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**With Disabilities,
children, AND ELDERs.**



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ABSTRACT

There is no need to justify building cities to benefit all users. Building cities considering only the needs of a fraction of their urban residents is what needs to be justified. And yet, we have grown accustomed to cities where urban public spaces and services are planned, designed, and built ignoring the needs of people with disabilities, of small children and their caretakers, and of elders, thus limiting their access. Against this background, this monograph aims to advance urban planning practices that can effectively contribute to enabling people with disabilities, children, and elders to access to the opportunities for work, socialization, and enjoyment that cities offer. That is, urban forms and urban systems that are purposefully shaped to allow people access to parks and public spaces and transportation systems, and to actively participate in civic life, regardless of their level of ability. For that purpose, this monograph is organized in two parts. Part one provides context to the evolution of the conversation on people with disabilities, particularly from the perspective of cities in LAC. Part two is a compendium of case studies on cities that have built spaces and transit systems that help remove the barriers that people with disabilities, elders, and small children face in cities.

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***Do people, regardless
of identity, have equal
access to public services
and spaces and to
the economic, social
and cultural benefits
of living in cities?***



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11 → Authors



INTRO

18 → Cities as Spaces for Opportunities for All: Building Public Spaces for People with Disabilities, Children, and Elders.

36 → Disability is not a Rarity; it is a Basic Color in the Palette of Human Diversity.

32 → Inclusive Cities: Urban Spaces for Life.

38 → The Future of our Cities in Everyone's Reach.



THEORY

44 → A Historical Framework for Thinking about the Rights of People with Disabilities.

68 → Inclusive and Accessible Cities.

82 → Why do people with disabilities have to adapt to environments instead of environments adapting to people with disabilities?

104 → Plural Identities and Public Space.



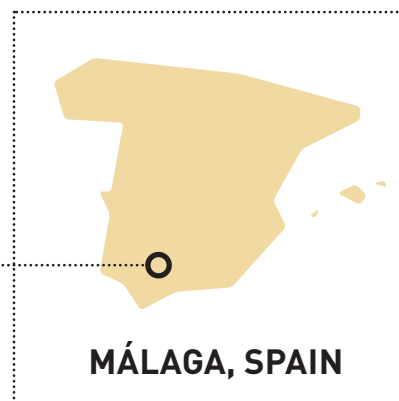
CASE STUDIES

- 122 → **Building an Inclusive City Through Play: Inclusive public spaces and recreational parks.**



- 150 → **City Hall Embraces Early Childhood Development Reaching an Underserved Population.**

- 172 → **Creating Spaces for Adults with Limited Mobility: Participatory Governance, Social Inclusion, and Public Planning.**



- 188 → **Day Center Program.**

202 → Tandana and Guápulo Park's Role in Quito's Transformation Toward a More Inclusive City.

230 → Technologies and Mobile Apps that Promote Inclusion.




242 → Access to Transport.

268 → The citizen as engine of accessibility an inclusion: La Paz Public Transport System.



284 → An Accesible Urban Landscape: The Portland Transit Mall.

A photograph of a man and a woman on a bus. The man, wearing glasses and a dark jacket, is standing and looking out the window. The woman is seated in a wheelchair, also looking out the window. The bus interior is visible, including handrails and windows. The image has a light blue overlay.

***Building spaces that PWD
can access, that enrich
the experiences of children,
and that are friendly to
the needs of elders is simply
a good investment.***

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**CITIES AS SPACES FOR
OPPORTUNITIES FOR ALL:**

BUILDING PUBLIC SPACES FOR PEOPLE

**With DiSaBiLiTiEs,
children, AND ELDERS.**

| Nora Libertun de Duren



There is no need to justify building cities to benefit all users. Building cities considering only the needs of a fraction of their urban residents is what needs to be justified.

And yet, we have grown accustomed to cities — urban public spaces and services — planned, designed, and built ignoring the needs of People With Disabilities (PWD), of small children and their caretakers, and of elders, thus limiting access for these groups. It is difficult to definitively measure how many people are being left out of urban spaces, particularly considering the lack of adequate ways to measure changes in the needs of the population. In addition, censuses of PWD are scarce and definitions differ between countries, often changing over time (Bickenbach, Posarac, Cieza, et al., 2015).¹

1. For example, in many countries, 20 years ago, mental health conditions, except in cases of severe mental disorders, would not be recognized by relevant regulations as a reason to be assessed as disabled. Similarly, musculoskeletal disorders, including lower back pain, were simply not considered disabilities but normal incidents of ageing. These days, both mental health conditions and musculoskeletal disorders are commonly recognized as leading causes of working age disability. Yet, social security laws in many countries still limit the definition of disability to physical and sensory conditions (Bickenbach et al., 2015).



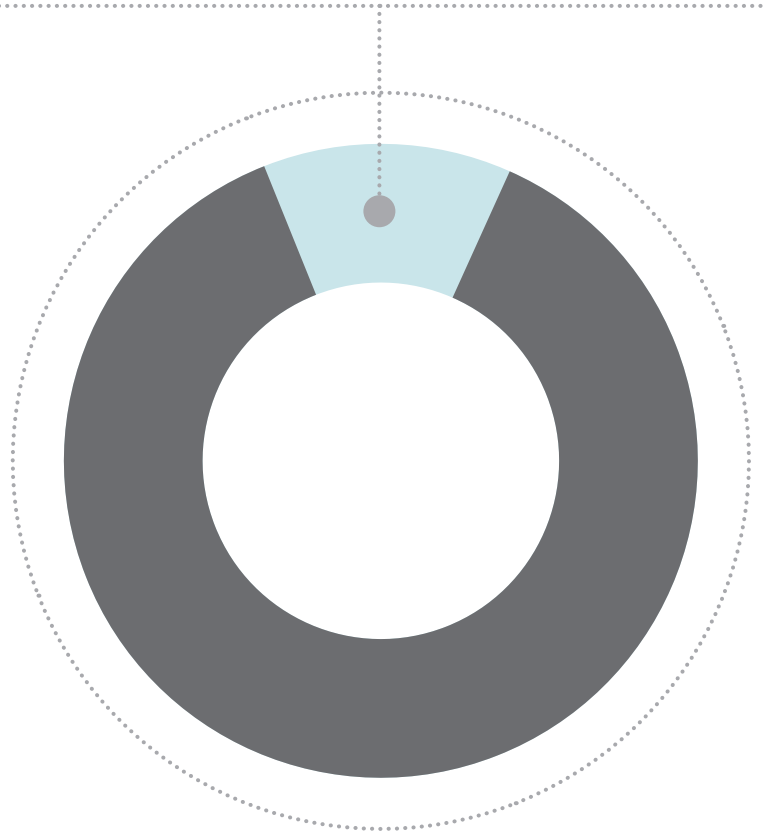
Currently, it is estimated that PWD make up about 13 percent of the 654 million residents of Latin America and the Caribbean (LAC).

