

A FAMILY-FRIENDLY LAND TRANSPORT SYSTEM

**Recommendations of the
Family-Friendly Transport Advisory Panel**

Submitted to

*Dr Lam Pin Min,
Senior Minister of State for Health and Transport*

on 30 April 2018

Supported by:



Contents

FOREWORD BY CHAIRPERSONS.....	3
FAMILY-FRIENDLY TRANSPORT ADVISORY PANEL	5
EXECUTIVE SUMMARY.....	7
BACKGROUND	12
METHODOLOGY AND PUBLIC CONSULTATION PROCESS.....	16
KEY FINDINGS & RECOMMENDATIONS	18
Theme #1: Greater Ease of Access for Families	18
Theme #2: More Family-Friendly Spaces	22
Theme #3 Promoting a Caring Commuting Culture.....	26
Theme #4: Mobility as a Service (MaaS)	32
CONCLUSION	38
ACKNOWLEDGMENTS	39

FOREWORD BY CHAIRPERSONS

Last year, the Family-Friendly Transport Advisory Panel was formed to engage stakeholders of our transport system on ways to make it more family-friendly and inclusive. We are heartened to see a high-level of political will and strong institutional determination to improve accessibility and make the transport system work for everyone, including families with special needs.

The Panel adopted a user-centric approach to review all aspects of a journey, from the first-mile to the last-mile. Our consultation covered public transport, taxis, private hire cars, cycling, and users of personal mobility devices. Over a 9-month period, we engaged more than 3,000 users of our transport system from all walks of life, from families with young children to families with seniors, from the highly mobile to the non-ambulant, from cyclists to families who drive their teenagers to school.

It gives the Panel great pride to note the significant strides made to date. Just to name a few, all MRT stations and bus interchanges are barrier-free, 96% of our public buses are wheelchair accessible (100% by 2020), foldable bikes and personal mobility devices are allowed on board public transport, parents can board public buses with open strollers, dual-speed escalators and travellators cater to commuters with reduced mobility, and more recently thematic train and stations raise awareness of autism. We are on the right track. As our families move through different life stages, from raising young children to caring for senior dependents, our transport system will have to evolve alongside these families.

This report will uncover the key challenges faced by these families on the transport system, on a daily basis. Anchored in feedback from the ground, evidence from local trials and best practices overseas, this report sets forth the recommendations based on 3 key principles (balanced, practical and cost-efficient) and 4 key themes. They are:

1. *Greater ease of access for families;*
2. *More family-friendly spaces;*
3. *Promoting a caring commuting culture; and*
4. *Mobility as a Service (MaaS).*

In line with Singapore's push towards a car-lite society and smart nation, while the Panel made recommendations on further infrastructure enhancements, our emphasis is on harnessing the power of social networks and assistive technologies to create a dynamic and caring commuting experience. Through a balance of hard physical enhancements with technological solutions, family-friendly policies and softer aspects of cultivating a caring commuting culture, the Panel is confident that the recommendations will lead to tangible improvements and positively transform the travel experience to one of ease and pleasant social interaction.

The overarching message is one of pride and optimism. Pride because we have done well in putting the right policies, infrastructure and services in place to create a more inclusive land transport system. Optimism because recent technology advancements and increasing willingness by civic groups and citizens to contribute to nation building have presented unprecedented opportunities for transport agencies and operators to co-create and co-deliver solutions to close the physical, information and attitudinal gaps in our transport system.

A seamless, delightful, family-friendly transport system will be a journey that the commuting public will take together with the Government and transport operators, as partners in transit.

Sitoh Yih Pin
Chairman,
Government Parliamentary
Committee for Transport

Richard Magnus
Chairman,
Public Transport Council

FAMILY-FRIENDLY TRANSPORT ADVISORY PANEL

In June 2017, the Government commissioned the Family-Friendly Transport Advisory Panel to consult relevant stakeholders on how Singapore's land transport system can be made more family-friendly. The formation of the Family Friendly Transport Advisory Panel marks a key milestone towards developing an inclusive land transport system for residents from all walks of life.

The Panel is co-chaired by Mr Richard Magnus, Chairman of the Public Transport Council, and Mr Sitoh Yih Pin, the Chairman of the Government Parliamentary Committee for Transport, and comprises members representing the key stakeholder groups, such as parents with young children, experts on seniors and disability issues, and academia.

In formulating its recommendations, the Panel was guided by 3 key principles:

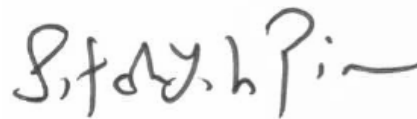
1. **Balanced** – Family-friendly transportation and accessibility issues are multi-dimensional problems. We gathered feedback from diverse segments of families like those with young children, special needs dependents, dependents who are seniors, as well as regular commuters. We also took into consideration the challenges faced by operators, government agencies, environmental constraints within the land transport system and trade-offs among the different user groups.
2. **Practical** – The Panel reviewed all the views surfaced by the different user segments as well as international best practices and translated them into actionable recommendations that will bring tangible benefits to transport system users.
3. **Cost-efficient** – The costs, benefits and trade-offs were considered to ensure the continued sustainability of the transport system and overall affordability for all.

This Report presents recommendations to fulfil the vision of a more accessible, family-friendly and inclusive transport system, transforming our land transport system from a vehicle that moves strangers from Point A to Point B, to a vibrant space that fosters social inclusion, and enables access to opportunities and aspirations in life. It is time to re-imagine our land transport system, shifting the focus from individual modes and nodes, to mobility, co-creation, and cultivation of a caring commuting culture for families.

The Panel gives our full support to the recommendations outlined in this Report.



Mr Richard Magnus, Chairman of Public Transport Council.



Mr Sitoh Yih Pin, Chairman of the Parliamentary Committee for Transport.



Ms Anita Fam, Vice President, National Council of Social Service.



Dr Mathew Mathews, Senior Research Fellow, Institute of Policy Studies, LKY School of Public Policy.



Ms Rahayu Mahzam, Member of Parliament for Jurong GRC and a new mother.



Mr Samuel Ng, Chief Executive Officer, Montfort Care.



Mr Steven Teo, father representative.



Ms Lu Jia Hui, mother representative.

EXECUTIVE SUMMARY



This Report from the Family-Friendly Transport Advisory Panel sets out the key challenges faced by families of diverse needs in Singapore and the tangible actions we can take collectively to make our land transport system more inclusive and family-friendly.

The Panel reached out to more than 3,000 users of our transport system and conducted an extensive public consultation exercise through in-depth interviews, focus group discussions, REACH listening points, and an online survey to gather insights for the recommendations in this Report. Diverse segments were consulted, including families with young children, families who drive secondary school children to school, families with members who are wheelchair users, families who cycle and use personal mobility devices (PMDs), families with special needs members, and seniors who travel independently.

The scope of review extended beyond public transport to include on-demand, active and shared modes (i.e. private hire cars, bicycle and personal mobility devices) and focused on door-to-door mobility, including the first-mile and last-mile in order to move Singapore towards a car-lite society.

Guided by **3 key principles** (balanced, practical and cost-efficient), the Panel has drawn up **22 recommendations** based on the **4 key themes**:

1. *Greater ease of access for families;*
2. *More family-friendly spaces;*
3. *Promoting a caring commuting culture; and*
4. *Mobility-as-a-Service (MaaS).*

Overview of Recommendations

Greater ease of access for families

1. Allow rear door tapping for open strollers;
2. Enhance awareness of rear-door boarding and tap-in through public education and training of bus captains;
3. Install user-friendly stroller restraint systems on public buses;
4. Enhance training for bus captains to drive nearer to the kerb when boarding and alighting seniors and semi-ambulant commuters;
5. Introduce features that will make public buses more accessible for seniors (e.g. limiting the height of steps, use of assistive devices);
6. Develop system maps and transport applications showing availability of family-friendly features e.g. nursing room, changing facilities, exit with lift;
7. Introduce more way-finding signage to guide parents to nursing room and diaper changing facilities;
8. Update websites and transport applications showing scheduled and unscheduled lift maintenance;
9. Provide information on barrier-free taxi stands and boarding/alighting points on transport applications;
10. Set policy that all new taxi stands should be barrier-free'; and
11. Assess the demand and feasibility of providing more shelters at bicycle/scooter parking stations at the MRT stations.

