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TOURISM FOR ALL: AN INNOVATIVE APPROACH FORENHANCING WELL-BEING OF SPECIAL NEEDSCASE STUDY (ISLAMIC CAIRO –HISTORICAL CITY)

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Abstract

Cities are being increasingly recognized and valued for their contributions to the quality of life of their citizens. Urban environments provide enormous variety of physical and cultural components. Due to social and demographic changes, there is an increase of people with disabilities all over the world. According to UNWTO, people with disabilities represent 2 billion persons or 15 % of the world population .Over the years, persons with disabilities has faced barriers to realizing their right to participate in life in general and in cultural life in particular due to inaccessibility of cultural programs, health problems, and lack of services. Persons with disabilities on average as a group are more likely to experience adverse socio economic outcomes such as poorer health less education and Lower level of employment. The researchers will highlight on how accessibility and accessible tourism can improve and enhance the quality of services, promoting social justice through ensuring healthy and safe life for disabled persons. At the same time from Human right perspective they have the right to live, enjoy and participate in all aspects of life. The research was conducted by using the anthropological qualitative approach; i.e. in-depth interviews and different types of observations. In conclusion, therefore the study advocates the right of Special needs to live and enjoy their lives; to enjoy visiting their cultural heritage sites in an accessible way; and to access museums, galleries, hotels easily..

Keywords

Accessibility; Accessible tourism; Tourism for All; Universal Design

TOURISM FOR ALL: AN INNOVATIVE APPROACH FOR ENHANCING WELL-BEING OF SPECIAL NEEDS
CASE STUDY (ISLAMIC CAIRO –HISTORICAL CITY)

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ABSTRACT: *Cities are being increasingly recognized and valued for their contributions to the quality of life of their citizens. Urban environments provide enormous variety of physical and cultural components. Due to social and demographic changes, there is an increase of people with disabilities all over the world. According to UNWTO, people with disabilities represent 2 billion persons or 15 % of the world population .Over the years, persons with disabilities has faced barriers to realizing their right to participate in life in general and in cultural life in particular due to inaccessibility of cultural programs, health problems, and lack of services. Persons with disabilities on average as a group are more likely to experience adverse socio economic outcomes such as poorer health less education and Lower level of employment. The researchers will highlight on how accessibility and accessible tourism can improve and enhance the quality of services, promoting social justice through ensuring healthy and safe life for disabled persons. At the same time from Human right perspective they have the right to live, enjoy and participate in all aspects of life. The research was conducted by using the anthropological qualitative approach; i.e. in-depth interviews and different types of observations. In conclusion, therefore the study advocates the right of Special needs to live and enjoy their lives; to enjoy visiting their cultural heritage sites in an accessible way; and to access museums, galleries, hotels easily..*

KEYWORDS: *Accessibility; Accessible tourism; Tourism for All; Universal Design*

1. INTRODUCTION

This paper seeks to find solutions and concepts to raise the awareness of people and the tourism sector in general, especially that tourism in Egypt is considered the largest source of the country's economic income, and because Egypt has a massive history starting from (before history, Ancient Egyptian Civilization, Coptic and to the Islamic Civilization). All this should be protected, preserved and maintained to be a theatre of mother civilizations on earth so people, students, special needs all over the world can see it, enjoy it and learn it. The objective of this study are:

A) Accessible tourism and Income Generation

B) Using 3D modeling / Technology , in accessible routes and accessible tourism.

Where the questions of Study are:

A- How can accessible tourism generate income?

B- How can 3D technologies be used in accessible routes and accessible tourism?

C- How can we enhance Islamic Cairo by applying this approach and applications?

Theory; how can we use 3D technologies in tourism, which let us learn and witnessed a new generation of technologies that can be represented to tourists, students and special need persons.

Definitions ;

Tourism: has been identified by "UNDP" as a powerful engine for accelerating socio–economic development & safeguarding biodiversity and cultural heritage.

Accessible Tourism: According to World Tourism Organization (WTO), it is the ongoing endeavor to ensure that tourist destinations, products and services are accessible to all people regardless of their physical limitations, disabilities or age. It encompasses publicly and privately owned tourist locations.

Cultural Heritage: Has been identified by UNESCO as a legacy of physical artifacts and intangible attributes of a group or society that are inherited from past generations maintained in the present and bestowed for the benefit of future generations.

Well-Being: a good or satisfactory condition of existence; a state characterized by health, happiness and prosperity; welfare: to influence the well-being of the nation and its people. (http://www.dictionary.com/browse/well-being)

Islamic Cairo: is the oldest and largest Islamic city with a massive historical sites and buildings that tell us about the story of a great civilization.

2. ACCESSIBLE TOURISM AND ACCESSIBLE ROUTES

2.1 Introduction

In this paper, we are going to set the key concepts of disability, what it means, what are the types of disabilities, what are the problems that disabled people face in their daily lives. What are the standards and laws that have been adopted in several countries? It is an overview of accessible tourism and routes; some of examples will be mentioned.