Duryea, Salazar, and Caicedo, 2019

It is also estimated that 25 percent of LAC residents are younger than 15 years old and that, by 2030, 12 percent of LAC's population will be older than 65 years old (UNDESA, 2019). Further, 60 percent of LAC women have a child younger than 15 years in their household and almost half of these women are single mothers (Gallup, 2020). While not all of these categories are exclusive, it is evident that accessibility and inclusion in cities affects a significant proportion of the population.

Still, everywhere in our cities we encounter spaces that can only be accessed by climbing stairs or walking through narrow paths, systems that can only be navigated by reading written instructions, or buses and metros that cannot be accessed with a wheel chair or a stroller and mostly serve office jobs commuters. As these urban practices are ubiquitous, they have come to define our expectations for what needs can and cannot be accommodated in public spaces and systems.

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And thus, advocating for cities that work for all—that is, cities built to enable physical access to public spaces and services for all people—often faces resistance as unrealistic and requiring justification. Under the arguments of cost savings or impractical building requirements, cities disregard existing legal commitments to support universal access. The [UN Convention on the Rights of Persons with Disabilities](#) is a binding document ratified by most LAC countries. In addition, the [World Health Organization Age-Friendly Cities Framework](#), the [Sustainable Development Goals](#), the [New Urban Agenda](#), and the [Sendai Framework for Disaster Risk Reduction](#) all refer to leaving no one behind. In addition, the Housing and [Urban Development Sector Framework](#) and the [Diversity Action Plan](#) of the Inter-American Development Bank call for more inclusive urban systems and public spaces. This normative background provides a strong mandate for cities to shape a more inclusive and accessible urban future for all.

Importantly, building spaces that PWD can access, that enrich the experiences of children, and that are friendly to the needs of elders is simply a good investment.

Perhaps current views that limit accessibility are remnants of the narrowly utilitarian rationale guiding the urban plans of the industrial cities of last century. Cities planned to enable factories for mass production, in search of efficiencies in moving workers and merchandise (Hall, 2014), are clearly obsolete today when access to information and communication technologies marks the pace of economic production. By enabling access to urban centers and to transit for more people, cities would only increase economic opportunities and economic productivity. Allowing more people to transit the city independently better enables them—and their caretakers—to participate in the job market (Duryea et al., 2019). It is estimated that the costs associated with excluding PWD from the labor force in low- and middle-income countries leads to losses equal to roughly 7 percent of national GDP (UN, 2016).

And yet, we can only speculate about the magnitude of the benefits of an inclusive city. To begin with, there is a paucity of data on PWD, children, and elders. These data are needed to capture the degree to which cities are inclusive in relation to access and use of public spaces, mobility, and urban services, and to document existing avenues to engage with local governance institutions. Further, data are needed to assess the actual levels of participation of PWD in political life. There is no comprehensive data on the impacts of inclusive cities because they are only just beginning to be built. Finally, other impacts related to the wellbeing of all residents are equally meaningful though harder to quantify, such as the value of allowing more social interaction among generations, of promoting cities that help transcend stereotypes and nurture empathy, and of the mental health benefits of interacting in urban spaces designed to appeal to all of our senses, including sounds, smells, and textures.


Against this background, this monograph aims to advance urban planning practices that can effectively contribute to enabling PWD, children, and elders' access to the opportunities for work, socialization, and enjoyment that cities offer.

That is, urban forms and urban systems that are purposefully shaped to allow people access to parks and public spaces and transportation systems, and to actively participate in civic life, regardless of their level of ability. For that purpose, the monograph is organized in two parts. Part one provides context to the evolution of the conversation on PWD, particularly from the perspective of cities in LAC. Part two is a compendium of case studies on cities that have built spaces and transit systems that help remove the barriers that PWD, elders, and small children face in cities.

Part one includes four chapters about PWD and cities from a variety of vantage points: history, urban planning tools, normative frameworks, and the human capabilities approach. **In chapter one**, Lance Freeman and Nora Libertun trace the long history of the struggle for PWD to be accepted and included in wider society, which is a precondition for an inclusive city. The chapter examines the ways PWD have been viewed and understood in the Americas in modern times. It portrays how our understanding of disability has evolved from perceiving it as an absolute, categorical condition determined at the individual level to understanding a disability as the outcome of the relationship between a human being and the person's cultural, social, and physical environment. Accordingly, it postulates that the design and operation of urban systems, the interplay between institutions and people, and the spatial layouts and programming of public spaces are essential tools to enable all people to be full participants in their society.

In chapter two, Juan Pablo Salazar builds on this approach and reflects on the main urban planning tools required to design and implement truly accessible and inclusive urban spaces: reasonable accommodations and universal design. A reasonable accommodation refers to an ex-post adjustment made to an environment to enable a person with a disability to enjoy the same access and participation as others. The universal design approach implies planning for the needs of a diverse population from the initial phases of the project. Both approaches, as well as a combination of them, are needed to make cities inclusive.





***The costs associated with
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In chapter three, Victor Pineda, Luis Artieda, Katherine Chacón Martínez, and Federico Poitier review the normative framework for making cities inclusive of PWD. They highlight that accessibility is increasingly being recognized as a fundamental human right as it is a precondition for older people and PWD to live independently and participate fully and equally in a society. They note that the inclusion of accessibility in the urban development process can be divided into three key elements: physical environments and mobility systems, adequate housing, and information and digital infrastructure. In addition, they call for rigorous data and metrics on projects at the city level to ensure progress on the inclusive city agenda.

Part one concludes with chapter four, by Ann Mitchell, which explores the complex interaction between individual identities and public spaces. After delineating the multidimensionality of the concept of social identity, she explores what additional insights can be gleaned from Nobel Prize winning economist and philosopher Amartya Sen's human capabilities approach (Sen, 1992). This approach brings the key concepts of freedom and choice, among others, to the analysis of identity. Accordingly, when evaluating the level of human wellbeing, metrics should not be based on the amount of resources but rather on capabilities—that is, the real freedoms people have to be and to do what they value. The chapter concludes with a reflection on how recognizing the plurality of individual affiliations can contribute to fostering social inclusion in cities.