Overview of Recommendations

More family-friendly spaces	<ol style="list-style-type: none"> 12. Provide more space for wheelchair users and open strollers: At least 2 wheelchairs or 1 wheelchair and 1 open stroller space on buses; 13. Provide a quiet room at MRT stations, Bus Interchanges and Integrated Transport Hubs for commuters with special needs and increase awareness that commuters may seek waiver of fines with station staff when they exceed the time limit due to special situations; 14. Raise awareness and facilitate co-creation between government and stakeholders for physical or virtual training facilities or a space that allows all children with special needs to familiarise themselves with the transport system prior to travelling on public transport; and 15. Design a family-themed cabin during school holidays (full day), enhance public education and signage to allow priority boarding for families.
Promoting a caring commuting culture	<ol style="list-style-type: none"> 16. To adopt a multi-pronged, multi-layer approach (Whole-of-Government – Community – Schools – Home) to cultivate a caring commuting culture; 17. Develop Standard Operating Procedures (SOPs) with operators to help commuters with special needs especially during train service disruptions. We should also equip commuters with tangible tips on how to keep a look out for commuters with special needs who may need help especially during train service disruptions, and the proper etiquette of offering support and help.

¹ Currently, 95% of pedestrian walkways, access to MRT stations, taxis and bus shelters, and all major public roads are barrier free.

Overview of Recommendations

	<ol style="list-style-type: none">18. Enhance SOP to specify protocol for helping motorised and non-motorised wheelchair users to board or alight from public buses. In addition to services offered by bus captains, in the spirit of promoting a caring commuting culture, practical tips on how fellow commuters can offer support to persons in wheelchairs can also be disseminated.19. Cultivate a caring commuting culture towards persons with invisible disabilities through public education; and20. Extend priority seats to commuters with invisible disabilities, such as persons with long-term physical, mental, intellectual or sensory impairments.
Mobility-as-a-Service (MaaS)	<ol style="list-style-type: none">21. Explore the scope of MaaS beyond integration of transport modes (public transport, bike sharing, car sharing, e-scooter sharing) to include complementary services and features e.g. medical escort and navigation guide; and22. At the macro-level, the Government to review options to ensure open availability and interoperability of transport data to create and safeguard a favourable MaaS growth environment.

BACKGROUND

As the profiles and needs of families in Singapore change across life stages, it is important that our land transport system evolves alongside these families to ensure Singaporeans of all mobility levels are able to access our transport system with ease and capture opportunities as integral members of society.

In the last decade, the Singapore resident population has grown older due to lower fertility rates and rising life expectancy². By 2030, 1 in 4 Singaporeans will be aged 65 and above³ (refer to Figure 1). Resident life expectancy also rose from 80 years in 2006 to 83 years in 2016. An accessible transport system and environment is an important complement to ageing-in-place, enabling seniors to be engaged in their community and to lead active independent lives.

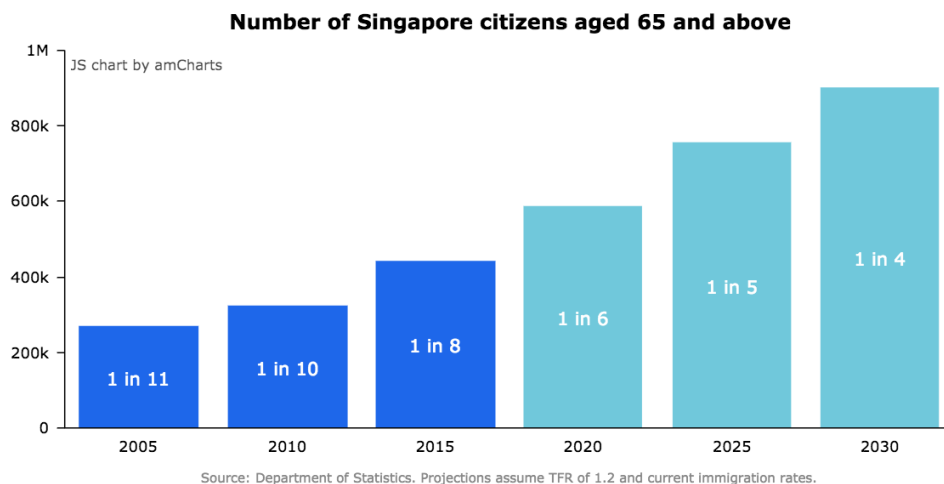


FIGURE 1 PROJECTION OF SINGAPORE CITIZENS AGED 65 AND ABOVE

To enhance the inclusiveness of our public transport, the Panel also consulted persons with disabilities and families with members affected by Autism Spectrum Disorder (ASD). Persons with sensory (visually impaired, and Deaf

² Department Statistics Singapore. (April 2018). *Age Pyramid of Resident Population*. Retrieved from <https://www.singstat.gov.sg/statistics/visualising-data/storyboards/population-trends>

³ Population.sg. (22 August 2016). *Older Singaporeans to double by 2030*. Retrieved from <https://www.population.sg/articles/older-singaporeans-to-double-by-2030>

and Hard-of-hearing) and physical disabilities constitute half of the disability group⁴ in Singapore (refer to Table 1).

TABLE 1 PREVALENCE OF PERSONS WITH DISABILITIES IN SINGAPORE⁵

Population Group	Approximate prevalence rate
Student population	2.1% of student population
18 – 49 years	3.4% of resident population
50 years and above	13.3% of resident population

While the actual number of families with members affected by the ASD is unknown, data from healthcare institutions reported an increase⁶ in the number of Singaporean children diagnosed with ASD. The incidence rate is estimated to be at 1 in 150 children⁷ (refer to Figure 2). The Autism Resource Centre (Singapore) estimated that there are about 200 cases of newly diagnosed children with autism annually. In Singapore, about 50,000 individuals have autism, and 11,500 are under the age of 19 years⁸.

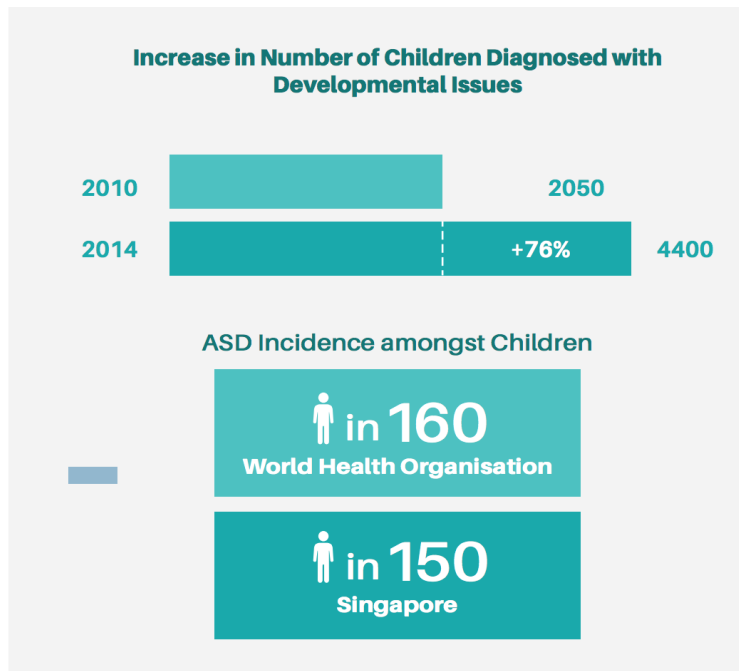
⁴ Retrieved from <https://www.msf.gov.sg/media-room/Pages/Number-and-profile-of-persons-with-disabilities.aspx>

⁵ Ministry of Education and National Council of Social Service (as cited in 3rd Enabling Masterplan 2017 – 2021). Retrieved from https://www.ncss.gov.sg/NCSS/media/NCSS-Documents-and-Forms/EM3-Final_Report_20161219.pdf

⁶ KK Women’s and Children’s Hospital and National University Hospital (as cited in 3rd Enabling Masterplan 2017 – 2021). Retrieved from https://www.ncss.gov.sg/NCSS/media/NCSS-Documents-and-Forms/EM3-Final_Report_20161219.pdf

⁷ Institute of Mental Health. (2018). *Autism Spectrum Disorder*. Retrieved from <https://www.imh.com.sg/clinical/page.aspx?id=250>

⁸ Autism Resource Centre (Singapore). 2018. *Prevalence of Autism in Singapore*. Retrieved from <http://www.autism.org.sg/living-with-autism/prevalence-of-autism-in-singapore>



Sources: KK Women's and Children's Hospital, National University Hospital

FIGURE 2 AUTISM SPECTRUM DISORDER (ASD) INCIDENCE AMONG CHILDREN IN SINGAPORE⁹

A more family-friendly transport system will not only enable access to healthcare and education for these individuals, but also foster social inclusion and empower them to become integral and contributing members of our community.