2.2 Disability in the World

According to the World Bank, one billion people, or 15% of the world population, experience some form of disability. Disability prevalence is higher for developing countries, 1/5 (one fifth) of the estimated global total between 110 million – 190 million people experience significant disabilities. Persons with disabilities on average as a group are more likely to experience adverse socio-economic outcomes than persons without disabilities such as:

- Less Education
- Lower level of employment
- Poorer health

2.3 Definition of Disability

The Washington group defined persons with disabilities as those people who are at a greater risk than the general population for experiencing restrictions in performing specific tasks or participating in role activities due to limitations in basic activity functioning, such as walking, talking, seeing and hearing. Another definition by the Federal Laws in USA defined a person with disability as any person who has a physical or mental impairment that substantially limits one or more major life activities, has a record of such impairment or is regarded as having such impairment.

2.4 Types of Disabilities

- Vision impairment
- Deaf or Hard of hearing
- Mental Health
- Intellectual disability
- Brain injury
- Autism Spectrum Disorder
- Physical Disability Types

Cerebral Palsy is a brain damage caused by brain injury or abnormal development of the brain that occurs before birth, during birth or after birth. Cerebral palsy affects body movement, muscle control and muscle coordination.

Spina Bifida is a type of birth defect called a neural tube defect. It occurs when the bones of the spine (vertebrae) do not form properly around part of the spinal cord.

Poliomyelitis is an infectious viral disease that affects the central nervous system and can cause temporary or permanent paralysis

- Stroke
- Head Injury
- Spinal Cord injury

3. DISABILITY IN EGYPT

In Egypt, data on disability are not accurate for a lot of reasons, one of which is that families do not mention that they have disable persons especially the mentally retarded ones.

3.1 Definition of Disability in Egypt

A disabled person means someone who needs rehabilitation service to meet the basic needs in society because impairment such as movement, related function , sensory function and mental function brings physical, social , economic and psychological disability. According to Jica it is a Japanese cooperation between Egypt and Japan, started when Japan provided technical cooperation in 1954 followed by grant aid in 1973 and loan in 1974 . 1977 Jica Egypt office was established, report March 2002, there are approximately 5% of the total population has some form of disability, unfortunately no comprehensive data on disabilities is currently available.

3.2 Sources of Data on Disability in Egypt are:

1- Census
2- Sample Surveys

Egypt has a national Census (Dr Bothaina EL Deeb under - Disability in Egypt-2015) every 10 years since 1907 containing data on disability. The census provides data about the categories of disabled persons classified according to type, age, gender and distribution. Reasons for inaccuracy of the results concerning the disability in Egypt could be as:
- Customs and Traditions of some families.
- Low Educational levels of some families
- Failure of the media to explain disability and the services provided to disable persons by the community.
- Lack of awareness
- The general population census questionnaire does not include categories of disability which may affect the number of disable persons.

Table 1: Distribution of Disabled persons by type of Disability in Egypt 1996

Type	Male	Female	Total
Blind	10.7	11.1	10.8
Lose one eye	1.8	1.3	1.6
Deaf-Dumb	3.1	3.5	3.2
Deaf	1.6	1.9	1.7
Lose of Arms	2.1	0.6	1.6
Lose of legs	4.1	1.4	3.2
Mental Retardation	17.5	15.3	16.7
Poliomyelitis	12.8	12.1	12.5
Paralyze total or partial	19.4	17.6	18.7
Other Disabilities	23.1	30.6	25.8
Total	100	100	100

According to National community for Disabled People (NCD) National Community for Disabled in Egypt, they mentioned that disabled persons in Egypt it is around 10 – 15 million, around 15% persons of the population in 2014. In 2016, the number is getting higher around 17 % of the population.

Table 2: Disability by Type & Categories 2016

Sex	Total	Seeing	Hearing	Mobility	Cognets	Self-Care	Comment
Female	12.188	2.553	949	6.089	546	676	1.377
Male	16.536	3.530	1.207	7.537	895	1.198	2.169
Total	28.724	6.082	2.156	13.625	1.442	1.873	3.545

According to WBO (World Bank Organization), mentally retarded in Egypt 25 % of persons specially in Upper and Lower Egypt. Deaf disability the second large disability in Egypt according to NCD 20 % of disabled persons. Third largest disability in Egypt is blind & visual impairment people , according to WHO 2016[3],

1 million blind persons and 3 million visually impaired. Forth disability in Egypt is hearing loss, according to WHO is prevalent in 16% of the population of Egypt . This means 13 million people across all age groups.

3.3 Problems Facing Disability in Egypt

- Lack of services by the government.
- Lack of proper utilities (hotels – Cafes – Restaurants – Streets ..etc…).
- Lack of schools especially in poor areas which have the highest rate of disabilities.
- Lack of awareness
- Lack of trained people in national authorities and local communities in how to deal with disabled people.

3.4 Recommendations in order to have accurate data on disability we need:

- Issues to be considered by interviews :
    - Establishing trust is vital for quality responses
    - Be sensitive to the language you use.
    - Treat persons with disability as you would treat anyone else.
- To educate the local community about disabilities, how to treat disable persons, how to accept them.
- Universal design should be applied in Egypt in communication with the proper authorities to be executed in the future.

4. ACCESSIBLE TOURISM

In this section, we will talk about Tourism in general, Tourism in Egypt, Accessible tourism and types of tourism.

4.1 Tourism in General

UNDP identifies tourism in general as "a powerful engine for accelerating socio- economic development and safeguarding biodiversity and cultural heritage ".