Part two presents nine case studies, each portraying a project that aimed to make a city more inclusive. The cases encompass initiatives from governments, civil organizations, and private entities; some of them are more focused on removing urban barriers that affect PWD, while others aim to promote activities that further social inclusion. The projects include actions in real and virtual spaces; in spaces to stay and to transit; and in cities in Brazil, Bolivia, Colombia, Ecuador, Israel, the United States, and Spain. Importantly, all cases presented are real projects (not plans, guidelines, or expectations) that have been successfully implemented.

The first three cases focus on the role that playgrounds and opportunities for play in public spaces has in making cities inclusive for children, elders, and PWD. In the Campinas, Brazil, case study, Catarina Mastellaro focuses on how inclusive playgrounds and equipment allow children with and without disabilities to play together. Campinas' efforts started as a demand from representatives of civil society—in particular, mothers of children with disabilities who lacked access to public facilities where their children could play—and later grew into a municipal policy to promote an inclusive and peaceful city that works for all. The interventions described are relevant to other cities because they are not expensive and can be

easily replicated, even in a piecemeal fashion. However, to succeed, these projects should be combined with promoting a culture that favors respect and interaction among people of all abilities.

Gordon La Forge describes the development of 15-minute neighborhoods

in Tel Aviv, Israel. These neighborhoods focus on the needs of families with small children, whereby every parent should be only a 15-minute walk from most services for young children. This concept also aligns with investments in sidewalks, streets, parks, public transportation, and facilities with services families need to help their infants and toddlers flourish. Municipal officials sought to deliver expanded services to families in greatest need, including lower-income residents, asylum seekers, migrant workers, and the Arab minority living in the ancient city of Jaffa. The case shows the challenges of establishing links with families in vulnerable situations, and the importance of committing extra resources to reach out to children in the most disadvantaged communities.

In the next case study, in Malaga, Spain, Carolyn Angius explores the challenges and opportunities of serving an aging population and some of the approaches being used by the city to increase access to the public realm for older adults and those with limited physical mobility. As Malaga strives to meet the needs of a growing elderly population within fiscal constraints, city departments have implemented innovative approaches to participatory governance, urban planning, and design. In addition to designing housing and parks that fit the needs of people with limited mobility, Malaga implemented participatory governance structures, such as seniors' associations, that empower older residents and expand the reach of city services without significant additional public spending.

In the fourth case, in Bogota, Colombia, Maria Camila Ariza also shows how cities can provide better service for elders, albeit with a focus on intergenerational and productive activities. She portrays how a network of integrated community centers for seniors provides opportunities to participate in social and cultural events, and to get to basic medical and psychological services. In addition, the centers are made accessible via dedicated buses and universal design sidewalks. Among the centers' programs are activities whereby youngsters and elders share knowledge and emotional support. Also, the centers support gardening as a way to connect seniors to original rural cultures, as some of them moved from rural areas. Gardens are also a way to launch entrepreneurial activities by providing people with the basic ingredients needed to produce edible and cosmetic products. It is worth underscoring that there is an institutional framework at the city level that provides continuity in the funding for the centers.

In the fifth case study, Vanessa Guerra presents an integral approach to social inclusion in Quito, Ecuador. The case study explores how Tandana, an initiative by a non-for-profit organization, integrates nature, human, and animal rights. Tandana implements sustainable practices that include vulnerable groups in an all-accessible urban public space, which consists of a vegan restaurant, a cultural center, urban gardens, and the Guápulo Scenic overlook park. The income generated by the restaurant allows the initiative to sponsor several activities, such as fair-trade bazaars in the park that include vendors who have cognitive disabilities and classes on agroecological practices, among others. This project highlights the importance of a clear vision, a strong community organization, long-term partnerships, and a financial mechanism that ensures long-term sustainability.

In the sixth case study, Mariana Pinzon and Suzanne Duryea explore the role new information and communication technologies, such as apps that can be downloaded to mobile phones, can play in making cities more accessible for PWD. They point out that, while new technologies can empower PWD as a result of having more information on accessibility in their living environment, information alone is not enough to ensure collective action and responsiveness by service providers. Thus, meaningful changes can only be achieved by combining technological innovations with changes in the urban environment.

The last four cases focus on accessible urban transit systems. Lauramaría Pedraza, Manuel Rodríguez Porcel, and Diana Sandoval explore accessible transit systems in Brazil and Bolivia. In Brazil, they focus on the transit systems in the cities of Curitiba and Uberlandia. Curitiba is implementing its vision to make all of its transportation system fully accessible to PWD by 2025, including its entire Bus Rapid Transit fleet, sidewalks, and platforms. The municipality also launched social media campaigns to promote inclusive attitudes among the city's residents. In Uberlandia, inclusion has been mandated in municipal regulations for over 30 years. In 2012, it became the first city in Brazil to have a fully accessible bus fleet. Since then, Uberlandia has continued to work to provide accessibility at every level and is today one of the favorite destinations of athletes looking for accessible sports facilities to train for competitions such as the Paralympic Games. In the case study in La Paz and El Alto, Bolivia, the authors depict an innovative cable-car system that provides a mass transit solution adapted to the unique topography of the area. The system has been built following inclusive design parameters, staff has been trained to support the needs of all patrons, especially PWD and elders. A bus fleet complements the cable-car system and enables residents with reduced mobility or in areas with limited accessibility to be connected to the main transportation system. Consistently, these cases show that an inclusive transit system increases the value of the system for the whole population and that a long-term commitment and a strong regulatory framework are the backbones of these projects.

In the last case study, Lance Freeman presents the Portland Transit Mall in the United States, which was designed to be accessible to as many people as possible. He emphasizes that an integrated transit system, as opposed to one offering paratransit system services, provides better services for people with and without disabilities. It illustrates that with forethought, with the proper institutional mechanisms in place (including a planning process that routinely includes input from persons with disabilities), and with technical know-how such as that encompassed by universal design principles, the urban landscape can be developed in a manner that is inclusive and welcoming for all. Because the Mall was designed as the focal point for the Portland metropolitan area, both literally and figuratively, it signals that accessibility for all is important. It provides each user with first-hand experience of a truly accessible landscape and an appreciation for how the built environment can be designed to be inclusive in a beautiful and unobtrusive way.