In the last 10 years, substantial progress has been made to deliver a family-friendly transport system. Today, all MRT stations and bus interchanges are barrier-free, 96% of our public buses are wheelchair accessible (100% by 2020), foldable bikes and personal mobility devices are allowed on board public transport, parents can board public buses with open strollers, there are dual-speed escalator and travellers to cater to commuters with reduced mobility, and more recently thematic train and stations help to raise awareness of autism (refer to **Annex A**).

⁹ As cited in 3rd Enabling Masterplan 2017 – 2021. Retrieved from https://www.ncss.gov.sg/NCSS/media/NCSS-Documents-and-Forms/EM3-Final_Report_20161219.pdf

Public transport operators have also pro-actively introduced a series of commuter-centric initiatives to improve commuter experience. Some examples of the initiatives include:

- Stickers available for commuters like expectant mothers, seniors and commuters who are unwell to indicate that they need a seat in the train;
- Ambassadors to proactively inform parents with strollers to use the lift instead of the escalators;
- Collaboration with a special needs school to produce educational videos to teach individuals with special needs how to take public transport; and
- Learning journeys to senior care centres for bus captains to allow them to better understand the mobility challenges faced by seniors.

For shared and active transport modes to be attractive alternatives to personal ownership of vehicles for the public, it is imperative that we look beyond just focusing on building a reliable public transport system. We also need to address the gaps between modes, accessibility at key transport nodes, and the first-mile and last-mile in order to make travel experience seamless and delightful. In addition to removing physical barriers, we should harness more transit related data, leverage on assistive technologies and devices to enhance travel experience and better inform travel decision.

METHODOLOGY AND PUBLIC CONSULTATION PROCESS



23 Focus Group Discussions

6 In-depth Interviews

116 Responses



2,194 Responses



5 Listening Point Sessions
at 5 Bus-interchanges

746 Responses

We Reviewed

In preparation for the public consultation exercise, the Panel reviewed best practices overseas and existing family-friendly features within our land transport system, as well as initiatives undertaken by transport operators and other agencies (refer to **Annex A**). Some of the local and overseas examples considered and adapted for our recommendations include the Tube Map showing family-friendly and accessibilities information by Transport for London¹⁰, Safe Journey card by First Bus – Greater Glasgow¹¹, Mobility as a Service schemes in Europe (e.g. Mobility 2.0 services by MobiPalma, Whim, UbiGo,), etc.

We Consulted

Prior to developing our recommendations, the Panel carried out an intensive public consultation exercise involving more than 3,000 users of our transport system with different profiles over a 9-month period (July 2017 – March 2018) to better understand the challenges, commuting experiences and needs of families. The profiles consulted were:

¹⁰ Retrieved from <http://content.tfl.gov.uk/toilets-map.pdf>

¹¹ Retrieved from <https://www.firstgroup.com/greater-glasgow/plan-journey/safe-journey-card>

1. *Families with young children;*
2. *Families who drive secondary school children to school;*
3. *Families with members who are seniors;*
4. *Families with members who are wheelchair users;*
5. *Families with members who have special needs;*
6. *Seniors who travel independently;*
7. *Families who cycle and use personal mobility devices; and*
8. *Regular commuters.*

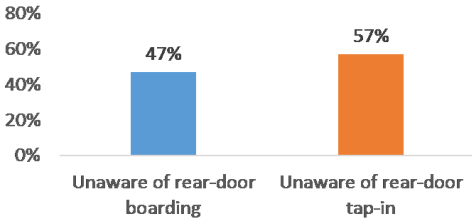
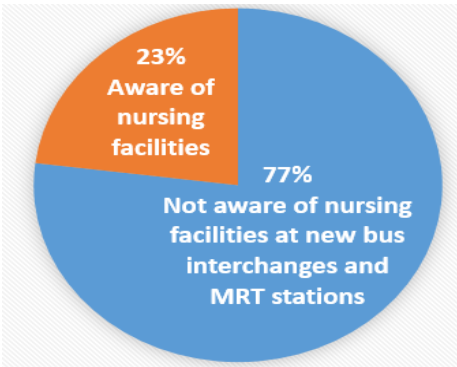
KEY FINDINGS & RECOMMENDATIONS

Through a triangulation of the feedback from our diverse modes of engagement, our findings and recommendations have been distilled into 4 themes.

Theme #1: Greater Ease of Access for Families

While we have made significant improvements to our transport system to enhance its accessibility for families with special needs, more can be done to provide greater ease of access, especially for families with young children, wheelchair users and seniors (refer to [Table 2](#) for challenges and suggestions).

TABLE 2 EASE OF ACCESS - KEY CHALLENGES/ SUGGESTIONS

Families with young children							
<p>a. Difficulty boarding the front of buses with open stroller.</p>	<p><i>“Open strollers as well. But if I am alone I find it very difficult - that one is part of negative side. Because if you are alone you are pushing the stroller there is a gap between the door and when you board the bus and it’s difficult for me to bring up the stroller.”</i></p> <p>Percentage of respondent unaware of rear-door boarding and tap-in when travelling with stroller</p>  <table border="1"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Unaware of rear-door boarding</td> <td>47%</td> </tr> <tr> <td>Unaware of rear-door tap-in</td> <td>57%</td> </tr> </tbody> </table>	Category	Percentage	Unaware of rear-door boarding	47%	Unaware of rear-door tap-in	57%
Category	Percentage						
Unaware of rear-door boarding	47%						
Unaware of rear-door tap-in	57%						
<p>b. Lack of awareness of the option to request for rear-door boarding and tap-in with an open stroller.</p>	 <table border="1"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Aware of nursing facilities</td> <td>23%</td> </tr> <tr> <td>Not aware of nursing facilities at new bus interchanges and MRT stations</td> <td>77%</td> </tr> </tbody> </table>	Category	Percentage	Aware of nursing facilities	23%	Not aware of nursing facilities at new bus interchanges and MRT stations	77%
Category	Percentage						
Aware of nursing facilities	23%						
Not aware of nursing facilities at new bus interchanges and MRT stations	77%						
<p>c. Concern about safety of unsecured stroller on buses.</p>							

- d. Lack of awareness and difficulty in finding nursing facilities at new bus interchanges and MRT stations.

“Of course now you can leave the stroller open in the bus it is good but actually there is no place to secure the stroller, so it can be maybe dangerous for the child. Even when you carry your child and leave the pram there, you still have to take care of it otherwise it will hurt people. There is no facility for that.”

Wheelchair users

- e. Difficulty getting to and from the MRT platform if the lift breaks down or is under maintenance.

“If the lift spoil then a bit difficult. That time my helper sends my boy to school, then at Queenstown MRT and the lift spoil, then my helper went to the control station and they will get people to help carry him.”

- f. Although the taxi stands or boarding/drop-off area may be barrier-free, sometimes wheelchair users are unable to board or alight due to space constraints (single lane) where they are unable to park the wheelchair parallel to the taxi, and board the vehicle.

Seniors/Families with members who are seniors

- g. Challenges when boarding and alighting buses by semi-ambulant seniors with leg or knee pain as the step into the bus is too high when the bus has stopped too far from the kerb.

“As they have weak legs, it is not easy for them to board and alight the bus especially when there is a gap between the kerb and bus. The bus does not always stop near the kerb.”

- h. Steps at the back of the bus, from the gangway to the seat are too high.

- i. Lift located too far away from entrance of MRT station¹².