In another form, Tourism can be identified as the activities of persons, visitors. A visitor is someone who is making a visit to a main destination outside her/his usual environment for less in a year for other purposes. Tourism considered a rapidly growing phenomenon and has become one of the largest industries in the world; the impact of tourism is extremely varied. In addition, tourism is increasingly gaining dominance in the socio economic development especially in developing countries.

There are new approaches for applying sustainability in every aspects of life, Sustainable Tourism, well-Being is one of these aspects, and in the few lines below we will give more details about sustainable tourism and well-being types. Sustainable tourism is an industry committed to making a low impact on the environment and local culture, while helping to generate future employment for local people. The positive of sustainable tourism is to ensure that development is a positive experience for local people; tourism companies; and tourists themselves.

4.2   Types of Well-Being :

- Physical well-being.
- Economic well-being.
- Social well-being.
- Development and activity.
- Emotional well-being.
- Psychological well-being.
- Life satisfaction.
- Domain specific satisfaction.
- Others

Well-being is a positive outcome that is meaningful for people and for many sectors of society, because it tells us that people perceive that their lives are going well. Good living conditions (e.g., housing, employment) are fundamental to well-being. Tracking these conditions is important for public policy. However, many indicators that measure living conditions fail to measure what people think and feel about their lives. Therefore, Accessibility and accessible tourism it's one important aspect of well-being.

4.3   Accessible Tourism Definition

According to United Nations of World Tourism Organization (UNWTO), Accessible tourism refer to the adaptation of environments and tourism products and services to enable access, use and enjoyment by all users, under the principles of universal design. Accessible Tourism as well is the ongoing Endeavour to ensure tourist destination, products and services are accessible to all people regardless of their physical limitations, disabilities or age it encompasses publicly and privately owned tourist .

4.4   Accessible Tourism In the World

According to UNWTO, people with disabilities represent 2 billion people of the world population 15%. In some countries the social and economic situation of this group favors their participation in tourism if destinations are well prepared to receive and care for special needs people. In 2000, the percentage of people over 60 was 11% of world population, which means this number will double to 22% of world population in 2050. This number will present opportunities for the tourism sector [2]. Many senior tourists can have a stable income more leisure time and greater availability; therefore demand accessible services in order to travel without difficulty. According to a recent study by ENAT Foundation and Partners 2015, less than 10% of tourism suppliers in Europe offer accessible tourism services while demand for such services is set to increase due to the ageing population and continuing upward trend in market demand.

4.5   Types of Tourism

- Accessible Tourism
- Medical Tourism
- Business Tourism
- Religious Tourism
- Cultural Tourism
- Garden Tourism
- Sports Tourism
- Space Tourism
- Sustainable Tourism
- Water Tourism

4.6   New types have been added such as

- Island tourism
- Adventure Tourism
- Disaster Tourism
- Education Tourism
- Heritage Tourism
- Yoga Tourism
- Eco Tourism

4.7 Universal Design Definition

Universal Design (UD), is the design of products and environments to be usable by all people to the greatest extent possible, without the need for adaptation or specialized design (Accessible Tourism Future by Special issue editorial).

The intent of universal design concept is to simplify life for everyone by making products, communications and the built environment more usable by more people at little or no extra cost. The universal Design concept targets all people of all ages, sizes and abilities, as well UD is a design approach reflecting a way of understanding people's needs.

4.8 Advantages of Universal Design

- Enlarges the target markets of destinations
- Ensures that more pleasant experience can be delivered
- Increase the market base reduce seasonality
- Support the competitiveness of destinations (Buhabis 2000)

Universal design should provide a better accessible tourism future that should enhance the competitiveness of tourism destinations and organizations.

Fig. 1 Accessible streets in Europe

Fig. 2 Tactile paving for Blind

All Tourists want unique experiences tailored to their needs. Therefore, facilitating travel for people with disability is not only a human rights imperative, but also an exceptional business opportunity.

5. TOURISM IN EGYPT

Tourism is the largest economic income and part of Egypt, as 25% of Egypt (GDP) is coming from Tourism sector. A lot of services and products get involve in Tourism income in Egypt like Hotels, museums, etc . The most famous type of tourism in Egypt is MASS TOURISM. Mass Tourism doesn't care about the value of the monuments or archaeological buildings or sites, but they just count for how many tourists are in the country regardless their levels and/or categories, this type of tourism considered now in Europe as dangerous type because of the disorganizing of tourists going in and out to archaeological sites without control, can cause dangerous effects to the monuments and its authenticity . In the next few lines I am trying to tackle the problem from accessible tourism point of view in both sides, on one hand accessible tourism should be sustainable and on the other hand this new type can safeguard heritage and generate income. Tourist Arrivals in Egypt decreased to 533 thousand in June from 574 thousand in May 2017. Tourist arrivals in Egypt averaged 473.20 thousand from 1982-2017, reaching an all-time high of 1487 thousand in October 2010 and a record low of 57 thousand in Feb 1991.

5.1 Disability and/or Accessibility Access in Egypt

Business and institutions in Egypt generally do not make special accommodations for persons with disabilities and Egyptian authorities do not enforce laws mandating access to transportation communication and public buildings by persons with disabilities. Pedestrian sidewalks and walkways are limited uneven, high and sometimes used by cars, motorcycles. In Egypt, there is no architectural code, or building code, therefore they need to issue a decree for building codes in general and universal design code in particular.

