entering the toll zone had reduced by 10–15%, 16% and 15% respectively at the early stage of the implementation of electronic road pricing systems.

2 Gibson & Carnovale (2015), 'The effects of road pricing on driver behavior and air pollution' Journal of Urban Economics, 89, 62-73; Viard & Fu (2011), 'The effect of Beijing's driving restrictions on pollution and economic activity', Journal of Public Economics, 125, 98-115

3 Harsman & Quigley (2010), 'Political and public acceptability of congestion pricing: Ideology and self-interest' Journal of Policy Analysis and Management, 29, 4, 854-74; Schuitema (2010), 'Priceless policies: factors influencing the acceptability of transport pricing policies', Doctor of Philosophy, Groningen, 111.

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PROMOTE MOVEMENT OF PEOPLE AND GOODS

Public Transport Improvements, Concrete Benefits, Performance Measures

Too often debates around transportation devolve into discussions about private cars and the needs of private motorists. But, more than 90% of Hong Kong citizens' vehicular mobility is fulfilled by public transport. Yet in areas like Central, 70% of traffic flow is attributable to private vehicles and only 10% to public transport. At the same time, how well our roads are doing at moving its citizens and goods around is still measured in the number of vehicles they accommodate, not by how many people or how much goods are in those vehicles.

- **ERP will be an important measure to safeguard the attractiveness of public transport.** Increased congestion disproportionally affects users of public transport, such as bus riders, by slowing down their journeys. This can also lead to negative feedback loops which put more people into private vehicles, further deteriorating the experience of public transport users.

- **Measure the right things.** ERP should be used to spearhead a shift in transportation planning in Hong Kong where road performance is measured in passenger-kilometres or tonne-kilometres instead of vehicle-kilometres. Simply put, success on our roads should be measured by how many people can smoothly travel on them, rather than how many cars can.

- **ERP revenue should be re-invested visibly in public transport and related infrastructure.** For the public at large, beyond just residents of Central, to see the benefits of ERP, we highly recommend proceeds from the ERP to finance improvements to franchised buses and public light buses going to, from, and through Central. This can be either improvements on services and/or improvements on infrastructure, such as public transport terminuses. Direct fare subsidies for travel through the Pilot Scheme area could also be considered. We encourage the Government to work with District Councillors to detail out specific proposals, thereby gaining the buy-in necessary for ERP.

- **ERP can make life easier for goods transporters as well,** by cutting down both travel and waiting times – increasing possible round trips in a day. ERP should also be used to incentivise goods transporters to use the roads outside of the main commuter peaks, further benefiting both goods and people movement.

- **Focus on the right things.** Additional parking spaces as a complementary measure with the introduction of ERP is a flawed concept. In fact, adding more parking spaces would induce additional demand for private cars to come into Central, countering the effects of the ERP. The real issue with parking in Central is induced by the discrepancy between parking cost of public and private car parks[4] as well as challenging enforcement – leading to a spurious notion in motorists that there is a lack of parking spaces.

DESIGNING A SUCCESSFUL ERP SYSTEM

Charge Levels, Safeguarding Privacy, Dynamic & Real-Time Pricing

The ERP Pilot Scheme is unlikely to be perfectly designed from the start, but the important thing is first to begin and then allow real-life factors to shape the design by making use of today's smart technology. At the same time, while technology can be flexible, the policy might not always be.

Thus, it is important that ERP is designed and implemented with a future in mind where life will be slightly different from today, requiring a slightly different set of ERP variables, for example regarding cost, operating hours etc.

- **Set the right price with a transparent fee structure.**

The cost level of the ERP charge is one of the key variables that the Government needs to present. The cost needs to be meaningful to achieve the envisioned benefits and the actual figure can be reached by calculating backwards from the concrete improvements to public transport that ERP should finance. Also, the fee structure should be simple to understand and cater to different road-users based on their individual impact.

Referencing from overseas experiences, namely London, Stockholm, and Singapore, the existing payment ranges from about HKD 3 to HKD 115. However, it is important to note that these prices are charged under different pricing schemes.

For instance, London charges a flat daily fee and hence the high price of about HKD 115, while Stockholm charges differently at different times of the day, but both cities charge the same regardless of vehicle type; whereas Singapore adopts an ERP scheme that considers vehicle type, location, and the time of the day.

4 Zhang (2019), "Hong Kong's lack of parking spaces is 'cause for concern' and only getting worse, Director of Audit says", available at https://bit.ly/2Ync5Sr

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A scheme prepared to adjust. In the case of Hong Kong, since the traffic situation changes due to many environmental and societal factors, the ERP system pricing should be variable and based on both real-time and historical traffic data – studies show that variable pricing is effective at spreading traffic out to avoid peaks, especially regarding private cars[5]. Further, we should not be looking at designing the perfect scheme, and instead, be prepared to make adjustments once the pilot scheme is implemented, depending on actual circumstances.