¹² The Panel notes that currently, when designing a new station, the following design principles will be considered for lift location:

Families who cycle and use personal mobility devices

- j. Families who cycle/use PMD commented that having shelters at the bicycle/PMD parking stations at MRT stations would make it more convenient for their children to travel by bicycle/PMDs for the first mile journey to the MRT.

“Now my son is in JC1. He started using a skate scooter. He will skate to Tan Kah Kee MRT, park his scooter.... He lost his skate scooter. Got stolen... Because of that, it has deterred him from skating to Tan Kah Kee station. Now I go back to sending him to Tan Kah Kee station... Proper designated parking has no shelter. He decided to park within pavilion not properly designated with shelter.”

In response, the Panel recommends the following in view of the key findings highlighted in Table 2:

#1 Recommendations: Greater Ease of Access for Families

Buses (Families with young children)

1. To allow rear door tapping for open strollers that board at rear door;
2. Enhance awareness of rear-door boarding and tap-in through public education and training of bus captains; and
3. To install user-friendly restraint systems in public buses for open strollers.

Buses (Seniors and semi-ambulant commuters)

- **User Friendliness**, i.e. Direct and logical routes from fare gates to platform and logical commuter flow. LTA also considered the shorter tactile route from cabin to lift at platform. Lastly, convenience to take 2nd lift if 1st lift breaks down are also considered.
- **Avoid impediment to commuter flow**, i.e. ensure better distribution of commuters and prevent over-crowding at platform or concourse; and
- **Legibility and way-finding**, i.e. clear line of sight from fare-gates to lifts and vice versa (using lifts as a way-finding element)

4. Enhance training for bus captains to drive nearer to the kerb; and
5. Introduce features that will make public buses more accessible for seniors, such as limiting the height of steps, and leveraging on technology and assistive devices to inform driving behaviours (i.e. alert driver to drive closer to kerb when seniors are alighting or boarding the buses).

Enhance Quality and Timeliness of Information

6. System maps and transport applications showing availability of nursing room, changing facilities, exit with lift etc.;
7. More way-finding signage to guide parents to nursing room and diaper changing facilities;
8. Update websites and transport applications showing scheduled and unscheduled lift maintenance.
9. Provide information on barrier-free taxi stands and boarding/alighting points on transport applications.

Enhance Physical Accessibility

10. Set policy that all new taxi stands should be barrier-free¹³; and
11. To assess the demand and feasibility of providing more shelters at bicycle/scooter parking stations at the MRT stations¹⁴.

¹³ Currently, 95% of pedestrian walkways, access to MRT stations, taxis and bus shelters, and all major public roads are barrier free.

¹⁴ The Active Mobility Panel has commenced its public consultation to review the rules and code of conduct for cycling and the use of PMDs. Hence, the feedback gathered from our consultation will be directed to that panel for their consideration in the review.

Theme #2: More Family-Friendly Spaces

Mobility, being able to travel together as a family or independently, is one key element of social engagement in Singapore. Providing more family-friendly spaces on public buses and trains, and at stations and interchanges will allow families with different needs to share the spaces on our transport system.

Table 3 highlights the key challenges and suggestions from the families with regard to transport facilities and spaces.

TABLE 3 MORE FAMILY-FRIENDLY SPACES - KEY CHALLENGES/ SUGGESTIONS

<p>Wheelchair users and parents with young children</p> <p>a. Currently, with only one space for wheelchair, some may have to wait for the next bus.</p> <p><i>“Mom is in a wheelchair. If bus already have 1 wheelchair in the bus, have to wait for another round. If another bus also have, have to wait 2 – 3 times before boarding... A lot of times, it is a challenge to wait for many many many times.”</i></p> <p>b. When there is a wheelchair on-board, parents are unable to board with open stroller.</p>
<p>Families with members who have special needs</p> <p>c. For commuters with special needs (e.g. ASD), sensory overload can trigger meltdown. Commuters suggested having a quiet space at bus interchanges and MRT stations for people with autism to retreat when they have a meltdown. They also highlight that sometimes they might exceed the time limit to exit the train station in special situations like this.</p> <p><i>“I think trains are very noisy and dark and close and emotionally scary. I have sensory issues and challenges, in that I hear, see and sense a lot more things than what other people feel. It makes me feel so overwhelmed by so many things, lights, sounds, and even smell of static electricity. Some of us may even smell or feel that. It’s very overwhelming.”</i></p>

“You all may want to consider to have a quiet room but security is the concern. The second one is awareness. Then if our child too long in the train station because of the melt down or whatever, you must give a bigger allowance for those. Don’t straight tap, kena (get fined for exceeding the time limit).”

- d. Families with special needs suggested having training facilities or space for children with autism to learn how to take public transport, which will help them travel independently.

“Is there perhaps a training facility for autistic kids, to try public transport on their own? So when they grow up to old enough, then maybe, like 10 years old, like a safe training facilities. Of course not real, but a simulated one, where like at a bus stop, you are not supposed to walk beyond this line, until you see the bus comes, then you can board.”

Parents with young children

- e. To make family-travel more welcoming and delightful, families also suggested having a dedicated cabin for families with young children.

“So it will be good to have like maybe for an entire train, maybe have one cabin just for family, family friendly. If they know they are having a child they should go to this cabin rather than not having cabin with bigger space so we can put our strollers, our backpack you know and everyone is basically having a child. Don’t really have to compete with other commuters.”

After reviewing the key challenges and suggestions from the different families using our land transport system, the Panel recommends the following to enhance the transport spaces:

#2 Recommendations: More Family-Friendly Spaces

- 12. Provide more space for wheelchair users and open strollers on public buses i.e. at least 2 wheelchairs spaces or 1 wheelchair and 1 open stroller space on buses. The deployment of such buses can be prioritised to high demand bus routes first before introducing such features across all new public buses.

13. Provide a quiet room at MRT stations, Bus Interchanges and Integrated Transport Hubs for commuters with special needs and increase awareness that commuters may seek waiver of fines with station staff when they exceed the time limit due to special situations. Staff on the ground should be properly trained and educated on special needs of such families.
14. Raise awareness and facilitate co-creation between government and stakeholders for physical or virtual training facilities that allows children with special needs, such as children with autism or invisible disability to experience and familiarise themselves with the transport system prior to travelling on public transport. In addition, the Government should actively facilitate co-creation, development and adoption of assistive devices to train and aid persons with intellectual disability to travel independently by making available relevant transit related data to the marketplace. Based on the feedback gathered, while assistive devices are available, the awareness is low. There is a need to promote and enhance the awareness of assistive technology and devices available in the marketplace.



Assistive Device with location tracking, calling or monitoring function

15. Design a family-themed cabin during school holidays (full-day) and enhance public education to allow priority boarding. In addition to signage for priority boarding on the platform floor which may not be visible during peak hours, more prominent signage can be placed to remind commuters to give way to families travelling with young children.

Beyond the above recommendations, there are already a number of co-creation initiatives in place to facilitate greater ease of access or offer spaces to help families with members who have special needs travel independently. More can be done to increase the awareness of such projects and facilitate the take-up or expansion of such family-friendly facilities and services.

For example, JurongHealth transformed the way rehabilitation is conducted in a healthcare setting with the development of the JurongHealth Mobility Park, a simulated environment with pedestrian crossings, walkways and life-size models of public transportation. SMRT sponsored the transportation models—an MRT train cabin, bus and taxi—which are used to prepare patients, the elderly and people with special needs, to reintegrate into the community after discharge from the hospital.

SG Enable partnered a few special education schools on a project to train children with special needs to travel independently on public transport, using a life-sized simulator (called the Interactive Mirror) and assistive devices with location tracking, calling and monitoring features¹⁵.

¹⁵ The Interactive Mirror is showcased in Tech Able, an assistive technology resource centre for persons with disabilities, in Enabling Village. Currently, there are 5 training modules: Take Bus, Take MRT, Top Up EZ-Link, Road Crossing and MRT Service Delay.

Theme #3 Promoting a Caring Commuting Culture



In addition to hard infrastructure, the key to a family-friendly transport system is the people and the interactions among them. Cultivating a caring commuting culture requires sustained investment and effort and extends beyond land transport and government agencies.

A multi-pronged, multi-layer approach (Whole-of-Government – Community – Schools - Home) is needed to holistically cultivate a caring and gracious commuting culture in a sustained manner in order to make long-lasting positive change, re-introducing camaraderie into the system and travel experience.