5.2 Accessible Tourism Standards

How organizations and social society tried to solve accessibility and enhance the life of disabled person by set accessibility legal framework and technical standards.

We will mention the most famous organization and their framework:
International guidelines, resolutions, and standards (tourism for all –an overview UNWTO)

A. United Nations Organization (UNO)
B. World Tourism Organization (UNWTO)
C. European Union Institutions (ENAT)

A. United Nations Organization (UNO)

The regulatory framework consolidating Tourism-for-All, both domestically and international is recent. Before this framework existed and especially in international organizations, recognition of the rights of persons with disability was gradually consolidated. During its first phase of working on disability, the United Nations organizations strove to ensure the welfare of people with disability.

In December 1975, the general assembly adopted the "Declaration on the rights of disables persons", which stated that persons with disabilities have the same civil and political rights as other human beings.

The UN declared 1981 as the "International year of disabled persons ", with a view to promoting the participation of persons with disabilities in social life and in the development of society, as well as to creating a specific action plan targeting such persons. An outcome of that initiative was the" World Programme of action concerning Disabled persons" this programme states that persons with disabilities are entitled to the same rights as all other human beings and equal opportunities. The World Programme of Action is a global strategy to enhance disability prevention, rehabilitation and equalization of opportunities, which pertains to fill participation of persons with disabilities in social life and national development.

According to section 134 of the programme "member states should ensure that persons with disabilities have the same opportunities for recreational activities as other citizens. This involves the possibility of using restaurants, cinemas, theaters, libraries, as well as holiday resorts, sports, arenas,

hotels, beaches and other places for recreation Member states should take action to remove all obstacles to this effect.

In 1993, the UN approved the "Standard Rules on the Equalization of opportunities for Persons with Disabilities ", which comprise 22 human rights based action. In 2007, The International Convention on the rights of persons with disabilities, was created mainly to promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disability. This Convention marks a clear evolution in understanding the situation of persons with disabilities from the human rights perspective.

B. World Tourism Organization (UNWTO)

In 1980, the WTO approved the "Manila Declaration " stating that the rights to tourism entails for society, the duty of providing for its citizens the best practical effective and non- discriminatory access to this type of activity. On the basis of Manila declaration, the organization launched actions, agreements and negotiations to facilitate travel and stay at tourism destinations by persons travelling outside their country of residence. In 1999, the General Assembly adopted "the Global Code of Ethics for Tourism". It is a framework of reference and a set of principles to guide all the stakeholders in the sector towards responsible and sustainable development of global tourism.

Global Code of Ethics, highlight the equality of all persons the need to promote the rights of persons with any kind of disability , and the elimination of any obstacles limiting the practice of tourism, described as one of the best possible experiences of the sustained growth of free time. In 2005, the document "creating tourism opportunities for handicapped people" was updated and published under the title "Accessible Tourism for all ", WTO set list of requirements should be met in tourism facilities and sites. By 2009, "The Declaration on the Facilitation of tourist travel "was approved it called upon states:
a. To make their tourism, tourism sites and establishments accessible to persons with disabilities and to offer them special facilities.
b. To offer special training to the staff of tourism sites, establishment, and tourism related services.
c. To publish clear and detailed information on existing receptive facilities.

In 2011, UNWTO, enhances the efforts with reinforce its cooperation with other organization, like "AES Foundation" ONCE Foundation" ENAT Foundation".

C. European Union Institutions

In 1974, "Social Action Programme "was one of the first actions concerning disability adopted by the European council, focusing on improving the living conditions of vulnerable groups. In 1981, the European council approved "the social integration of handicapped people" with a view of fostering actions in favor of these groups of people. In 1994, "White paper on European social policy, adopted by the European Commission, was a step forward for the European Union. In 1996, The European Council expresses its commitment to the principles of non-discrimination on the grounds of disability and of equality of opportunities for all.

In 1999, The European Union and treaty of Amsterdam, restarted respect for human rights and individual freedoms, and set forth that more effective action should be adopted to combat discrimination on the grounds of disability. In 2000, European council established a general framework for equal treatment in employment.

The Council of Europe presented an action plan (2006-2015) adopted on 5th April 2006, to promote the rights and full participation of people with disability in society. In 2007, the Council of Europe adopted a resolution on achieving full participation through universal design.

In 2010, the Charter of Fundamental Rights of the European Union, it states that to strength the protection of fundamental rights in the light of changes in society, social progress and scientific and technological developments. Because had special situation regarding right of persons and disabilities from longtime, EU countries made a decree about disabilities it's mentioned that" Everyone has the right to enjoy the arts, everybody has the right to take part in sports, everyone has the right to go to hotels, restaurants and cafes. Wheelchair users cannot go to a concert if there are only stairs in the

concert hall. A blind person cannot enjoy paintings if there are no subtitles. A person with intellectual disability cannot enjoy a book if there is no easy to read version of it.

In other hand, the convention on the rights of persons with disabilities (UNCRPS) requires governments to make sure that all persons with disabilities can (By measures and standards accessible for all):

a. Enjoy culture in an accessible way; enjoy TV films and theatre plays in an accessible way.
b. Access museums, galleries, hotels easily.
c. Deaf persons have the right to use their sign language.