The sum of these essays and case studies shows that many cities are making important progress but that there is still much more to do to make cities truly inclusive today and tomorrow, by planning for the demographic changes that are already having an impact on LAC cities. Urban planning and urban design should and could remove environmental obstacles and thus increase the independence of movement and enjoyment of spaces for most people. Ultimately, cities need to be built to increase the freedom and capabilities of individuals by making opportunities available to them.



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***Urban design could
remove environmental
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of spaces for most people.***







INCLUSIVE CITIES: URBAN SPACES FOR LIFE

Juan Pablo Bonilla

LAC is one of the most urbanized regions in the world. Cities are an important driver of innovation, productivity, and economic growth. Cities can also contribute significantly to improved standards of living and upward social mobility.

In cities, social interactions can lead to social transformations.

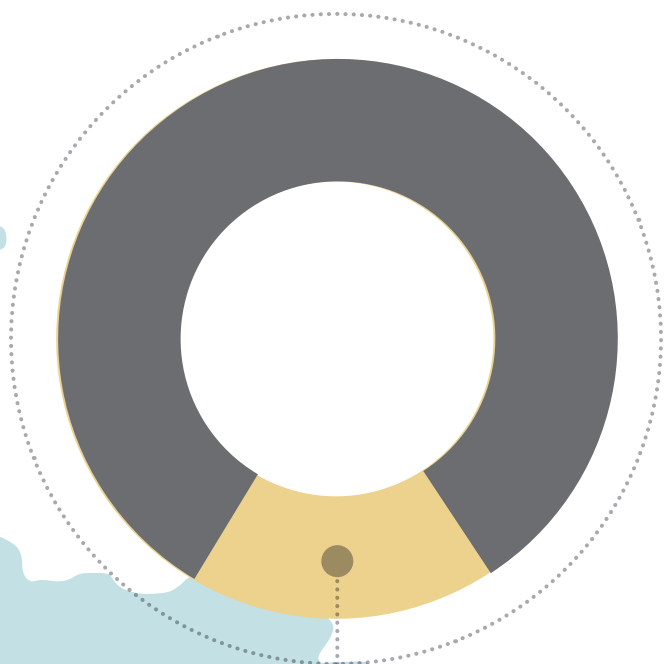
Cities are a meeting point that facilitates the creation of social movements that seek to ensure rights for the most vulnerable. Urban design affects the way we experience the city and directly impacts quality of life.

However, the benefits of urbanization are not equally distributed. Cities in LAC exhibit high levels of socio-spatial exclusion, while urban spaces are not designed to accommodate the diverse needs of the whole population.

Minors represent a large share of the urban poor. There are up to 40 million street children in LAC, of which 7 million are considered homeless. LAC is the fastest aging region in the world, bringing new challenges related to the growth in the number of people with functional dependence, which could exceed 27 million by 2050. About 13 percent of the region's population has some type of disability.

Despite these numbers, PWD, children, and elders are still not considered in the design of urban spaces and systems. Thus, an estimated 20 percent of the urban population experiences barriers to their effective inclusion in urban spaces and systems (Pineda, Artieda, Chacón, et al, 2020). These barriers can be physical, limiting how a person moves from one place to the other in a city; economical, limiting access to employment opportunities; and social, limiting interaction and participation in public spaces.

This study aims to draw attention to the importance of developing public urban spaces and systems that consider the needs of all urban residents along their life cycle, with a special focus on the needs of children, the elderly, and people with disabilities.



There are up to 40 million street children in LAC, of which 7 million are considered homeless.

To tackle social exclusion in our cities we need to design policies and solutions that meet the needs of all urban dwellers.

For that, we need to understand how social vulnerability intersects with identity. We also need to understand that every citizen has a right to enjoy public spaces and to access basic urban services -such as water, electricity and sanitation- and basic social services -such as education and health-, no matter their age or physical limitations.

Cities are geographical spaces where the provision of all types of public services intersect. Thus, this study is multisectoral by nature. It highlights case studies that range from inclusive urban transit initiatives to examples of using technology for social inclusion to urban planning projects that design urban spaces to integrate children with disabilities.

It also showcases lessons learned from a wide array of cities from around the world—Tel Aviv in the Middle East; Portland in North America; Malaga in Europe; and Bogota, Campinas, Curitiba, Urbelandia, La Paz, and Quito in LAC—that have championed the inclusion of children, the elderly, and people with different disabilities into their urban design, increasing access to urban spaces.

Cities need to be accessible and enjoyable for all. We hope that this study provides city leaders, policymakers, and urban planners with practical tools to make LAC cities more inclusive.



**DISABILITY IS NOT A RARITY;
IT IS A BASIC COLOR IN THE PALETTE
OF HUMAN DIVERSITY.**







DISABILITY IS NOT A RARITY; IT IS A BASIC COLOR IN THE PALETTE OF HUMAN DIVERSITY.

| Marcelo Cabrol

Let me start with a figure: it is calculated that 13 percent of the population of LAC has some form of disability. That 13 percent is a lot of people, over 80 million. If it were a country, it would have more people than Colombia, Peru, or Argentina. We are in an era where there is continuous talk of “people-centered design.” And here a big question arises:

Can we really do people-centered design without including such a large part of the population?

A city is for all its inhabitants. There should not be people who cannot enjoy it in the same way as everyone else. A city is all of us and under that principle we must design our projects, whatever the city, country, or sector. Accessibility is not a “favor,” it is a right and we have to treat it as such.

The UN Convention on the Rights of Persons with Disabilities gives us a governing framework to start working with but, above all, it gives us a change of mentality. Until now, having a physical, sensory, or mental impairment was equivalent to a disability. The Convention changes that view. What creates a disability is not the impairment but the barriers that surround people with such impairments. It places the disability outside of people, and places it in the barriers that prevent them from leading a normal life.

It is now up to society in general and governments to remove those barriers.

Traditionally we only think of physical barriers, but there are many more. “Stereotypes,” “prejudice” and “discrimination” are terms too often repeated by the affected. We must invest in bringing down barriers, all kinds of barriers: attitudinal, communication, physical, political, programmatic, social and transport barriers, among many others.