TABLE 4 KEY CHALLENGES/SUGGESTIONS HIGHLIGHTED BY COMMUTERS WITH REGARDS TO COMMUTING CULTURE

Wheelchair users and families with young children

- a. Families with young children would appreciate help when travelling with young children on public transport.

“It’s the same for people like me who have kids. Sometimes, we are just struggling like you are just trying to pull your kids along, you are trying to carry the bag and all you need is one person saying can I help you hold this You don’t need to hold the kid, just hold the bag and that makes a lot of difference for even me just paying for the ezlink card or topping up the card.”

- b. Other commuters not giving way for parents with young children, seniors and wheelchair users to board/alight bus, train, or lifts.

“Some passengers rush into lift and ignore wheelchair user and caregivers, extending the waiting for the lift.”

“There also the things that people like to stand near the door because they want to alight easily. People who want to go on board are having difficulties. But at the end there is so much of space...that is definitely a concern, I can’t even get into the bus. So is not comfortable for me to take with my family.”

- c. Commuters do not give up their seats on buses or trains to seniors

“Ask them to give up seat also difficult. They don’t.”

Families with members who have special needs

- d. More public education is needed to generate more understanding towards commuters with special needs, such as people with invisible disabilities. Some parents suggested that priority seats be extended to persons with invisible disabilities.

“It will be good if there is a seat. Now the seat, your logo is always the old one, the pregnant one, or the carry baby one, the injured one. Probably with a special need.”

- e. Commuters with special needs might feel lost during train disruptions as their daily routine is disrupted. This is also a key concern of parents with special needs children travelling on public transport.

“One is that especially recently the disruptions and breakdowns. E.g. 2 weeks ago, good thing I was with him. There was a disruption from city hall going westward...What I’m concerned is when this happens, my son became anxious. He keeps asking me what’s happening and why. When I try to calm him down, I was afraid that he will sort of over react and may cause a scene. One of the main challenges is if there were to be any disruption and breakdown, how would a person with autism cope. I see that he needs a lot of support in the event of such incident happening...In this case, there’re so many scenarios, so many different kind of (factors), we don’t really know how to prepare him well for such events.”

Wheelchair users

- f. Inconsistent level of help rendered by bus captains to help wheelchair users board and alight buses.

“...Some bus captains do not help push wheelchair users who are not on motorised wheelchair up the ramp”

Families who cycle and use personal mobility devices

- g. Public education to promote sharing of pavements and safe use of bicycles and PMD. The safety of families who cycle and use PMDs can be compromised by:
- Errant cyclists/PMD users;
 - Pedestrians too engrossed in their mobile devices and not paying attention when they walk or they may change directions abruptly; and
 - Drivers who turn abruptly without signalling.

“For two directions, everybody (is) on the right. More experienced people (are) doing that. There are a couple of new learners (who cycle) all over the place, a bit of inconvenience to the other users.”

“Cyclist will cycle behind pedestrians if they cannot overtake yet. If on the opposite side, no oncoming pedestrians, should overtake. The practice of keeping to the left is so that people will know what to expect. Expect person to keep to the left. Main cause of misunderstanding is you don't know what to expect. Person is walking on the left, and suddenly the person move to the right, so how am I supposed to pass this person?”

#3 Recommendations: Promoting a Caring Commuting Culture

16. To adopt a multi-pronged, multi-layer approach (Whole-of-Government – Community – Schools – Home) to cultivate a caring commuting culture e.g.
- ❖ Create awareness via public education, events, advertisements on public transport and courtesy campaigns;
 - ❖ Inculcate caring commuting behaviours from young;
 - ❖ Role modelling to encourage others to be caring; and
 - ❖ Show appreciation when help is offered to motivate people to continue helping.
17. Develop Standard Operating Procedures (SOPs) with operators to help commuters with special needs especially during train service disruptions. We should also equip commuters with tangible tips on how to keep a look

out for commuters with special needs who may need help especially during train service disruptions, and the proper etiquette of offering support and help.

18. Enhance SOPs to specify protocol for helping motorised and non-motorised wheelchair users to board or alight from public buses. In addition to service by bus captain, in the spirit of promoting a caring commuting culture, practical tips on how fellow commuters can offer support to persons in wheelchairs should also be disseminated.
19. Cultivate a caring commuting culture towards persons with invisible disabilities, e.g. provide facts about autism through public education.
20. Extend priority seats to commuters with invisible disabilities, such as persons with long-term physical, mental, intellectual or sensory impairments by working with relevant agencies on ways to enable some commuters to voluntarily identify themselves as special needs commuters to others, e.g. Care Stickers, Safe Journey card.



Safe Journey Card
(www.firstgroup.com)



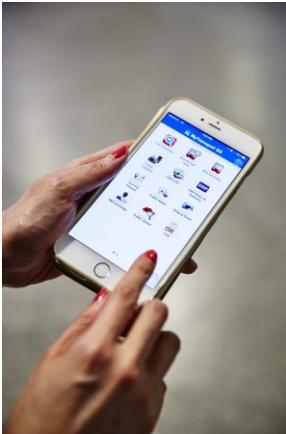
Care Sticker

Sustained public education to promote sharing of pavements and safe use of bicycles and PMDs is important. Following the passing of the Active Mobility Act in Jan 2017, LTA has rolled out many initiatives. Examples include:

- press advertisements to raise awareness on its rules and code of conduct;
- stakeholder engagement with bicycle and PMD retailers, interest groups and migrant worker dormitories on the use of PMDs; and
- partnership with relevant agencies and stakeholders, e.g. NParks, Traffic Police and Grassroots Organisations to educate cyclists and PMD users about safety; and
- introduction of harsher penalties by LTA in 2018 for PMD users who ride on roads and expressways.

To ensure a more holistic review on the issue and in view that the Active Mobility Panel is currently gathering feedback for the review on rules and code of conduct for cycling and the use of PMDs, the feedback gathered from our consultation will be shared with the Active Mobility Panel for their consideration.

Theme #4: Mobility as a Service (MaaS)



Mobility as a Service integrates all available modes of transport and mobility services into a one-stop-shop package, which can be tailored according to the end users' mobility needs to offer an agile, sustainable and effective alternative to car ownership. In an already well-integrated transport system like Singapore, MaaS can expand the travel options, enhance first-mile-last-mile connectivity and provide a new source of door-to-door travel data that would be useful for planning purposes.

As these MaaS technologies are being developed, the adoption and acceptance of these technologies by commuters remains uncertain. How will commuters react to these technologies? What are the design and policy implications to be considered in preparation for the implementation of MaaS in Singapore? In addition to studying existing MaaS schemes in other cities (e.g. Helsinki, Berlin, Hannover, Palma, Gothenburg etc.) to understand the key features and also enablers required to foster a conducive environment for MaaS implementation, the Panel also conducted a series of focus group discussions to better understand what would make MaaS an attractive option for families in Singapore.

TABLE 5 FEATURES OF MOBILITY AS A SERVICE THAT FAMILIES WOULD LIKE TO HAVE

For MaaS to be welcomed by families in Singapore, the following are key features highlighted by the focus group discussion participants:

a. Safety

- Background checks and allow driver selection; and
- Notification to inform that child has reached destination.

“This is my child right, so people – make sure they do background checks and all that.”

“Message if a child is travelling alone when the driver pick up the child, and reach destination, a message to the caregiver. Or a special need kids. Try on first time traveling. This kind of message quite useful to the caregiver.”

b. Cost/ Affordability

- Price < Price of owning a car;
- Discounted rate for seniors; and
- If expensive, will only use during emergencies.

“Price – it must at that point in time, reasonable to suit my needs.”

“Especially for seniors like us, they should have this thing, those special rate.”

c. Reliability and availability

- Punctual, predictable and on-time arrival at destination; and
- Almost 24/7 availability when service is needed.

“If you can guarantee I will be on my way within 5 minutes. I will pay subscription if I can get transport and get on my way within 5minutes, to my destination.”

“It must be available most of the time. Maybe not 24 hours, but must be available most of the time whenever we need the service.”

d. Real-time information and dynamic adjustment of journey

- Crowdedness-level (bus/ train loading);
- Notifications of traffic congestions/train breakdown and dynamic adjustment of alternative route/ modes;
- Capability to dynamically propose alternative route for commuters with special needs in response to exigencies on the ground (e.g. lift breakdown, construction works) and updated navigation guide on accessibility route at destination.