Various countries across Europe have taken action to make culture, sports, tourism accessible for persons with disabilities in most places like hotels, museums, restaurants, people who work there must take training in how to cater for guests with disabilities.

5.3 Accessible Tourism Income Generation

As we mentioned before that, tourism in general in all over the world can be a solid income generation for countries. On the other hand to make sure that archaeological sites and heritage be sustainably developed most countries in Europe exclude mass tourism which one of the reasons it cause damage to heritage. Countries in Europe and Africa goes to creative solutions and create new types of tourism like PPT approach, Eco tourism and more. Therefore, Accessible tourism is even bigger income generation for all tourism sectors.

Making historical cities accessible to citizens and visitors is a winning strategy for the long term, sustainability of heritage sites as increased visitor numbers have a triple effect through the tourism economy. Income from tourism, directly and indirectly can provide greater financial means for conservation and urban regeneration. Catering for the accessible tourism market typically brings additional advantages to local business by extending the traditional holiday seasons and increasing the demand for a wide range of services, (by Jesus Hermandez , Accessible Routes in Historic Cities, 2007). Improving accessibility brings greater sustainability to the business, community and at the same time trying to improve quality of life for residents and tourists alike, indeed accessible tourism benefit everyone.

6. ACCESSIBLE ROUTES DEFINITION

An accessible historical route is a pedestrian pathway, which takes visitors on a pre- determined route that allows them to experience an environment of historical and cultural significance (V ia Libre , accessible routes 2007).

Another definition of Accessible routes is a continuous unobstructed path connecting all accessible elements and spaces of a building or facility. Interior accessible routes may include corridors, floors, ramps, elevator, lifts and clear floor space at fixtures.

Fig. 3 Entrance of Historical Buildings and toilets accessible

6.1   Accessible Historical Route Standards and designs

In most cases the route has a defined start and finish point passing through a wider historical cultural environment; in other cases it entails an idea of free movement within the city center without any starting or ending point (Via libre ,Accessible routes 2007).
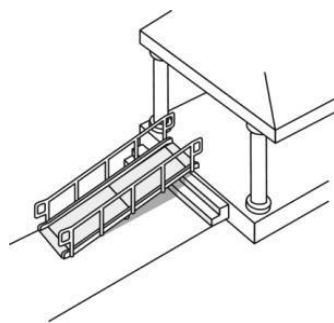
The route may be followed in whole or in part, according to the visitors interests, abilities and the time available for the visit, it may also be followed in reverse. To quality it as an "Accessible route it must provide comfortable and equitable access for all visitors, including persons with disabilities. The path itself must have a continuous clear width and free height, and a smooth surface which has no major obstacles and no steeps gradients, allowing easy access for people who use wheelchairs or other walking aids "rollators, walkers, walking sticks" the route will thus be easy to access for parents with small children and babies in push-chairs or prams. The path must have suitable guidance on the route itself for easy navigation, this may be achieved with signage, maps, plaques or other means of guidance.

Accessibility applies not only to the physical access of the route. Certain points of interest along the route should be identified and an explanation of the historical and cultural significance of these should be available in accessible formats. Alternative means of experiencing the buildings or environment may be offered through recorded (spoken) information, text displays, tactical information and models , digital simulations , etc …
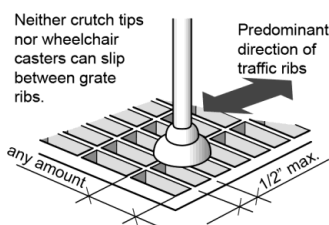
Basic information about the route and the points of interest should be available from the city's tourist information office and websites. Information should be produced in printed form, in Braille and in digital formats (including audio description where possible). This will enable visitors to learn about the route and plan their visit or review the route after a visit and re-live the experience with their friends and families. While the main purpose of the accessible historical route is to provide an interesting cultural experience for visitors.

6.2   Urban Design for Accessibility

Accessibility standards vary from one country to another, according to the national legal norms and requirements. Regional and local laws and city planning codes may also apply. When designing and implementing the accessible route, the respective access norms for each city should be followed; the accessible historical route was audited in order to provide an objective description and assessment of the accessibility of its characteristics and features.

Portable Ramp Used at Inaccessible Building Entrance

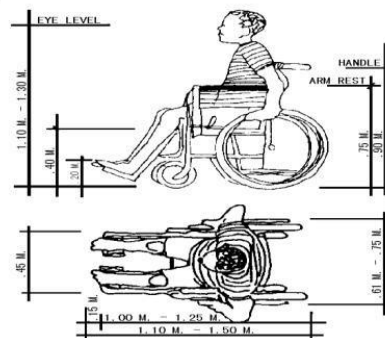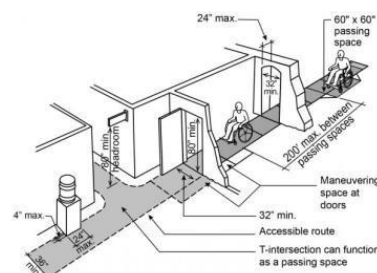Grate Opening in Pedestrian Travel Direction

FIG. 2 WHEELCHAIR DIMENSIONS

Basic Features of an Accessible Route

6.3   Example of Accessible Routes in Historical Cities:

League of Historical and Accessible Cities (LHAC) is a project of the European Foundation Center's Disability Thematic Network. They made special examples of accessible historical routes in Europe such:

LUCCA , is a small city in the heart of Italy with a unique historical center. The monumental historical center hosts numerous churches of great architectural importance (Lucca has been called the city with 100 churches), towers and impressive palazzos. A lot of Associations, stakeholders and volunteers involved in this project like "Fondazione Bancadel Monte di Lucca" . In Addition, the accessibility in LUCCA is considered unique, but as part of the LHAC elements of this work are surely replicable and suitable to be adopted by other cities.