This means we must work in a different way. We need to bring all these points of view into the design of our projects. It also changes the way we measure quality. A project cannot be acceptable if it does not incorporate all these angles. For that we need diverse teams, including experts and users, with the necessary experience and a different point of view from the traditional one.

By working on disability, we can take on the region's greatest challenge: inequality.

Even after years of rising social spending, we are still the most unequal region on the planet. Inequality and disability share a common characteristic: they hurt the same people.

More women than men are living with a disability. Their longer life expectancy has a direct effect. Women are also the group with the lowest wages and therefore the lowest pensions. Indigenous peoples also have a higher incidence of disability, as do people on low incomes.

It is a vicious circle in which poor people are more at risk of disability and PWD are more likely to be poor. They live in areas where infrastructure and services are less accessible, and they have fewer resources for the equipment, technology or assistance needed to reduce the barriers.

PWD have fewer ways of escaping poverty. Quality education, decent jobs and many public services are out of reach because of attitudinal and environmental barriers. In addition, they face high costs of treatment and care which can have a catastrophic impact on family incomes.

The most vulnerable groups in society—the elderly, women, indigenous peoples, and the poor—are already among the most excluded segments of the population and are also the populations with the highest proportion of people with a disability. In many ways, their exclusion is magnified by living with a disability.

Our work in disability is strategic because it has a direct, efficient, and effective impact on our mission as an institution to improve quality of life in LAC. But also, because—if not now, then in the future—this large segment of the population could include our mothers, siblings, friends, neighbors, and ourselves.

Disability is not a rarity; it is a basic color in the palette of human diversity.

Entrada
Sentido > Terminal Boqueirão





THE FUTURE OF OUR CITIES IN EVERYONE'S REACH

■ Agustín Aguerre

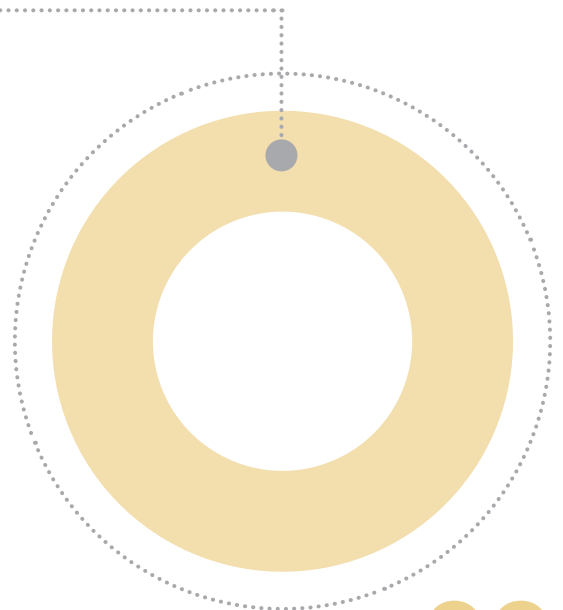
Marlene's story made headlines in November 2019 in Curitiba. Marlene had trouble getting on a bus with her nine-year-old daughter, who has to use a wheelchair to get around, because the bus ramp was not working. She depended on that bus trip to go to a medical appointment for which she had waited a long time.

What makes news in Curitiba—a city where 96 percent of the public transport fleet is accessible to PWD—is unfortunately diluted among the other difficulties that are part of the daily reality of thousands of people in most cities in LAC.

The Brazilian city, famous for pioneering implementation of the urban rapid transport system, better known as BRT, has got used to people like Marlene being able to access a better quality of life by being able to move freely around the city.

Other cities in the region have also made significant progress. La Paz, for example, with the world's largest cable car system, has opened up opportunities for dozens of its citizens. Uberlandia, in Brazil's Minas Gerais state, has had 100 percent of its public bus fleet accessible since 2012.

**Uberlandia in Brazil
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However, these regional examples are the exception rather than the rule. In fact, for the vast majority of the 85 million people with some kind of disability in our region (WHO 2011), the most everyday tasks can become an obstacle course.

For example, the poor placement of electrical infrastructure in public spaces, such as light poles obstructing pavements, can create a barrier for PWD with limited mobility.

In sanitation, when infrastructure is designed without taking into consideration the needs of PWD, toilets or latrines with steps (or raised above ground) are inaccessible to people with physical disabilities. Latrines are often too small for people in wheelchairs or crutches to enter and close the door, a key element in their privacy. Wooden floors, tiles or other materials can be too slippery, which means that millions of people with physical disabilities end up having to crawl—even when the floor is dirty—to reach the toilet (IWA Publishing 2011).

For this publication we gave ourselves the challenge of living the daily experiences of people with sensory, physical, or cognitive disabilities. We also explored what the needs are of older adults and pregnant women or mothers with babies for getting from one place to another safely and comfortably. We wanted to identify what really benefits PWD, guaranteeing enjoyment of their rights and having access to the opportunities offered by urban life.

In LAC, PWD make up 13 people of the population (ECLAC 2014). A high percentage of these people do not have access to public services such as transport, water, or energy. In addition, the most vulnerable economic and social groups have a higher proportion of PWD than the rest of the population, which leads to greater restrictions on their autonomy due to lack of timely attention and access to relevant services. These groups are older adults, inhabitants of rural areas, indigenous peoples, and people of African descent, among others (Jouravlev 2004).

The United Nations Convention on the Rights of Persons with Disabilities (CRPD), signed by 26 LAC countries, recognizes a social model where disability “results from the interaction between persons with impairments and attitudinal and environmental barriers that hinders their full and effective participation in society on an equal basis with others” (UN 2006). According to this Convention, inability to access public services by persons with disabilities violates a range of rights, including the right to “non-discrimination.”

At present, in our cities, measures associated with the right to accessibility are focused on elimination of physical, architectural, communication, information and mobility barriers; in addition to rights such as autonomy (the ability of people to live independently),

active participation in society (work inclusion), the right to privacy and equal conditions (Summit of the Americas 2007).

For many of the countries in the region signatories of the Convention, effective implementation of the Convention presents a major challenge with a long road ahead before the accessibility of PWD becomes a reality.

The IDB is supporting the governments of the region through several projects designed to increase inclusion and guarantee accessibility of PWD to public transport, water and sanitation and energy services.

Our aim is to ensure that inclusion is taken into consideration from the early stages of project planning, through participation of different social groups, elimination of physical and social barriers, as well as awareness campaigns, among other activities.

