

## CHAPTER ONE: WHAT IS ACCESSIBILITY?

### 1. INTRODUCTION

Access is not ‘just about wheelchairs’, but rather refers to how easy it is for everybody to approach, enter and use buildings, outdoors areas and other facilities, independently, without the need for special arrangements. Universal Access is a set of strategies and techniques that aim to improve the accessibility of the built environment, so that all members of society may enjoy this environment equally. To a large degree, universal design and universal access focus on achieving equality and inclusivity of so-called ‘disabled’ members of society.

We may distinguish four models of disability (Wendell, 1996):

1. The moral model which sees disability as punishment as a result of sin.
2. The medical model which sees disability purely as a defect or sickness, which must be cured through medical intervention.
3. The rehabilitation model which regards disability as a type or form of deficiency that ‘must be fixed’ by a rehabilitation professional or other helping professional.
4. The disability model, under which (Pfeiffer, 1998)

“...the problem is defined as a dominating attitude by professionals and others, inadequate support services when compared to society generally, as well as attitudinal, architectural, sensory, cognitive, and economic barriers, and the strong tendency for people to generalize about all persons with disabilities overlooking the large variations within the disability community”

The most applicable definition for Universal Access is the social model, a model which serves to identify disability as a social, rather than medical phenomena.

The United Nations definition of disability (U.N. Decade of Disabled Persons 1983-1992, 1983) reflects, in some part this idea of disability as a social construct:

“Impairment: Any loss of abnormality of psychological, or anatomical structure of function.

Disability: Any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being.

Handicap: A disadvantage for a given individual, resulting from an impairment or disability, that limits or prevents the fulfillment of a role that is normal, depending on age, sex, social and cultural factors, for that individual.

Handicap is therefore a function of the relationship between disabled persons and their environment. It occurs when they encounter cultural, physical or social barriers, which prevent their access to the various systems of society that are available to other citizens. Thus, handicap is the loss or limitation of opportunities to take part in the life of the community on an equal level with others”

It is clear that what stigmatizes and marginalizes disabled people is not their actual impairment or disability, but the social network around them which causes their impairment or disability to be a restriction. Universal accessibility aims at addressing the social roots of disability, and rather than treating disability as a condition to be diagnosed and treated, it sees it rather as a product of social conditions.

## **2. BACKGROUND AND HISTORY OF ACCESSIBLE DESIGN**

The 1950s saw the first movement towards the consideration of designing for people with disabilities. No real articulation of this movement was seen, however, until the 1960s, when a synergy of different elements and forces came together to highlight the importance of taking disabled people into account during the design process.

The 1960s saw the birth of widespread civil rights movement in the United States of America, which in turn helped to inspire the Disability Rights Movement. This movement in turn gave rise to an impetus in design, leading to the formulation of 'Barrier-Free Design' which aimed at removing obstacles in the built environment for persons with severe to moderate forms of functional mobility limitations. In 1961, A.N.S.I. published the A 117.1 standards entitled "Making buildings more accessible to and usable by the physically handicapped." The essential problem with the A.N.S.I. standards was that they were simply standards and did not carry the weight of federal legislation.

In 1964, the Civil Rights Act for Racial Minorities was passed, which acknowledged the narratives of paternalism and care taking, whilst at the same time affording minority groups the tools to create equality of opportunity. Design, in the mid and late 1960s increasingly became seen as a necessary (though not sufficient) condition for achieving civil rights. This understanding was crystallized in 1968 with the passing of the Architectural Barriers Act, which required all buildings constructed, altered or leased with federal funds to be 'barrier-free'.

However, it was acknowledged, towards the end of the 1960s, that Barrier-Free design was insufficient, and still did not embrace the notion of civil rights and non-discrimination; it was viewed as a form of segregation and was seen to provide 'special' treatment for people with serious physical limitations. A more individualized approach was sought after, and accessible design was born in the 1970s as the terminology to describe this new approach. Accessible design

spread in the 1970s to most of the United States and Europe, placing an emphasis on solutions tailored to the individual, and creating situations wherein individuals could be “normalized and integrated” into society. Section 504 of the Rehabilitation Act of 1973 demonstrated the United States government’s commitment to accessible design.

The 1970s also saw the introduction of the concept – introduced by Michael Bednar - that functional capacity for all members of society is increased when environmental barriers are removed. This really opened the door for a universal understanding of accessibility and pointed the way towards a theory of universal accessible design.