It is possible to preserve heritage and history by giving modern solutions to improve life quality simultaneously stimulating economic development. The involvement of persons with disability is a primary element, in order to convey practical suggestions based on real needs. Raising awareness of disability issues in the community has been an important bi- product of the initiative, important steps on the road to inclusion (by Fondazione Lucca).

Fig. 4 Traffic light for Deaf

Fig. 5 Board for Deaf and Blind

6.4 3D Technologies / Modeling and its role in Accessibility

Cultural Heritage (CH) researchers have been working with virtual models and augmented reality (AR) for many years, to printout the results in order to understand them better is the next logical steps, because multisensory experiences lead to a better understanding.

In fact, touching an object means understanding and remembering it better. Rapid prototyping has the ability bring things to a human scale, which means that tactile models have to fit in our hands, and details have to be adapted to the size of our fingers. Yet, there are no binding standards for the accessibility and educational value of tactile models.

Three Dimensional printing as a tool will not only become vital in the field of reconstruction of objects but also for research, documentations, preservations and educational purposes, and it has the potential to serve these purposes in an accessible way. As arts and culture are opened to new publics, the need for an anthropocentric approach and inclusive non- discriminating art is growing. There will not be one best solution rather there will be medium specific solutions, and a strong need to integrate the design for all philosophy in the practical implementations.

6.5 Porting 3D to the Mobile platforms

Smart phones or tablets could become very effective devices to present visual data. In the specific cultural heritage (CH) domain, this is definitely the case of the systems supporting the visitors of museums or of historical cities (several interactive, virtual guides have been developed and experimented with the recently based on portable devices, (M.Ioanndes;E. Quake, 3D research challenges , 2014).

Fig. 6 Eagle eyed artificial intelligence to prevent Children Vision loss

Fig. 7 Smart Glasses for blind

Fig. 8 3D printed Paintings @ Museum del Perdo Madrid To be Touched by everyone

Fig. 9 Pervasive SUB complies all subtitles of TV channels & send them to a central server which forwards them to Smartphone's and tablets for (DEAF – Blind persons)

7. HISTORIC CITIES AND APPLYING ACCESSIBILITY CASE STUDY ((ISLAMIC CAIRO – EGYPT)

S. Mutal defined historic city as "Those active human settlements strongly conditioned by a physical structure originating in the past and recognizable as representing the evolution of its people". Another definition by ICOMOS, this definition was a rose last few years , Historic Landscape Urban (HUL) , is refer to the urban area as the result of a historic layering of cultural and natural values and attributes extending beyond the notion of historic center so include the boarder when context and its geographical setting.

7.1 Standard and Legal framework for Historic City

The world heritage cities programme is one of thematic programmes formally adopted by the world heritage committee (WHC). Under the cities programmes, the Historic Urban Landscape (HUL) initiative was launched in 2005 to raise awareness of the need to safeguard historic cities by including inherited values and cultural significance of their wider context into strategies of conservation and urban development.

The (HUL) initiative emerged from the international conference, world heritage and contemporary architecture, managing the historic urban landscape held in Vienna (Austria) in May 2005, which issued the" Vienna Memorandum "(Stephan Biance , 2014). Vienna Memorandum represented a consensus product considered valuable as a historic record documenting the progress in understanding and the state of the debate at the time.

Historic cities considered the most complete and certainly the most tangible incarnation of culture. The hallmarks of historic cities could be hailed under three main topics:
A. The sense of integrity produced by the combined pursuit of spiritual, emotional and material expressions that act in connection with each other.
B. The progressive enrichment and differentiation of physical structures, through a continuous and incremental evolution.
C. The mutual interaction between people and their built environment a feedback that works both ways and helps to anchor the imagination in a given site or territory.

In other word, historic cities are unique and genuine in their value, to be protected and promoted and safeguarded there are some design principles for historic cities should be applied such as (Plant Design Standards, 2015):
- Restoration
- Reconstruction
- Rehabilitation

- Adaptive Reuse (AR)
- New Construction
- Additions
- Alterations
- Demolition
- Relocation

7.2 Management of Historic City (HC)

Successful conservation is acknowledge to require the involvement of many different professionals including city planners, architects, sociologists and administrators (Sennis Rodwell, 2009). The key issues of management can be identified:

- Need to treat a historic center in the context of the wider city.
- The need to adapt standardized planning techniques to suit local conditions, historic urban texture and scale adopting a bottom up rather than a top down approach.
- The need to respect the intangible cultural traditions of a historic city.
- The importance of simple buildings and vernacular architecture in distinguish a historic city from a group of monuments.
- The prevention of out of scale uses and buildings.
- The importance of treating the existing historic fabric on equal terms with other factors in the general planning process.
- The principal that environmental capacity should be the determining factor in transport and traffic.
- The importance of securing beneficial use within the community through a mixture of residential, commercial, industrial and leisure activities that accord with the scale of the existing buildings and urban grain.
- The importance of regular maintenance using traditional materials and building techniques (S.Rodwell, 2009).

