

## Status of Austin city on global level in terms of universal accessibility

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### Article Information

### ABSTRACT

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In the advancement of human race and technology, urbanization is at its peak at present.. Services, infrastructure in Urban environments, providing facilities, depending upon their design, can hinder or validate the access, decide involvements of society. In near future, it is probalitized that about 625 million people, around 15 in every hundred might be persons with disabilities, will be living in urban centers. Sustainable urbanization can only be achieved if it is inclusive of all members of society. The inaccessibility currently faced by the differently abled people in highly populated cities of the world poses major threat to urbanization. Hence it becomes the need of the hour to assess the cities we live in to understand the issues related to universal accessibility of the city. This study intends to assess the Austin city in terms of universal accessibility by comparing it to the cities rated as world's most universally accessible cities. This investigation will use evidences provided by most advanced literature reviews, statistical survey, case studies and assessment based on universal accessibility guidelines provided United Nations organization. The study will present the assessment about current status of Austin city in terms of universal accessibility.

**Keywords:** Universal accessibility, Public spaces, Design guidelines, United Nations organization.

## 1. INTRODUCTION

Universal accessibility is way of lifestyle which enables people with different abilities and restrictions able to use facilities, amenities & services without need of adaption or specialized design provided for inhabitants of the area. Approximately 16% of world's population experience being differently able in 2023 and the number is expected to increase in near future with increase in elderly aged group. Universal accessibility status of a city is measured not only on its infrastructural availability but its adaptive policies and regulations applied for future development. Our cities are not planned with all type of users in mind. a one-size-fits all approach is taken all too often, when designing everything from infrastructure to policy and buildings to signage. This means navigating an urban

landscape filled with inaccessible public spaces for the differently able people.

By the year 2050, large population will live in urban area, making the issue of accessible spaces and universal design of utmost importance. Cities must undergo a radical shift, if they will to cater spaces accessible to all.

### 1.1 UNIVERSALLY ACESIBLE CITIES OF THE WORLD

With review of 3500 tourists with disabilities, the organization valuable 500 has ranked most accessible cities in the world. European Commission (EC) and the European Disability Forum (EDF) awards every year access city award to most universally accessible cities. Valuable 500, ED , EDF, Urban area design guidelines on inclusive cities by Asian development bank (ADB)

rank the cities universal accessibility status using major parameters mentioned in subheading 2.1

Over the globe, in the recent time, there have emerged many assuring initiatives and better practices that have successfully inspired accessibility and the inclusion of differently abled people, their rights, aspirations and contributions in the urban development context.

## 2. CITY UNIVERSAL ACCESSIBILITY STATUS PARAMETERS

Inclusive environment of a city is judged by different organizations in different countries like **Access city awards in European commission, UCLG congress, etc.** the criteria and parameters followed by these organizations for ensuring universal accessibility of the city are as follows

United cities and local governments (UCLG) congress norms which focus on infrastructure, legislative framework, measurable strategies and awareness programs –

- Involvement of vulnerable groups in cities, particularly aged and differently abled in city development planning,
- Designing and monitoring. Use of indicators in the design of urban planning policies and measurable strategies.
- Local and national level Inter-organization coordination.
- Policy makers, urban planners, service providers and designers awareness on the Innovation, social and economic benefits.
- Knowledge and training for professionals and students on building accessible cities.
- Government leadership and assured stand on inclusive urban development.
- Provisions for safe and accessible public spaces

European commission (EC) access city awards are judged on following norms which focuses mainly on city planning and infrastructure.

- the built environment and public spaces;
- transport and related infrastructure;
- Information and communication, including; public facilities and services.

European disability forum (ED) awards are regulated on following criteria which focus on city infrastructure and advanced technology use.

- built environment and public spaces
- transport and related infrastructure
- information and communication, including new technologies (ICTs)
- public facilities and services

Asian Development bank (ADB) inclusive cities award are moderated on following criteria which mainly focuses on legislative framework and accessible tourism.

- Strategic Context and Regulatory Framework

- Inclusive Urban Development
- Sustainable Development Goals
- Long-term strategy development by the state
- Safety, equality and Accessibility of physical environment
- International and National Laws and Regulations

According to key indicators provided by UCLG congress based on WHO age friendly city framework, disaster risk reduction sendai framework, EC, EDF, ADB following common key parameters are considered for measuring universal accessibility status of a city.

### 2.1 LIST OF PARAMETERS

1. Criteria 1 -Involvement of differently abled and aged people in design and monitoring urban development transformations.
2. Criteria 2 -Measurable strategies with key indicators in urban design and planning policies.
3. Criteria 3 -Awareness and understanding by all members of urban planning and design team members.
4. Criteria 4 -Training of future human resource like students and professionals.
5. Criteria 5 – Provision of safe and accessible public infrastructure.
6. Criteria 6 - Legislative measures provision along with rules and regulations for universal accessibility friendly environment.