Curitiba was one of the cities we chose to accompany PWD to understand how they experience their daily travel. This reality gave us information on the degree of accessibility of the urban transport system and put us on the right track for achieving universal accessibility, highlighting the need to work on issues related to the service itself, aside from infrastructure adaptation. The experiences of Uberlandia and La Paz complement this picture very well, illustrating the opportunities that accessible transport systems can provide for all.

Through more inclusive transport services, we want to see more cases like Marlene and her daughter in the news. Not because of their plight but because we want the lack of an accessible transport system for all to become an endangered species.



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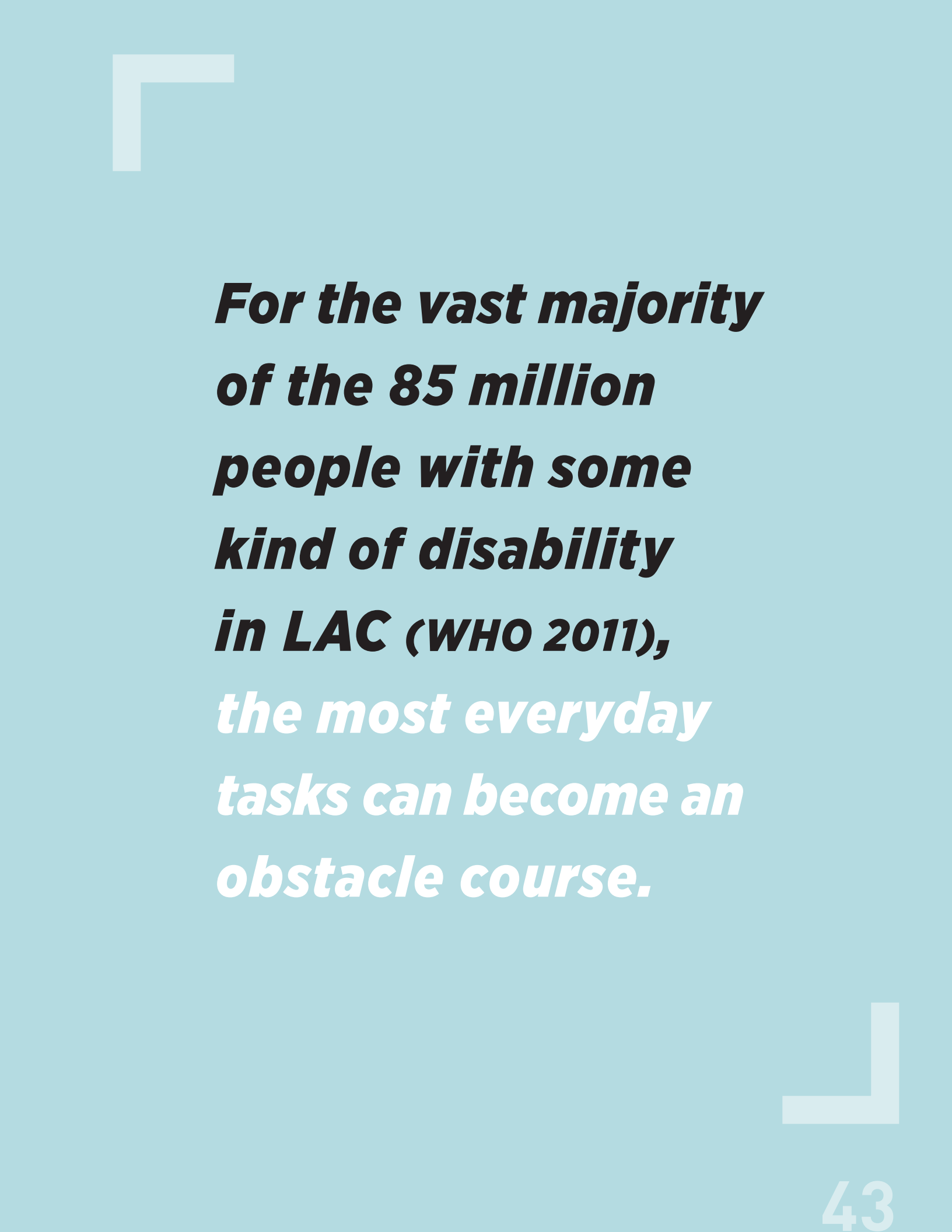
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A HISTORICAL FRAMEWORK FOR THINKING ABOUT THE RIGHTS OF PEOPLE WITH DISABILITIES

■ Lance Freeman and
■ Nora Libertun

Persons with disabilities have often struggled to fully participate in the wider society.

Those struggles are due to physical and cultural barriers that prevent their full participation. Historically, persons with disabilities have been systematically excluded from the public sphere and relegated to their homes or, when available, to the care of specialized institutions.

However, LAC countries are slowly coming to recognize the rights of persons with disabilities to access activities, institutions, and locations. The past 15 years have seen significant changes in legal frameworks that proactively support the rights of persons with disabilities. For example, most of the countries in the region have ratified the Convention on the Rights of Persons with Disabilities adopted by the United Nations (United Nations 2006). Some of the rights enshrined in the convention have direct implications for the way cities are designed and built—specifically, the right to accessibility, which focuses on access to the physical environment, the right to transportation systems and to building facilities; and the right to adequate standards of living, which include access to adequate water services and affordable housing.

This chapter traces the long struggle for persons with disabilities in the Americas to be accepted and included by the wider society, which is a precondition for an inclusive city. The chapter examines the ways that persons with disabilities have been viewed and understood historically and how these perceptions have translated into the role of persons with disabilities in the society at large. As a historical piece, some of the wordings and phrases quoted in the chapter reflect the notions about disability at certain times and can be harsh and even offensive for some to read. While the authors recognize the importance of language in either imposing or removing barriers to persons with disabilities, they also acknowledge the fact that discrimination and derogatory language has played a significant role in the way disability has been portrayed historically, and a historical framework should not attempt to deny such past by editing hurtful language, but rather denounce it, in an effort to learn from our history and strive towards a more inclusive society.

→ MODERNITY AND THE MEDICAL MODEL OF DISABILITY

The Renaissance, the Industrial Revolution, and the concomitant rise of modernity transformed societies in the West, and the experiences and societal position of persons with disabilities would eventually be transformed as well. Modernity unleashed several forces that changed the way disabilities were viewed, impacted the very existence of some disabilities, and shaped how persons with disabilities were treated by the society at large.