In other words, heritage can contribute to the life a city in many different ways, in tourism, education, emergence of creative industries like (fashion design, arts, crafts), attract investment and create employment related to heritage.

Therefore, must to establish, enhance heritage policies like (national authorities – civil society – international organization- heritage professionals – private companies) and heritage governance include cooperation, negotiation and regulation. Heritage Governance refers to the interaction and networking between public and private sectors both in horizontal way (ministries- stakeholders) and vertical ways (NGO, society).

7.3 The City in Islam and Arab World

Great cities were centers of manufacture, producing staple goods for a local market, textiles, metal work, pottery ,leather goods & proceeds foods.

7.4 The shape of the City (design)

A city was a place where merchants and artisans workers, scholars studied and taught, rulers or governors held court guarded by their soldiers, judges administrated justice, villagers and dwellers in the desert came to sell their products and buy what they needed (Albert Horani, 1991).

The structure of a city had to accommodate all their needs. In the Medina at the heart of every great city, there lay two kinds of complexes of buildings. One of them included the main congregational mosque, which was a place of meeting and study as well as praying, near it would be the house of the chief (EL QADI), schools of higher learning, shops of books and candles. The other complex would include the central market place (SOUQ) the main point of exchange, near it would be the shops of textiles, jewelry, spices'. The market area was mainly for exchange goods were kept, locked and guarded. Quarters contains amass of small streets and alleys opening off a main street, at some period .The

quarters had gates which were shut and guarded at night. A quarter might contains a few hundred or thousand inhabitants it contents of place of worship, subsidiary market (Suwaqya), public bath (hamam).

In Islamic Arab world cities have been a source of fascination of their inhabitants. One aspects of (this fascination has been the representation of their outward appearance, whether by verbal or visual means (Nicholas Warner,ARCE 1980).From the most famous Islamic Arab Cities, we have Qayrwan, Marrachech, Basra, Damscus and Islamic Cairo.

7.5 Islamic Cairo

The historic area of Islamic Cairo is the largest. This old city telling a story of a civilization more than 50 centuries old could be told by the variety of monuments, which stand throughout the land. The advent of Islam early in the 7th century A.D. ushered in a new era(ETA, 1997).

Cairo had a different view, Cairo was a new creation during the early centuries of Islamic rule in Egypt, the center of power and government had moved inland from Alexandria to the Nile, and a successes of urban centers had been built to the north of the Byzantine Babylon, to create first Islamic Capital. Al Fustat founded by Amr ibn el A's,Qatai'Al Askar finally AL Qahira.(Howard lin,1991).At its heart lay the Azhar Mosque, built by Fatimid's for the teaching of Islam, within a short distance lay the central street which ran from the Northern gate of the city (Bab EL Futouh) to the southern gate (Bab Zwila),and a long both sides of it, and alleys leading off it, were mosques, schools , shops and warehouses of merchants in cloth, spices', gold and silver are remain there.

7.6 General Problems Facing Islamic Cairo

Islamic Cairo has attracted interest and studies since 1950's due to historical and cultural importance (Ghada Abada, 2013). Today Islamic Cairo is at the heart of the metropolitan area, the historic city is under immense pressure for change leading to the erosion of its identity.

Because of the richness of Islamic Cairo UNESCO has listed IC since 1979 on its world heritage list. To be listed on UNESCO list is has criteria that should be exist for a site, fortunately we have at IC several criteria that protect the value and the authenticity of a site.

UNESCO listed under one of the "Cities of Human Heritage ". Transformation of Cairo in particular Islamic Cairo put the area under many problems whether on short term or long ones. Some of these problems are:

- Legal and institutional issues, IC lacks an institutional framework that is efficient , transparent and accountable.
- Lack of administrative framework, there is no cooperation between different national authorities which lead most of the time to conflict between parties .
- Lack of untrained local officials or staff.
- One of the major threats to urban rehabilitation in Islamic Cairo is the existing "demolition Decrees" that can only be reversed or change through very complicated process.
- Lack of organized database that maintain ownership records of different plots.
- Infiltration of commercial activities into residential segments of Islamic Cairo's neighborhoods.
- The majority of the inhabitants cannot afford direct cash of rehabilitation process.
- Lack of car for private cars, penetration of high velocity transportation into Islamic Cairo, considered one of the major problems that face the area.
- Lack of appropriate tourists facilities like (toilets, restaurants, Telephone cabinet, internet, information desk), with acceptable hygiene level.
- Lack of appropriate infrastructure like (roads, lighting, Signage, garbage boxes) .
- Lack of Adaptive Reuse (AR) plans of existing monuments and buildings.
- No buffer zones are marked to keep the distance between residential complex and buildings, monuments complex.
- Lack of funds to maintain the damages of monuments.
- Lack of proper planning processes in conservation activities.
- Pollution due to factories in the area.
- Failure to follow up with the maintenance of registered buildings.

- Unclear borders of Islamic Cairo

The preservation problems of Islamic Cairo are huge and far surpass those being confronted by any other Arab city.

