

Inclusive and Universally designed Housing and Transportation–The Singapore Experience

Background Information

1. Singapore with a population of 5.54 million has evolved from a land with slums to a high density urban city in the last 50 years. The early days were focussed on economic development and housing the people.

2. The first step taken towards creating a user-friendly built environment goes back as early as the 1980s. The provision of barrier-free accessibility in buildings was made mandatory in 1990 under the Building Control Regulations with reference to the *Code on Barrier-free Accessibility in Buildings 1990* (Accessibility Code). The Accessibility Code has since undergone several revisions through a 3-P Review Committee. The Review Committee included representatives of persons with disabilities. The latest code, *Code on Accessibility in the Built Environment 2013*, made effective in April 2014 for compliance, has enhanced provisions for persons with disabilities, older persons and family with young children.

3. The fast ageing-population and the increase in the number of older persons with acquired disabilities had prompted the related government agencies to take concrete steps to improve their buildings and infra-structures to be user-friendly for all.

4. To support Ageing-in-place and to build an inclusive built environment, the Building and Construction Authority has developed and implemented the Accessibility Master Plan since 2006 to address the accessibility issues of the past, present and future through a multi-lever and multi-agency effort. One of the key initiatives is the promotion of Universal Design to the government agencies, the building industry and the public.

5. As the mandatory requirement to provide accessibility in buildings was implemented only 1990, there was a large stock of existing buildings that were not barrier-free. Thus, one key strategy is to encourage voluntary upgrading through promotion and with capital incentive.

Universally Designed Housings

6. Housing units built after 2007 are required under the Building Control Regulations to make provision for easy retrofitting to meet the needs of the occupant who may need to use the wheelchair.

7. For public housings which house 80% of the population, the Housing and Development Board or HDB has since 2006 adopted the universal concept in their new housing design and planning.

Existing Public Housings

8. Since the 90s, HDB has carried out several upgrading programmes to improve the existing housing estates and housing blocks that were built before 1990. The programmes include:

a. 5-year Barrier-free Accessibility Upgrading Programme (2006-2011)

Under programme, the accessibility within the precinct was improved with the installation of accessible routes, ramps and handrails.

b. 14-year lift upgrading programme (2001-2014)

The high rise housing blocks built before 1990 did not have lift access at every floors. Thus this island wide programme to make lift stops at every floor level with improvement to the existing lifts or with the installation of new lifts was implemented in 2001 and completed in 2014. To date, more 90% of the public housing blocks have lift accessibility at every floor.

Public Transportation- Improvement to the Transport Infra-structure

9. As at now, 100% of our trains and 85% of our public buses are wheelchair accessible. All public buses will be wheelchair-accessible by 2020.

10. At the macro level, planning policies requires that all new development have provision for barrier-free and comfortable inter-connectivity between buildings. All new train stations, bus interchanges and other road related infra-structures are designed and built to meet the needs of persons with disabilities and in accordance with the *Code on Accessibility in the Built Environment*. Initiatives to further improve 'Walkability' of the public walkways are works-in-progress

Improvement Work to existing Transport Infra-structures

11. Recognising that accessibility of public transport and its infra-structures is one key enabler for older persons and persons with disability, improvement works were carried out in the last ten years to improve the existing buildings and other infra-structures. They include:

- a. Improvement of all existing train stations with the installation of lifts, accessible toilets and tactile guidance system for the visually impairment (completed in 2004)
- b. Improvement to road related infra-structures (2006-2002) such as bus terminals, bus stops, public walkways, road crossing and taxi stands.

- c. Green Man Plus scheme to give older persons and physically challenged pedestrians more crossing time at signalised crossings.
- d. Programme to retrofit lifts at overhead bridges to improve accessibility for the less mobile (Work-in-progress).

Conclusion

12. In an effort to make Singapore an inclusive and friendly environment, the close 3-P (public, private and people) collaboration is key and highly effective in driving accessibility improvements and broadening the adoption of Universal Design.

Information by

Goh Siam Imm (Ms)
Director, Universal Design Department
Building and Construction Authority
Singapore

Date: 24 Oct 2015