### 2.1. 2.2. SIGNIFICANCE OF PARAMETERS

To understand the status of any city at global level in terms of universal accessibility, we analyzed the existing cities awarded with accessibility and inclusiveness awards. We studied the criteria and norms applied by the organizations judging the participant cities. Based on the common outcome of the analysis resulting in six criteria upon which a cities global status can be compared with other cities awarded as most accessible in the world. Following criteria explain the details considered for the comparison.

1. Criteria 1 - Involvement of differently abled and aged people in design and monitoring urban development transformations.

The development of design friendly for differently abled and aged people requires two major criteria i.e. experience and expertise. The design and technology expert can provide solutions of the given problems which are wholesomely experienced and analyzed by the differently abled and senior members, especially of influential status or leaders of the society. As a result,

the act serves the purpose of making people aware of the rights and the facts.

2. Criteria 2 -Measurable strategies with key indicators in urban design and planning policies.

Strategies implemented for increased inclusiveness of the differently members may provide partial results where the availability of the is facilities is restricted to only certain class, part of society or geographical area up to which effectiveness of the implementation exists. In some cases, the infrastructure is provided but doesn't provide the quality of the extent required. To avoid such discrepancy and truly check the effectiveness of the implementation, indicators become eminent. Strategies like website accessible to all, reservations in employment and exemptions for differently abled, survey and reviews through programs are few of the examples of the indicators.

3. Criteria 3 -Awareness and understanding by all members of urban planning and design team members. Though the facilities and infrastructure is provided to differently abled, the awareness and importance of its use must be explained to the end user. Due to lack of awareness, people remain reluctant and in extension lose their integration in the society. Effective use of communication media for both sided communication in regularly abled and differently abled people becomes substantial. As an example understanding of braille by all type of people and availability of documents in braille, availability of context according to flexibility of the user proves beneficial.

4. Criteria 4 -Training of future human resource like students and professionals.

Concept of universal accessibility has recently become popular as people are becoming aware of its benefits for all. The future users and designers of the society when taught and trained in the inclusive thinking, effective and innovative solutions are found. These future members of society become architects, engineers and policy makers in the society who can ensure better implementation and results for a better tomorrow.

5. Criteria 5 – Provision of safe and accessible public infrastructure.

In many cases, the infrastructure provided for making the place universally accessible is not fully safe and has many conditions for its use. The term “safe” regards the consistency and quality of the infrastructure and “accessible” regards the ease of end user to use the facility without proving the worthiness for it. Effectiveness of fifth criteria depends on the result of effective implementation of criteria 1, 2 and 3. A well-developed policy measured with indicators upon implementation and being used by fully aware users can only ensure safe and accessible public infrastructure.

Criteria 6 - Legislative measures provision along with rules and regulations for universal accessibility friendly environment.

In spite all the privative measures, safe implementations and timely measurements of the inclusiveness policies it all remains dependent on the people who abide it. No society is an exception for having the elements that would disobey and disregard the commonly accepted regulations for the betterment. In such cases, legislative measures become inevitable approach to resist and correct the injustice. The criteria use key indicators implemented for measurement of the strategies is used to judge the decisions. Hence the differently abled citizens rights needs to be protected by the legislative framework which becomes their accessibility In the constitution.

### 2.3. CASE STUDIES

Following case studies represent the cities taking part in access city awards 2020 with important titles under which universal accessibility criteria's are satisfied.

a. Warsaw Poland - ‘Principles of universal design embedded in the city strategy’ A well versed 10-year action plan, Investment in freeing barriers, Measuring satisfaction index among population with disabilities, Universal design: The goal for the future policies.

b. Castillo de la Plana Spain - ‘Accessibility at the heart of all local policies and strategies’ Accessibility Plan, Transport and the pedestrian environment, Upgrading public facilities, Access to information, An accessible and inclusive city

c. Tartu Estonia - The issue of equitable access to infrastructure and public spaces for citizens and visitors is crucial for Chania. Removing barriers to access, Innovation in parking accesibility, Accessible transport for end users, Accessible tourism, Working with the disability community and Mobility Plan

d. Skellefteå Sweden - ‘Accessibility is good for everyone’ Tackling cognitive challenges, Public space policy, ‘Skellefteå for everyone’ accessible sports and work, Raising awareness, mainstreaming disability.

### 2.4 STATUS OF AUSTIN CITY TEXAS BASED ON COMPARATIVE ANALYSIS WITH THE PARAMETERS STATED ABOVE

We have analyzed different reports provided by Austin city government for the implementation of universally accessible infrastructure and effectiveness of inclusive environment.

