

# **Mainstreaming of Universal Design Concept**

## **Meeting of Legislative Council Panel on Welfare Services Subcommittee on Improving Barrier Free Access and Facilities for Persons with Disabilities 18 February 2012**

**~~ Submission from the Equal Opportunities Commission ~~**

### **Purpose**

This paper aims to provide views of the Equal Opportunities Commission (EOC) on the incorporation of Universal Design concept and principles into Government policies.

### **Background**

The term “Universal Design” is used to describe the concept of designing all products and the built environment to be aesthetic and usable to the greatest extent possible by everyone, regardless of their age, ability, or status in life. Subsequently, it is generally used to delineate the design of products and environment to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.

In 1995, the Centre for Universal Design at North Carolina State University developed seven principles of universal design: (1) Equitable Use; (2) Flexibility in Use; (3) Simple and Intuitive; (4) Perceptible Information; (5) Tolerance for Error; (6) Low Physical Effort and (7) Size and Space for Approach and Use. These principles are broader than those of accessible design and barrier-free design.

The following are examples of universal design:

- (a) Smooth, ground level, entrances without stairs.
- (b) Lever handles for opening doors rather than twisting knobs.
- (c) Light switches with large flat panels rather than small toggle switches.
- (d) Induction loop system – in a cinema, persons with hearing aids can hear the sound track if the cinema is equipped with a compatible induction loop system.
- (e) Screen readers – a website complying with web accessibility requirements is useful to persons with visual impairment with screen readers reading the page aloud.
- (f) A museum that allows visitors to choose to listen to or read descriptions.

Universal Design has become a mainstream issue mainly due to the aging of the population worldwide. While life expectancy rises and modern medicine increases the survival rate of those with serious injuries, illnesses, and birth defects, there is a growing interest in Universal Design. In addition, incorporation of the principles of Universal Design early in the design process is more cost-effective than making alternations/modifications after the products and services become available in the market.

### **Universal Design in Convention on the Rights of Persons with Disabilities**

Universal Design is an internationally recognized concept as it is explicitly embodied in the Convention on the Rights of Persons with Disabilities (CRPD). Article 2 of CRPD states that “Universal Design” means the design of products, environment, programmes and services to be

usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. Paragraph (ii)(h) in Article 9 requires the States Parties to take appropriate measures to promote the design, development, production and distribution of accessible information and communications technologies and systems at an early stage, so that these technologies and systems become accessible at minimum cost.

### **Overseas experience**

Many countries have set up standards and specifications for Universal Design or barrier-free design. In the United States, specifications for barrier-free design were published in 1960 after 11 years of disability ergonomic research. In 1961, the specifications became the first Barrier Free Design standard called the American National Standard was published. It was the first standard to present the criteria for designing facilities and programmes for the use of persons with disabilities (PWDs). As explained in the above, North Carolina State University developed seven principles of Universal Design which serve as guiding principles for planners, designers and builders.

In United Kingdom, the Royal Institute of British architects published three editions of “Designing for the Disabled” (1963, 1967 and 1997) by Selwyn Goldsmith, which contain valuable empirical data and studies of PWDs. These standards are excellent resources for the designers and builders.

In Europe, the Council of Europe (Tomar) Resolution ResAP(2001)1 states that the principles of Universal Design need to be introduced into the curricula of all occupants working on the built environment. The “European Design for All eAccessibility Network” was launched under the lead of the European Commission and the European

Member States in 2002. It fosters Design for All for eInclusion, that is, creating an information society for all. It has national contact centres in almost all EU countries and more than 160 network members in national networks. European Institute for Design and Disability (EIDD) was set up in 1993 to enhance the quality of life through Design for All. It disseminates the application of Design for All to business and administration communities previously unaware of its benefits. In 2009, it has active member organisations in 22 European countries.

In October 2003, representatives from China, Japan, and South Korea met in Beijing and agreed to set up a committee to define common design standards for a wide range of products and services that are easy to understand and use.