- **Privacy issues will always be an easy target for opponents of ERP to use if not taken seriously.** Although the technology proposed for the pilot scheme allows for privacy to be safeguarded, it is important that these measures are as transparent as possible to earn the public's trust. There are already highly successful methods in place in for example Singapore which safeguards road-users privacy and ensures that the ERP system is effective. By using pre-paid anonymous cards connected to an in-vehicle unit (IVU), only vehicles that fail to make payment will be photographed to recoup the foregone fee.

FOR A MORE LIVEABLE HONG KONG

As reflected in this position paper, Civic Exchange strongly supports the Government's plan to introduce the ERP Pilot Scheme in Central. The Scheme is of benefit to a vast majority of our fellow citizens, and brings significant economic, social, and environmental improvements to our city. It will also safeguard the competitiveness of Central as a highly efficient global business district.

To successfully achieve this, Civic Exchange recommends:

- **ERP should be used to improve public transport services.** The Government should launch a working group that works with each relevant district in how to use the funds to improve public transport services such as providing more choices and better frequency of bus routes and pedestrian facilities from the collection of funds. Furthermore, fare concessions could be offered to travellers opting for public transport through Central similar to the MTR Fare Savers.

5 Olszewski & Xie (2005) 'Modelling the effects of road pricing on traffic in Singapore', Transportation Research Part A: Policy and Practice, 39, 7-9, 755-72.

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- **Engage the winners, the public at large.** More can be done to engage the public to make sure that the voice of the silent majority that stands to benefit from the ERP is heard over the well-served voices of opponents. Engagement should be made on three levels. First, engage society through a publicity campaign explaining the benefits to them, with District Councillors and Legislative Councilors being partners through the process of co-creation in improving public transport services with the funds collected from the ERP. Secondly, form a task-force, made up by members of academia, NGOs, and industry to advise the Government. Finally, a champion is needed at the political level to usher the Scheme through the challenging legislative process. This should be an attractive pursuit as ERP is a rare political measure in that it will be of benefit to a vast majority of the electorate.

- **A holistic vision for a public transport-first city.** The ERP Pilot Scheme suffers from being presented as a piecemeal initiative rather than a part of an overall holistic vision for how the Hong Kong transport system should move in a sustainable direction for the benefit of its citizens. ERP is a key activity in preserving Hong Kong's world-class mobility that is firmly based in a public transport-first strategy. ERP is framed as a Smart City activity when it might fare better if it is instead positioned as a way to reduce externalities caused by private cars and illegal parking employing user-pay principles. It is crucial to notice that ERP can continuously evolve as a policy measure. In other words, the design parameters could be changed throughout the life of the ERP.

The ERP Pilot Scheme should be welcomed in Hong Kong because it will improve the mobility and quality of life of the vast majority of road-users, residents, and visitors in highly congested areas. Civic Exchange is currently carrying out a comprehensive sustainable transport study for Hong Kong with the express objective of tying in piecemeal activities like ERP into a larger whole of policy measures that can bring an attractive, affordable, and sustainable transport system to our city.

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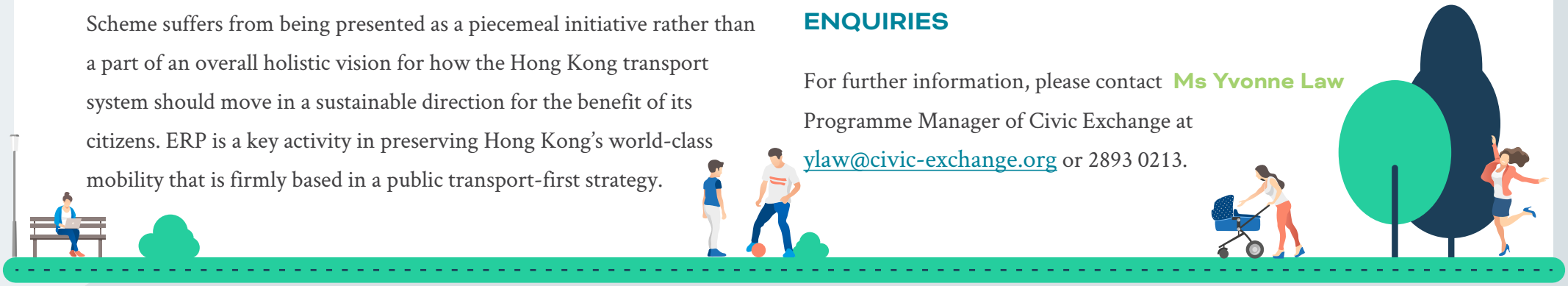
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