“So it will be good if to alert us when there is ongoing road works and what have you, so that when we walk, we don’t feel very puzzled why is the road like that. Am I in the wrong landmark? When we walk, we have to follow a certain type of landmark.”

“There’s a lot of lifts involved in taking the entire transport, the entire train route. Let’s say for example if that one is not available, then it immediately gives an alternative route then it will be easier.”

-

e. Customization

- Allow greater customization of passenger profile;
- Allow special requests e.g. assistance for physical transfer into transport, ramp;
- Allow filtering of options for route choices (cheapest, fastest, least number of transfers or walking distance), profile (e.g. wheelchair users, require car seats).

“So if the app is able to either preset or able to allow the users to input passenger of 4. One of it is a wheelchair user, one of it is a 5-year-old daughter with certain kinds of special needs whatsoever... Then about assigning of the mode of transport, the system is able to select the kind of car or vehicle that’s more suitable for either wheelchair user or a person with disability or child with certain special needs. That would be good.”

“May be more interested if it does things I cannot currently do. Use data analytics track pattern and pretty much it knows from Monday to Friday I travel this pattern and it can with one click arrange all my services for me. No need to key in my address. One button arrange the whole journey for me.”

“People have different needs when they travel and some people need to get there in the fastest way, some people need to get there the cheapest way, don’t care very long or what. So if you can filter out all the search result according to whatever is recommended, the best, and then

whatever is the fastest, what is the cheapest, then the user also know like if I need fast then I take this. It will be useful for a lot of people.”

f. Sharing

- Allow booking on behalf of others (children making booking for elderly parents);

“We are not used to tech, we don’t know how to use technology... like confuse like that. I am not used to it also...my children will use for me. My children and my daughter”

g. Assistive Technology e.g. VoiceOver and Talkback technologies for commuters with special needs.

“Don’t put images on the app. the text is very important... Voice over will not be able to read (images)...Text can voice over.”

h. Offer complementary/ Value-added services e.g.

- Meet and Assist service to ensure safety of child;
- Meet and Assist service for seniors (medical escort and transport); and
- Other related services e.g. grocery delivery, food delivery.

“We are looking at more than going from one point to another point. We are looking at some value-add services where it currently cannot be met.”

“If I have someone who can also look, bring my parents to the hospital, wait for them, after their medical appoint and send them back them back you see. Because at the end it’s about mobility and safety...my elderly parent, is just frail, I can’t possibly ask them to go to hospital.”

“If you want me to pay subscription for it, I would like it to offer me something I cannot get from existing apps. For instance, arrange for

groceries to be delivered to my house. Or order ubereats under that app. Jakarta already does this. That would be the attraction point for me.”

#4 Recommendations: Mobility as a Service

21. Explore the scope of MaaS beyond integration of transport modes (public transport, bike sharing, car sharing, e-scooter sharing) to include complementary services and features, e.g. medical escort, navigation guide and accessibility map for people with special needs in order to be an effective substitute for private cars in Singapore.
22. Government agencies look into how, at the macro-level, the Government can ensure open availability and interoperability of transport data to lower entry barriers and provide a level playing field (e.g. liberate data sharing policies) among industry players to create and safeguard a favourable MaaS growth environment.

MaaS as a solution for families who drive their secondary school children to schools

For families who drive their children to school, the barriers to give up driving highlighted by them are not easily overcome by transport agencies alone.

Some parents continued to drive their secondary school children to school for three main reasons related to the issue of time:

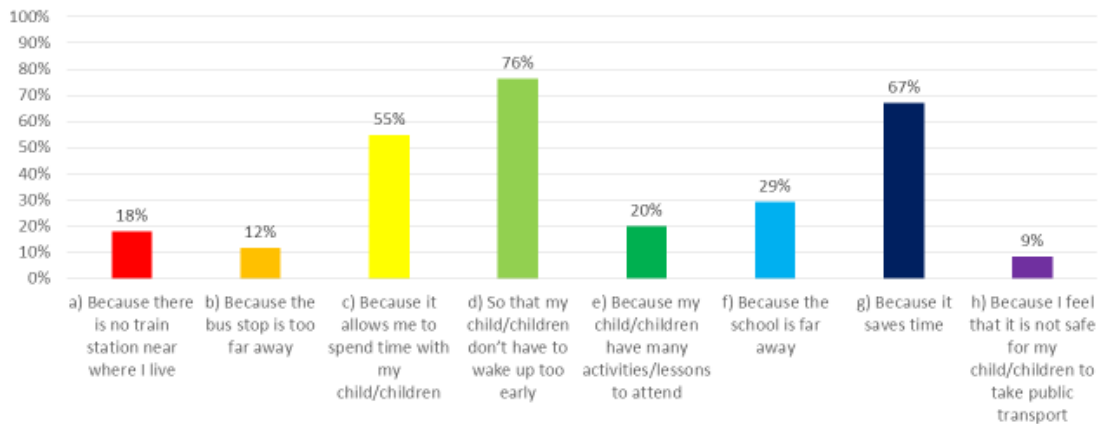
- They wanted their children to have a longer rest and wake up later for school;
- Compared to taking public transport and making transfers to get to school, going by car was faster and saved time; and
- They used the time together to bond with their children.

For many parents, if schools were to start later, and if there were fewer transfers when using public transport, they would be willing to let their children take public transport to school.

The Panel assessed that in the longer term, by 2030, 8 in 10 households would be within a 10-minute walk from a train station. The level of crowdedness will also progressively improve. Some families who drive their children to schools might switch modes of transport progressively. In the near term, MaaS can potentially be an attractive alternative if the scheme could address some of the reasons parents drive their children to school. For families to stop driving their teenagers to school, the solution lies beyond land transport agencies and LTA needs to work with the relevant agencies to address the root causes.

Families who drive secondary school children to school

Percentage of respondents who chose the following reasons as their **THREE** most important reasons that they drive their child/children to school



N=480

CONCLUSION

Our transport system is an important component of our city state, and it is a part of the shared experience of living in Singapore. Our transport system is generally well-integrated and accessible by the majority of the commuters. However, with the aim to have a more inclusive transport system, the design and delivery of such services can be more thoughtful, and empathetic to the needs of families across life stages and for users of different mobility-levels. We should capture opportunities arising from technology advances and increasing willingness from businesses, civil society organisations, communities and individuals to partner the Government and operators to deliver accessible and family-friendly mobility solutions.

It is not only important that we take tangible steps to enhance the ease of access for families, create more family-friendly spaces, promote a caring commuting culture and provide a conducive operating environment for MaaS, we should also introduce family-friendly transport indicators to measure the tangible benefits brought about by the initiatives introduced for families in our land transport system. Customer satisfaction by family profiles, ridership among commuters with special needs and public transport mode share can be measured.




The Panel hopes that the recommendations in this report will be implemented, and contribute to enhancing the travel experiences of families in Singapore.