International Organisation for Standardization, the European Committee for Electrotechnical Standardization, and the International Electrotechnical Commission has developed CEN/CENELEC Guide 6. These Guidelines are formulated for standards developers to address the needs of older persons and PWDs.

In addition, European Commission encourages manufacturers and service providers to produce new technologies for everyone: technologies that are suitable for the elderly, PWDs, as well as young experts on information technology.

To sum up, Universal Design and accessibility are on the active social agenda in many countries, translating human rights as well as anti-discrimination values into concrete policies. Issues related to health care, accessibility, employment or education often possess the features of Universal Design approaches.

## **Local situation**

It is widely recognized that the population in Hong Kong is expected to remain on an aging trend. According to *Hong Kong Population Projections 2010 – 2039*, the proportion of the population aged 65 and over is projected to rise significantly from 13% in 2009 to 28% in 2039. In addition, it was estimated that there were more than 360,000 persons with disabilities (excluding persons with intellectual disability) in 2008 (*Census and Statistics Department: Special Topics Report No. 48*).

In order to meet the needs of the present without compromising the ability of future generations to meet their own needs, the Government is advocating the principle of sustainable development. The Chief Executive made it clear in his 1999 Policy Address that every citizen, every business, every Government bureau and department needs to start working in partnership to achieve sustainable development by finding ways to improve the quality of life as well as meeting our own needs and aspirations without doing damage to the prospects of future generations.

In view of the aging population, the increasing number of PWDs as well as our commitment to achieve a sustainable future for Hong Kong, it is crucial to adopt the principles of Universal Design in the formulation and implementation of Government policies and programmes. The adoption of Universal Design principles can ensure that the design of the built environment, products and services to be usable by all people regardless of their ages and disabilities, to the greatest extent possible, without the need for expensive adaptation or specialized design in later years.

In recent years, some government departments have been playing a relatively more active role in promoting Universal Design in the areas of

built environment, public transport as well as information and communication technology.

### ***Design Manual: Barrier Free Access 2008***

***Design Manual: Barrier Free Access (BFA) 2008*** is issued by the Buildings Department under the Building (Planning) Regulations, Buildings Ordinance which applies to the design and construction of new buildings or alternations and additions to existing buildings. While the manual is important in providing for minimum standards necessary for a barrier free environment, it has significant compliance limitations as presently, the provisions of the BFA do not apply to buildings belonging to the Government or buildings upon any land that is vested in the Housing Authority (HA). This means the BFA, including those mandatory requirements set out in the manual, also do not apply to the Government and HA buildings.

### ***Universal accessibility – Best practice and Guideline***

Architectural Services Department (ArchSD) published a guideline called ***Universal accessibility – Best practice and Guideline*** in 2004. The guideline aims to promote Universal Design for ArchSD public buildings and open space projects focusing on planning, building and maintaining an accessible environment.

### ***Transport Planning and Design Manual***

Transport Department (TD) published ***Transport Planning and Design Manual*** which consists of eleven volumes and is used primarily as a working document for TD staff. It also provides information and guidance to others involved in the planning and design of transport

infrastructures in Hong Kong. However, the standards contained in the manual should only be treated as a framework within which professional judgment must be exercised to reach an optimum solution.

### ***Information and Communication Technology***

The Office of the Government Chief Information Officer has taken initiatives to promote accessible information and communication technology services, including publishing “Web Accessibility Management Handbook”, organizing “Web Accessibility Seminars” and developing Online Resources for web accessibility requirements.

Generally speaking, different Government bureaux and departments have taken separate actions in promoting Universal Design, but there is a lack of a holistic and co-ordinated policy on the incorporation of Universal Design principles in the formulation and implementation of Government policies. There is still much for the Government to do to promote the adoption of Universal Design.

The new Legco Complex (the Complex) is one of the examples. It is not in dispute that the Complex was designed in accordance with updated and sophisticated design and building standards. However, some Legco members and members of the public raised concerns about the barrier free access to the Complex, for instance, it is considered that the footbridge connecting the Complex with Admiralty is too narrow for the wheelchair users to manoeuvre, and part of the footbridge is too steep which might pose potential safety hazards to wheelchair users as well as persons with walking difficulties.