The 1980s saw the creation of the so-called ‘disability community’, a group concerned with the dichotomy of us vs. them, and the perceived status of disability as rare and static. They also saw the essential problem of laws providing accessibility, but in so doing, creating feelings and narratives of marginalization and ‘special treatment.’ Ron Mace proposed ‘Universal Access’ as a means forward. For Mace, universal access constituted an awareness of market-related needs and a commonsense approach to making everything that is designed and produced usable to the greatest extent possible by the greatest number of the population.

1984 saw the standardization of the A.N.S.I. guidelines into legislation with the creation of the U.F.A.S. 1988 saw the passing of the Fair Housing Amendments Act, which broadened the scope of buildings requiring specific accessibility.

The Americans with Disabilities Act (A.D.A.) of 1990 broadened the scope of parties responsible for creating accessible environments to include both public and private entities regardless of whether or not they received federal funding. It was around the same time this law was passed, that interest in universal design grew, first in the field of industrial design, but gradually moving outward. The

Telecommunications Act of 1996 required all telecommunication devices, equipment and services to meet the needs of all individuals with disabilities.

### **3. CONTEMPORARY TRENDS IN UNIVERSAL DESIGN**

Simon Darcy (1999) has written extensively on universal access, and he maintains that it has three dimensions:

1. **Physical Access:** which involves persons with physical disabilities requiring the use of wheelchairs or walking aids and, consequently, the provision of e.g. handrails, ramps, lifts and lowered counters.
2. **Sensory Access:** which involves persons with hearing or sight impairments, such as those necessitating the provision of e.g. tactile markings, signs, labels, hearing augmentation-listening systems and audio cues for lifts and lights.
3. **Communication access:** which involves those persons who have difficulty with the written word, vision, speech and those persons with hearing impairments.

Darcy's framework provides a useful methodological framework from which we can base our definitions.

Universal design is an orientation to design in which designers strive to incorporate features that make each design more universally usable – broad and not tailored to the individual. Universal Design can improve the usability of places and objects for people by using so-called “assistive technology” that creates an interface that works seamlessly with the individualized solutions.

The definition of Universal Design that has been adopted by I.D.C. and perhaps most succinctly sums it up is,

“the design of products, service and environments to be usable by all people, to the greatest extent possible, without the need for personal adaptation or special provision”

Connell, Jones, Mace, Mueller, Mullick, Ostroff, Sanford, Steinfeld, Storey and Vanderheiden (1997) have advocated seven principles of universal design:

1. Equitable use

Design should provide the same means of use for all users; identical wherever possible, equivalent when not. Avoid segregating or stigmatizing users, make provisions for privacy, security and safety equally available to all users.

2. Flexibility in use

Designs should provide choice in the methods of use. They should accommodate left or right-handed access or use. Designs should facilitate the user's accuracy and precision, and should provide adaptability to the particular pace of the user.

3. Simple and intuitive to use

Designs should eliminate unnecessary complexity; be consistent with user expectations and intuition; accommodate a wide variety of literacy and language skills; arrange information consistent with its importance; provide effective prompting and feedback before, during a task and after its completion.

4. Perceptible information

Designs should provide different modes (pictorial, text auditing, tactile systems) for redundant presentation of essential information; maximize legibility and comprehension of information, differentiate information elements in ways that can be clearly described i.e. make it easy to give and follow instructions or directions; provide compatibility and comprehension with the variety of techniques or devices used by people with sensory limitations.

5. Tolerance for error

Designs should be such that they arrange elements to minimize hazards and errors; provide warnings of hazards and errors; provide fail safe features; discourage unconscious action in tasks that require special vigilance.

6. Low physical effort

Design's should allow users to maintain a comfortable body position; require reasonable operating forces; minimize repetitive actions; minimize sustained physical effort.

7. Size and space for approach and use

Designs should provide a clear line of sight to important elements for any seated or standing user; make reach to all components within range for any seated or standing user; accommodate variations in hand and grip size; provide adequate space for use of assistive devices or personal helpers.

#### **4. THE SOUTH AFRICAN CONTEXT**

The Employment Equity Bill and Human Rights Laws have reinforced the importance of the social integration of people with special needs into the workplace. Special needs users can be defined as people who are: permanently and temporarily disabled, elderly users, and visitors with prams and pushchairs. This significant development has placed new requirements on the planning and development of the working environment. The primary objective of this provision for people with special needs is to improve the quality of the environment for all users.