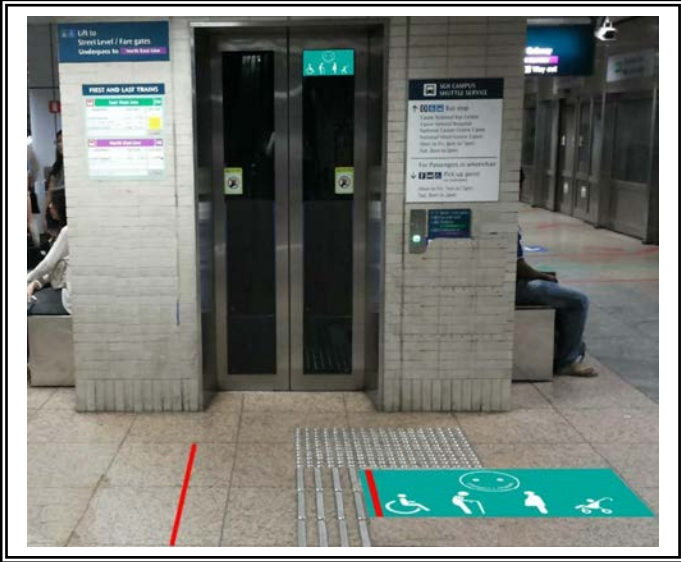

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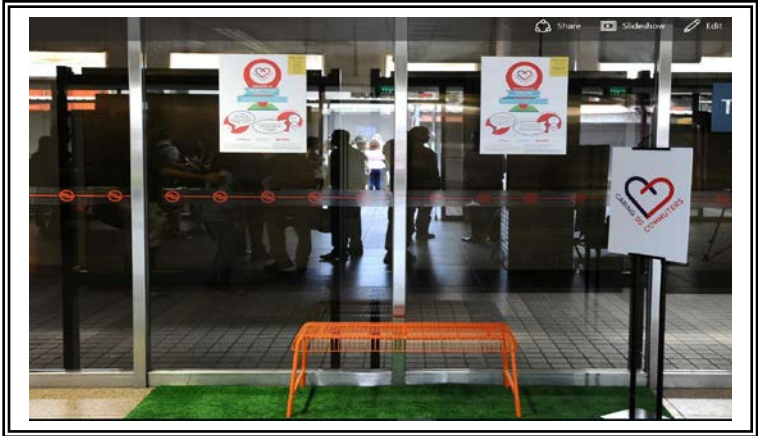

The Panel would like to thank all who had participated and contributed their views generously in the public consultation process. The report benefitted from the rich inputs from more than 3,000 stakeholders. Their valuable feedback and suggestions have helped to shape the recommendations contained in this Report. We would like to also thank the organisations and stakeholders who have facilitated the consultation process or shared their best practices with us.


Annex A: Family Friendly Initiatives for Singapore Land Transport System


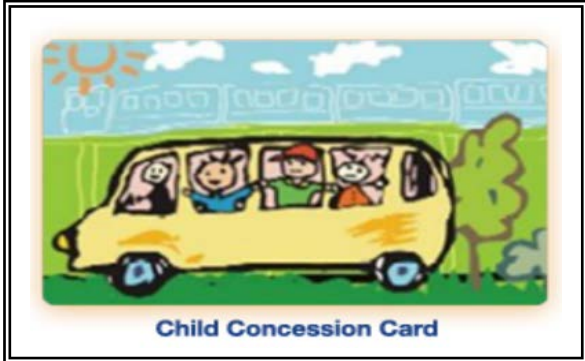
Improve Accessibility and Spaces for Families



Target Group	Where	Initiatives/Practices in Singapore
Families with children/ Commuters with reduced mobility, such as seniors, wheelchair users	In MRT stations and Bus Interchanges	
	<p>Priority queue</p>  	<p>Priority queues have been implemented at all MRT stations and new bus interchanges for seniors, expectant mothers, wheelchair users and parents travelling with strollers.</p> <p>Priority queue stickers are placed at the platform screen doors and passenger lifts for all MRT stations to remind passengers to give priority to these groups of commuters. There are also demarcated areas for priority queues at bus interchanges, with seats fitted at the priority queue zones, for these commuters to rest while waiting.</p>
	<p>Dual-speed escalators (off-peak hours) and travellators</p> 	<p>LTA has implemented escalators with a dual speed feature for all new MRT lines. These escalators operate at a slower speed during off-peak hours. This feature will be gradually extended to escalators in existing stations when they are replaced at the end of their useful lives.</p> <p>Travellators are also currently installed at Botanic Gardens, Bugis, Dhoby Ghaut and Serangoon Stations. New Thomson-East Coast line (TEL) interchange stations, such as Orchard and Outram Park, which require some walking between lines, will also have travellators to reduce the walking while making transfers.</p>
<p>Gap fillers installed at the station platform on North- East, Downtown and Circle Lines.</p>	<p>Rubber gap fillers have been installed at the stations along some of the train lines, i.e. North-East, Downtown and Circle lines, to reduce the gap between the trains and platforms. The platform gap is reduced from 10cm to 5.4cm with two fillers installed under the doors of the trains. This will prevent commuters from slipping in or strollers/wheelchairs getting caught in the gaps.</p>	

Target Group	Where	Initiatives/Practices in Singapore
	Wider fare gates at MRT stations	<p>Wider fare gates were introduced to allow wheelchairs users or families using strollers to access more easily. These gates are bidirectional, making it more convenient for commuters to access.</p> <p>Currently, all MRT stations have wider fare gates.</p>
	Barrier-free access at MRT stations and bus interchanges 	<p>All MRT stations and bus interchanges are barrier-free.</p> <p>Currently, all MRT stations have at least one barrier-free access route, entrance with a lift, tactile guidance system and wheelchair-accessible toilets. With the completion of Barrier-free Access enhancement work on the MRT network, more than 85% of all existing MRT stations now have two barrier-free access routes from the station entrance to the station concourse.</p> <p>Currently, Choa Chu Kang, Woodlands and Yishun Bus Interchanges have special Wheelchair Accessible Bus boarding berths with ramps, guard rails, directional and indicative signs, and staff assistance call buttons for commuters in wheelchairs.</p>
	Wheelchair-accessible washroom	<p>All bus interchanges are barrier-free, including the boarding/ alighting berths. Wheelchair accessible washrooms are available in bus interchanges. Tactile ground surface indicators are also available to guide visually impaired commuters.</p>
	Nursing room 	<p>Nursing rooms will be provided at the interchange stations on the new Thomson-East Coast Line (TEL). These rooms are also provided for at the new bus interchanges.</p> <p>For existing MRT stations, diaper changing tables are provided in the wheelchair-accessible toilets due to space constraints. Having the diaper changing room in the wheelchair accessible toilets also allows multiple care givers to attend to the baby at the same time if required.</p> <p>Existing bus interchanges that were developed from 2014 onwards have nursing rooms. New interchanges will be designed with a standalone nursing room with diaper changing amenities and wash basin. Examples of interchanges that have nursing rooms are Bedok, Bukit Panjang, Kampong Bahru, Joo Koon and the upcoming Yishun.</p>
	Family-friendly washrooms with diaper changing station, child-size toilet seat in new MRT stations.	<p>All stations along the future Thomson-East Coast Line (TEL) and Circle Line 6 (CCL6) will have family-friendly washrooms, comprising a diaper changing station, child-size toilet seat and barrier-free facilities, alongside the main toilets in the unpaid area.</p>




Target Group	Where	Initiatives/Practices in Singapore
	<p>Heart Zone/Heartwheels@Linkway – Outram Park Station</p> 	<p>In the paid areas of the interchange stations, there will be a nursing room and a barrier-free toilet.</p> <p>Designated areas at Outram Park where elderly and handicapped commuters can get help from members of the public, to get around when they use the public transport system.</p> <p>Provision of wheelchairs to use when crossing the long walkway between East-West line and North-East Line. Able-bodied commuters are encouraged to help commuters who need to use the wheelchairs.</p> <p>Launched by PTC in collaboration with Singapore General Hospital (SGH) and rail operators SBST and SMRT in August 2017, the initiatives were expanded to include new partners into the scheme (Singapore National Eye Centre and National Heart Centre came on board in December 2017 to support the Outram MRT Heart Zone). Tan Tock Seng Hospital and Ng Teng Fong Hospital will be launching the Heart Zone in mid-2018 for Novena and Jurong East MRT stations respectively.</p>
	<p>In Buses and At Bus Stops</p>	<p>Parents travelling with young children have been allowed to take their open stroller on board public buses since April 2017. This move is intended to make public transport more family-friendly.</p> <p>Parents/ caregivers can approach bus captains if they require assistance. Open strollers should be placed in the designated wheelchair space where available. If there are space constraints, bus captains may request strollers to be folded to give way to passengers in wheelchairs.</p>
	<p>Information display system in buses</p> 	<p>From fourth quarter 2018, there will be progressive introduction of a) a Passenger Information Display System (PIDS) that provides both visual and audio announcement of the next stop in all new buses, and b) electronic panels that display the Bus Service Number, the next 3 stops and destination in buses.</p>
	<p>Telematics systems to ensure smooth driving</p>	<p>For the safety of commuters, a smooth journey on buses will help, especially when they are standing in buses.</p> <p>All the bus operators in Singapore have installed telematics systems on their buses to monitor bus captains' driving behaviour. The sensor indicators will light up when a bus driver speeds for a prolonged period, accelerates or decelerates quickly, or changes lane abruptly, and provides</p>