With the rise of reason and science, supernatural explanations for disability receded in importance.

Advances in biology shed light on the true cause of disease, whether hereditary, infectious, or other origins. One no longer needed to look to the heavens or evil spirits to explain the mental and physical impairments of people. Even if the causes of a specific disease and a cure for it remained elusive, the eventual discovery of both was assumed to be a question of when, not if.

Advances in biological understanding and medical technology influenced the way persons with disabilities were viewed in society. The advances and promises of modern medicine held forth the possibility, indeed the inevitability, of using medicine to “cure” persons with disabilities’ impairments. For example, the invention of the x-ray and anesthesia improved the capabilities and reputations of orthopedic surgeons, many of whom sought to rehabilitate persons with physical disabilities through physical therapy and surgery. The widespread physical impairments that resulted from World War One, when many orthopedists and orthopedic surgeons had the opportunity to hone their medical knowledge and skills working with injured soldiers, served to cement the elevated status of these doctors. With the prospect of possibly “curing” or at least alleviating debilitating impairments, many adopted rehabilitation as the most important goal for improving the lives of persons with disabilities.

The advancement of medicine and the increase of wounded soldiers as a result of the first World War gave way to a new way of understanding disability, one based on the idea that disability was not a curse of the gods but the result of a catastrophic event, such as The War, and that persons with disabilities, particularly wounded soldiers, were not “useless”, but rather could be made “useful” again (Stiker, 2019). This form of conceptualizing disability has been known as the medical model of disability, and it is characterized by considering persons with disabilities as ‘sub-normal’ and in need of ‘fixing’. Under the medical model, disability is thought

of as the consequence of impairments or 'abnormal' pathologies that prevents a person from engaging in the sort of activities 'regular' people can. To the extent that the cause of disability, under this model is a medical one, the expert voice on disability is transferred to the medical science, which becomes the authorized interlocutor in determining the needs and appropriate policies for persons with disabilities. Furthermore, in so far as persons with disabilities are thought to be 'fixable', social and State efforts are directed towards policies that seek to 'fix' or 'normalize', through rehabilitation, persons with disabilities.

Closely aligned with the medical "rehabilitationists" were social reformers who sought to correct what they viewed as the moral and psychological debilitation that were thought to accompany physical and mental disabilities. These reformers reasoned that, by relying on others for care and sustenance, persons with disabilities lost not only the capacity to care for themselves, but also the will and desire to do so. The corollary of this viewpoint was that independence and an ability to take care of oneself were primary goals of rehabilitation. Indeed, "curing" disability, in the minds of some reformers, meant rehabilitating persons with disabilities to an extent that they were work-ready. Towards this end, reformers, and medical specialists in the late 19th century and early 20th century began establishing institutions for persons with disabilities. These institutions went beyond medieval institutions that focused on quarantining those with communicable diseases. Instead, these modern institutions also attempted to "rehabilitate" persons with disabilities so that they could become independent and employable, stressing an industrial education. Such an education typically focused on skill development and training to prepare people for employment, as opposed to a more academic curriculum that stresses conventional literacy, numeracy, and the arts.

The focus on steering persons with disabilities towards institutions was also connected to the upending of traditional familial and communal relationships that occurred during the Industrial Revolution. The revolution and the ensuing urbanization ushered in widespread residential mobility, with people no longer tethered to their place of birth. Instead, people moved about in search of employment and economic opportunity more broadly. Cities became home to tremendous economic opportunity but could also be cold and impersonal places—breeding grounds for anomie and weakened community ties. As such, responsibility for caring for persons with disabilities (and other persons in need of support) shifted to the state and extra-communal institutions. Therefore, the eighteenth and early nineteenth centuries saw the rise of public and private

institutions in North America, dubbed 'asylums', that were opened in a heyday of optimism as they were thought of as places for 'curing' persons with disabilities, and that reflected the social trends based on the assumption that mental disorders and disability as a whole were 'curable' (Noll, 2018).

Among such institutions was the New York Hospital for the Ruptured and Crippled, which opened during the United States Civil War and was the first such institution to focus on children with disabilities (Byram 2001). Institutions focusing on persons with sensory impairments also began to appear during this period. For example, the Asylum for the Education and Instruction of Deaf and Dumb Persons opened in Connecticut in 1817 (at the time, "dumb" meant a person incapable of speech). The New England Asylum for the Blind opened in 1837.

In LAC, it was common to copy the format of French educational institutions for children with disabilities funded after the French Revolution. For example, Brazil was one of the earlier providers of so called "special education". It replicated Parisian institutions for educating blind and deaf children in Rio de Janeiro with the creation of the Imperial Instituto de Meninos Cegos in 1854 and Imperial Instituto de Sordo-Mudos in 1854 (Rahme 2015). This was followed by the opening of similar institutions in Uruguay (1910), Bolivia (1927), Paraguay (1939), Colombia and Costa Rica (both in 1940), and Ecuador (1945) (de García 2009).

With the rise of reason and the expansion of empathy, the care and treatment of persons with disabilities was thought of as an improvement.

Social reformers like Albert Deutsch argued in the 1930s and 1940s that the treatment of persons with psychosocial disabilities was getting better and that the 'institutional solution', when properly staffed and funded, provided important benefits for people with disabilities and society as a whole (Deutsch, 1948). The post-World War II optimism also permeated the way in which institutions such as 'asylums' and 'special schools' were perceived, as they were thought of as places in which expert intervention could 'solve' the 'disability problem'. The general conception in the mid-nineteenth century was that these institutions were taking steps to help persons with disabilities "fit" into the wider society. Schools were opened to help the children and adults with disabilities acquire an education, with the aim of making them employable. Employment was an end in and of itself, that is, as a way to alleviate the dependency of persons with disabilities on the generosity of others. Establishing economic independence was seen as enhancing a person with disabilities' quality of life and sense of self-worth. As stated by Butler (1918, 18): "Every man and woman has this same feeling and he never knows how deep it is, and how necessary work is to happy life, until he can't work. To give the handicapped

man [sic] the chance to do work is to give him the only opportunity for real happiness.” It would not be until the mid-1960s, with the introduction of Foucault’s critical theories about the relationship between ‘madness’ and means of control, that the benign conceptions surrounding institutions of persons with disabilities would be reevaluated (Noll, 2018). As early as the 1970s, historians such as David Rothman would argue that the emergence of ‘asylums’ in the United States responded primarily to the need for control, rather than the laudable intention of ‘helping’ persons with psychosocial disabilities (Rothman, 1971).