Criteria number	Provision made by Austin Texas that satisfy the criteria
Criteria 1	The committee currently is involved with the Travis County Constable Precinct 5 Disabled Parking Enforcement Program. The committee has established an advisory mentorship with the Recreation ADA Transition Planning

	Committee and parks. providing timely feedback regarding the development of the 2016 Sidewalk Master Plan to the Public works Sidewalk Program. Annual programs like <b>Cinema Touching Disability Film Festival, universally accessible restaurants, libraries, parks and museums</b> built and maintained by government of Austin.
<b>Criteria 2</b>	Website accessibility, un discriminated employment, effective communication for differently abled people in city programs and services, accommodation provisions, policy modification (eg. Relief from service surcharge for auxiliary aids and services)
<b>Criteria 3</b>	city's activities and services, consisting skilled interpreters of sign language, Braille documents and other ways of making information and communications more accessible. Programs implemented by city government – <b>ARTBOX PROGRAM</b> – enhancement of Austin Transportation's (ATD) traffic signal (utility) cabinets with artwork created by local artists for community-inspiration. <b>CREATIVE CROSSWALKS</b> – use of color, texture and patterns to enliven city streets. <b>GEORGIAN ACRES MOBILITY HUB</b> - community hub for smart mobility.
<b>Criteria 4</b>	Access and public policy committee includes variety of city-sponsored task forces, advocating for citizens and visitors with disabilities. The committee also literates the community on the inevitability of accessible parking, including laws and regulations for accessible parking. To nominate a local business for their accessibility and welcoming attitude toward people with disabilities Austin

	Access Awards Nomination is formed.
<b>Criteria 5</b>	Smart mobility provisions, Urban planning and design policies, smart and universal access to public facilities etc Eg. TAPCO <b>TAPCO</b> is technology in Austin for testing Connected Vehicle Crosswalk Warning System for the pedestrians. This will test the ability of the system for improvement in pedestrian safety when the drivers are approaching street crossing pedestrians. <b>VELODYNE</b> is system which analyzes the real time traffic data for road safety and mobility using AI powered software included with laser sensors called LiDAR. <b>NTT-SMART CITY PLATFORMS</b> studies
<b>Criteria 6</b>	Austin city follows Americans with disabilities act (ADA) as mandatory for all infrastructure and planning. These also have to comply with Texas architectural barrier act in Texas government code chapter 469, Human resource code and accessibility standards for Texas chapter 121. Legislations implements in Title 6 of Civil rights act of 1964. – Discrimination shall not be done against a person with a disability or deny benefits under programs that receives federal financial assistance. City has provided ways for people involvement in governance in different ways E.g. Speak up Austin program, Austin 311, boards and commissions participation, Council meeting participation and

The above table notations are based on Austin Texas govt official website and reports published by the same till July 2023.

### 3. Discussion

While understanding a city in terms of its inclusive environment, it is necessary to check availability, sustainability and measurability of its policies and framework. Cities in the realization of inclusion and accessibility operate in different contexts at different stages. In this regard, developing practices and quality assurance on inclusion and accessibility requires a multi-stakeholder engagement. Government plays and the major stake holder and policy provider while end user is the smallest but most important member. Other agencies providing and maintaining the common goals of accessibility are managed by the policy makers providing necessary guidelines.

#### 3.1. Limitations

- This is a qualitative analysis and does not consider any quantitative statistical analysis of measurements.
- The parameters considered by different organizations are considered as general regulations depending on their purpose.
- The cities geographical, economic, demographical and political details along with historical background are not considered for the judgement of current status.
- This paper does not make any statement regarding status of any city as in official but only intends to put forth the understanding of authors.
- The parameters considered by the authors are subjected to design guidelines and policies of universal accessibility framed by different organization of global status.

### 4. CONCLUSION

Though the concept of Universal design originated in US, the principles of UD and other similar approaches have been globally adopted, such as “Design for All” in Europe and “Inclusive Design” in the UK.

Equitability, flexibility, simple and intuitive use, perceptibility of information, tolerance for error, low physical effort, and size and space for approach and use are the seven principals of universal design considered as base for understanding, designing and implementing inclusive environment for all. (Source: *The Principles of Universal Design Version 2.0. (1997). The Center for Universal Design, NC State University*)

The city of Austin, Texas has been working to achieve the accessibility in universal terms providing an inclusive environment. The government has taken substantial steps making sure to include the end user and stake holders of the society. Universal accessibility friendly regulations applied in Austin city are observed to be following all the major parameters based on data analysis and qualifies to be nominated as accessible city in terms of UCLG congress based on WHO age

friendly city framework, disaster risk reduction sendai framework, EC, EDF and ADB.

Based on the reports it has been indicated that the programs and the framework implemented for the universal accessibility is sustainable and constantly being built towards improvements. Strict legislative regulations specify the assured fulfillment of the sustainable development goals. Hence the comparative analysis of the Austin city with cities awarded as most accessible in the world based on common parameters of the organization judging the accessibility, it can be concluded that city of Austin, Texas has all the necessary policy framework, infrastructure and legislation to be called as one of the most universally accessible cities of the world.

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