Target Group	Where	Initiatives/Practices in Singapore
		visual cues for bus drivers to adjust their speed. This will ensure smoother journeys for an enhanced commuting experience.
	Wheelchair-accessible public buses	Today, over 96% of public buses are wheelchair-accessible and all public buses will be wheelchair-accessible by 2020.
	Barrier-free bus stop design	Since 2009, LTA has mandated that all new bus stops be designed for barrier-free access. Presently, 95% of bus stops island-wide already have barrier-free access.
	<p>Others</p> <p>Lift at pedestrian overhead bridges</p> 	<p>To enhance the overall accessibility of our public transport network for commuters with diverse needs, lifts at pedestrian overhead bridges were installed near public transport nodes, healthcare institutions, homes for the aged, and schools for special-needs children.</p> <p>Presently, there are 26 pedestrian overhead bridges installed with lifts. By 2021, there will be a total of 74 bridges fitted with lifts.</p>
	Special taxis that cater to users who can be seated in their wheelchair	<p>Wheelchair accessible taxis (e.g. SMRT's London Cab and ComfortDelgto's MaxiCab) are available for booking for passengers on wheelchair.</p> <p>A Taxi Subsidy Scheme (TSS) is provided for persons with permanent disabilities, who are medically certified as unable to take public transport, and totally dependent on taxis for travelling to school, work, or employment-related training supported by SG Enable.</p>
	Assistive technology on public buses	LTA will launch pilot programmes for new assistive technologies, including a new Passenger Information Display System on bus service 139 later this year, which runs from Redhill MRT to SG Enable. The trial includes a mobile application that allows persons with special needs to notify the bus captain of their intention to board or alight or seek assistance. It is an induction T-loop that transmits announcements to hearing-impaired users wearing T-coil hearing aids, and speakers that announce the next stop to passengers inside the bus and to users of the mobile application.
	Silver Zones in selected residential areas	Silver Zones were introduced in Oct 2014, in areas with high senior population and relatively high accident rates. Currently, there are 15 Silver Zones located island wide. Examples of such zones are Bukit Merah View, Woodlands Drive 14, Clementi Avenue 3, Bedok North Street 1,

Target Group	Where	Initiatives/Practices in Singapore
		<p>and Telok Blangah Crescent. 35 more Silver Zones will be constructed progressively. By 2023, there will be 50 Silver Zones island wide.</p> <p>The Silver Zones have features to slow down the traffic to make it safer for seniors. These features include:</p> <ul style="list-style-type: none"> • “Rest points” for seniors on the road divider, so they can cross the road in two stages. • Special signage to inform drivers they are in Silver Zones, along with three rumble strips on the road to slow drivers down. • Speed limits in Silver Zones will be reduced to 40kmh wherever possible. • Other traffic features aimed at slowing down traffic, like chicanes (gentle curves along sections of roads) and lanes with reduced width have also been installed to ensure that cars do not speed along these roads.
	<p>Public transport concession and free travel for children</p> 	<p>Under the Public Transport Concession Scheme for people with disabilities, cardholders will enjoy 25% or more off adult fares for all basic bus and train services, free travel for distances travelled beyond 7.2km, and the option to purchase a monthly travel pass for unlimited bus and train rides at \$60.</p> <p>Children below 7 years enjoy free travel on basic bus services, express bus services and train services. There are also concession schemes and passes for students and senior citizens.</p>
<p>Families who cycle or use personal mobility device (PMD)</p>	<p>Foldable bikes/ PMDs are allowed on board public transport</p>	<p>To encourage more people to use public transport and adopt active mobility for the first and last mile of their journey, since 1 June 2017, foldable bicycles and personal mobility devices (PMDs) have been allowed on board trains and buses at all hours of the day.</p>

Target Group	Where	Initiatives/Practices in Singapore
		<p>A set of rules and guidelines have been implemented and can be found on LTA's website www.lta.gov.sg, on the size of foldable bicycles and personal mobility devices allowable on trains and buses.</p>
	<p>Intra-town cycling network</p> 	<p>To promote cycling as a healthy form of transport, LTA is constructing a comprehensive network of cycling paths to facilitate intra-town cycling. These cycling paths will connect with the key public transport nodes, such as MRT stations and bus interchanges.</p> <p>Currently, cycling path networks have been built in 9 HDB towns, namely Tampines, Sembawang, Changi-Simei, Pasir Ris, Yishun, Punggol, Ang Mo Kio, Jurong Lake District and Bedok towns.</p> <p>By 2030, all HDB towns will have a cycling network, with a total of 700km of cycling paths across the island. Other bicycle-friendly infrastructure such as bicycle crossing and bicycle parking facilities will be added to further encourage a cycling culture.</p>

Promoting Caring Culture

Target Group	Topic	Practices in Singapore
<p>Families with children/ Commuters with reduced mobility, such as seniors, wheelchair users</p>	<p>Care Stickers for commuters who requires special care</p> 	<p>The Care Sticker was introduced by SMRT in July 2014. The “Care Stickers” are used to identify commuters in need of assistance or attention while travelling. Examples, include expectant mothers, seniors, parents travelling with infants, commuters with mobility needs and passengers who are unwell. By wearing the sticker, other commuters can identify them easily and provide assistance like giving up seats and helping in boarding and alighting</p> <p>These “Care Stickers” can be obtained at all passenger service centres along its MRT lines and bus interchanges.</p> <p>The Singapore Kindness Movement has also created a “Baby in tummy” button badge in support of expectant mothers. Wearing the badge will allow the public to better recognise the mum-to-be on public transport. The badge aims to remove the mental barrier of “whether to give up my seat or not”. The badges can be obtained at the baby fairs for mums-to-be.</p>
	<p>Gracious behaviour on public transport for our future generation</p>  	<p>The Kindness Gallery implemented by Singapore Kindness Movement (SKM) joined Singa to learn about gracious behaviour on public transport.</p> <p>The first interactive Kindville tour was aimed to increase the awareness of pre-schoolers to develop good social etiquette from a young age. The children are taught to have proper manners in the public transport and encouraged to use five magic words ‘Thank you’, ‘You’re welcome’, ‘Please’, ‘Excuse me’ and ‘I’m sorry’</p> <p>To promote graciousness, SKM has also partnered with the Early Childhood Development Agency to train and help teachers develop innovative lesson plans as well as to inculcate good behaviour on public transport for pre-school children. For example, there are puppet shows and an animated video featuring Singa and the Kindness Cubbies, learning about the Do’s and Don’ts on public transport, and how to be kind and gracious users on buses and trains. The video can be found on: https://www.youtube.com/watch?v=IVopYr7zW0w</p>

Target Group	Topic	Practices in Singapore
Families with special needs members/dependents	Training of bus captains and staff	<p>All bus captains are trained to provide assistance to passengers-in-wheelchairs. Bus captains driving wheelchair accessible buses (WAB) have also been trained to operate the ramp and assist passengers in wheelchairs to board and alight WABs.</p> <p>The alighting bell for persons in wheelchairs at the wheelchair space in the buses has a special tone, which will notify bus captains when a wheelchair user wants to alight.</p> <p>SBST and SMRT also provide additional training tailored to caring for commuters with special needs. As part of the training, bus captains visit various interchanges and day care centres for people with special needs to understand and gain experience from interacting with them. This is so that they can better appreciate and understand the needs of these groups of commuters.</p> <p>In addition, all the bus operators have partnered with Lien Foundation and Khoo Teck Puat Hospital's "Forget Us Not" initiative to train their frontline transport workers on ways to recognise people suffering from dementia, and how to assist them when they are lost or appear to be confused.</p>
	Training of taxi/ private hire car drivers	<p>As part of the Taxi Driver's Licence Vocational (TDVL) and Private Hire Car Driver's Vocational Licence (PDVL) training, taxi/ private hire car drivers are taught the basics of handling persons in wheelchair (e.g. helping the person to board the taxi, folding the wheelchair and keeping it in the boot).</p> <p>For wheelchair accessible taxis (e.g. SMRT's London Cab and ComfortDelgro's MaxiCab), the taxi companies provide specialised trainings for their drivers to ensure that they are able to assist their special needs passengers.</p>