7.7 Rehabilitation of Islamic Cairo

Because of all these problems facing Islamic Cairo, private sectors, NGO's, grassroots initiatives and UNESCO, have made lot of studies, planning and projects in the area. We will summarize as follow:

- 1990 nessed new official interest in the area
- 1992 an earthquake hit Cairo which caused the deterioration of historic buildings, monuments. Let UNESCO, Agha Khan Trust for cultural ran some projects to safeguard the rest of this magnificent place.
- 2005 witnessed adjacent and removal of alleys of the northern city hall as part of renovation project for the northern Cairo city wall called URHC (Abada, 2011).

7.8 Recommendation of Islamic Cairo

A. Documentation and immediate protection of buildings with peculiar architectural value.
B. Development of protection measures for traditional buildings.
C. Developments of Legal and institutional measures
D. Adaptive Reuse approach to be used which generate income and safeguard the heritage .
E. Cooperation between national authorities
F. Apply heritage governance
G. Create new ways of traffic that are eco-friendly to safeguard heritage such as (taftaf)
H. Tourist information desk to help tourists.
I. trained Persons to deal with most kind of disabilities (Tour guide Knows Sign language- Internet Connections with brille format to help – Escorts if needed for any special need's person needed ..etc.

7.9 Accessibility and Virtual Heritage in Islamic Cairo (Examples)

Examples are made in Egypt to safeguard heritage. First, there has been international conference entitled "Virtual Heritage Cairo", 1st international conference, held in February 2017. In this conference they raised and discussed a number of interesting subjects such as virtual reality in education, archaeology, and accessibility.

Virtual Heritage Cairo is the digital, online platform of the international collaborative network for cultural feed of VH platforms of medieval Cairo. The network aims to develop smart and interactive platforms for the documentation, preservation and engagement with Islamic Cairo culture, social and built heritage. Islamic Cairo a world heritage site, remains anonymous to those who have never visited Cairo. This platform look onto the potentials of reducing technical and logistics, limitations to produce virtual and immersive reality platforms of the old city that enable cultural terrains to be integrated into the digital models of the buildings and streets . (Mohaned Abdel Momen –VHC, 2017).

Second research maritime archaeology in Egypt extends over two decades since the mid- nineties, several major sites of maritime nature were discovered either on land or underwater. Almost none of those sites was presented to the public, several debatable issues concerning the preservation of those sites have resin since then. Moreover, from the educational point of view it became obvious that providing education to the large number of archaeology students an aspects of maritime archaeology is quite problematic, particularly in the case of underwater sites which can be seen only by divers. Hence the role of Virtual Reality became more evident in overcoming obstacles that are facing researchers and educators in the field (Wael Akl, 2017).

Third a team from Egypt and EV have implemented VR for realizing this fact for a Egyptian sites in Egypt using precise 3D laser scanning technology to provide the fundamental geometrical data for 3D stereoscopic visualizing into a virtual campus, students as well as instructors all over the globe are now able to carry out lectures virtually onsite instead of classroom (Emad Khalil 2017).

8. RECOMMENDATIONS

Improving accessibility and facilities, transportation, attractions and destinations more generally, requires the collaboration of a wide range of stakeholders including architects, designers, economists, local councils, policy makers, travelers with disabilities, historians and archeologists who can achieve and develops the concept of accessible tourism.

In other hand, collaboration with research centers, universities and private firms made possible the development of new technological devices like: SMART CANE, a tool that communicate with underground sensors to orient visually impaired people along the route and provide information to them (B.Martina 2016). Tactile accessible screens for tourist information accessible maps, audio guides, traffic lights combined with cyber passes, have been adopted in some cities.

As per UNESCO, in order to ensure participation of persons with disabilities in cultural life the following objectives should be achieved :

- Taking appropriate measures to ensure that disable persons can access local, regional and national cultural life.
- To ensure that people with disabilities can develop and utilize their creative artistic and intellectual potential for their own benefit and of their communities.
- Optional services should be applied like :
- Equipment availability to be bowered or rent like wheelchairs, hand powered ..etc.
- Foreign languages services.
- Audio and Video guides they should use sign language or subtitling for deaf visitors.
- Publicity and marketing of accessible routes.

Sustainability to avoid damaging our heritage we must establish and attains the concept of sustainability approach in tourism development.

9. REASONS TO AIM TO SUSTAINABILITY

As we have observed, the demand of sustainability tourism is growing up. So, many tourist activities are implementing good environmental and social practices and choosing ecological certifications and brands. (Wikipedia).

Invest in sustainability is not only necessary, but it is also beneficial. Make eco-friendly choices in a tourist accommodation is useful for three reasons at least:
A. It is created an added value for the guests more interested in this issue.
B. It is reduced the costs and consumptions (energy, water and wasted in general), the CO_2 emissions.
C. Attention for the environment is contagious and allow to do network. It's a positive energy to be able to innovate our business.

There are some sustainable forms of tourism have been applied in several countries like:
- Eco Tourism
- Community Based Tourism
- Green Tourism
- Rare Tourism

In Egypt, we must apply sustainability to our Egyptian heritage by:
- Cooperation among different parties whom are related to heritage to draw up an identified policy for site management.
- Tourism planning and management of archaeological sites.

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