The example is an illustration that the Government should take a holistic and co-ordinated approach and adopt the principles of Universal

Design in the design of all aspects of the Complex, including its surrounding environment and neighbouring facilities to ensure that the Complex is accessible to all people irrespective of their age, disability etc. Moreover, as Universal Design is not only a matter for the designers and experts, it is also essential to engage the “end-users” to provide input in the designing, reviewing and continuous updating stages.

### **Key Recommendations**

The following are some recommendations for the Government to incorporate Universal Design principles in the formulation and implementation of policies and projects.

#### ***Co-ordinated approach***

The Government should adopt a co-ordinated and cross-sectoral approach to the Universal Design concept. Policies in relation to disability must be inclusive and should mainstream disability issues in all policy areas and incorporate the principles of Universal Design.

Given Universal Design policies deal with equal opportunities, the Government should designate a senior officer, preferably at the level of Chief Secretary, who should proactively co-ordinate and monitor the adoption of Universal Design principles in the formulation and implementation of Government policies and action plans. This senior officer must also work closely with the relevant bureaux and departments and organisations to develop relevant standards and guidelines in relation to Universal Design.



### ***Engaging key stakeholders***

The Government should involve key stakeholders, including members of the public, planners, designers, architects, as well as PWDs, and engage them in the early stage of the formulation of policies.

The input of experienced representatives from users organisations and research groups should be ensured at all levels where decisions are made on Universal Design principles. The different concerns and needs of various groups of people can be taken into account.

### ***Training, education and research***

The Government should provide trainings to its officials, members of the public, planners, designers as well as architects to enhance their understanding of the principles and application of Universal Design. Activities for raising public awareness about Universal Design are also recommended.

Incentives should be given to planners, designers, architects and engineers to consider the needs of people of different ages, capabilities and cultural origins and inclusion of Universal Design requirements when designing. This should be supplemented by an information flow on Universal Design to professionals, by making compliance with accessibility standards compulsory.

The Government should set up a framework for the education sector to cultivate the principles of Universal Design. Educationists should be involved in this process and contribute to the introduction of the principles of Universal Design into the curricula. Courses in relation to the teaching of Universal Design as well as teaching material complying

with Universal Design principles are needed. To allocate money to Universal Design training programmes is a way to increase awareness within the education sector.

To facilitate the setting up of research centres on Universal Design and initiate research projects on extensive incorporation of Universal Design principles. Examples of good practice of the use of Universal Design principles should be compiled.

### ***Resources***

To allow for Universal Design action plans to be implemented, adequate financial resources are required, and these should be accompanied by procedures for the conveying of detailed requirements, guidelines and standards. It is also crucial to formulate plans to improve accessibility to the existing built environment as well as information technology and communication by adopting Universal Design principles.

### ***Evaluation***

To evaluate the effectiveness of the application of Universal Design principles to areas, including education, labour, transport as well as information technology and communication, cost-benefit analyses should be carried out.

The Government should work closely with the private sectors in promoting the application of Universal Design principles. Through the concerted efforts of the Government and private sectors, we can ensure that the design of built environment, products as well as services in the local community are usable by all people irrespective of their age and disabilities, to the greatest extent possible, without the need for adaptation or specialized design.

### ***Retrospective improvement to the built environment***

Under the current policy and practice, buildings/premises built before 1997 are not obliged to incorporate barrier free facilities. Relying on the Disability Discrimination Ordinance has proven to be an ineffective approach because civil proceedings are lengthy and tedious, and the Ordinance's application is complaint based which means that wholesale retrospective improvement is not pursuable. Government should consider legislating for gradual incorporation of barrier free facilities and universal design concepts to all pre-1997 buildings/premises where it is practicable to do so.

***Equal Opportunities Commission  
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