→ THE EMERGENCE OF CRITICISM TO THE MEDICAL MODEL

In some ways, the medical model and the reformists’ zeal to correct the “deficiencies” of persons with disabilities mirrored the “politics of respectability” practiced by some elites of another marginalized group in the United States: African Americans. Around the turn of the last century, some African American elites sought to win civil rights and better treatment from whites by behaving “respectably.” The view was that by disabusing lower-class African Americans of their proclivity for “uncouth” or “indecent” behavior, African Americans would win the respect of whites, and with that civil rights and full inclusion into American society (Harris 2014). Booker T. Washington offered up the epitome of respectability politics in his Atlanta Compromise Speech when he counseled members of his race: “It is at the bottom of life we must begin, and not at the top. Nor should we permit our grievances to overshadow our opportunities” (Harlan 1974). In Washington’s view, it was blacks, not whites who needed to address their own shortcomings before being granted full inclusion into the American polity—that is, the onus for rectifying racial inequality was placed squarely on the shoulder of African Americans themselves. Likewise, while the medical model sought to make a claim for the inclusion of persons with disabilities in the larger society, that claim was based on the expectation that persons with disabilities would or could conform to those expectations and requirements, which included being able to work and navigate their way through society with little or no accommodation. The onus fell squarely on persons with disabilities themselves to meet the requirements to participate in the world as it was.

The rise of modernity and its accoutrements—including reason, better medical technology, and an expanding circle of empathy—in many ways were thought to improve the position of persons with disabilities within the wider society, are least for those who were deemed ‘correctible’ or ‘curable’. Modernity was by no means an unalloyed benefit for people with disabilities nor should it be viewed as a steady, monotonic march toward progress and better treatment of them. Darwinian

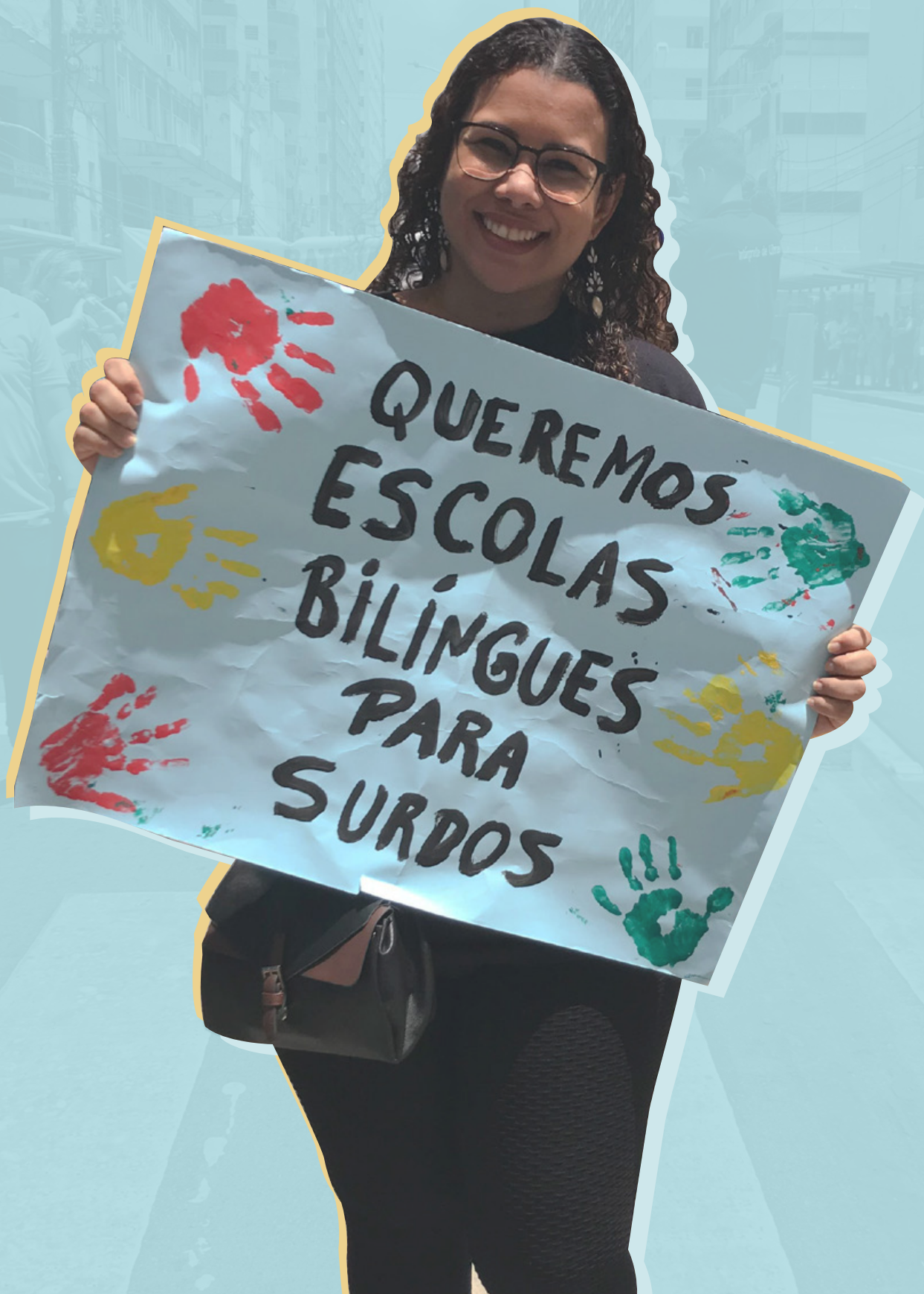
notions of evolution led some to view persons with disabilities, especially those with mental impairments, as “weaker” members of humanity whose fates should be left to the forces of natural selection. The Eugenics movement, which sought to improve the “quality” of subpopulations of humans through selective breeding, was informed by this line of thinking. Those with mental or congenital disabilities were frequently identified as targets for sterilization (Grenon and Merrick 2014). In 1907, the state of Indiana passed a law allowing the forced sterilization of the “mentally retarded,” and several other U.S. states followed shortly thereafter. The United States Supreme Court gave its imprimatur to the practice of forced sterilization in 1926. Its pronouncements included the infamous quote by Justice Oliver Wendell Holmes, Jr. in *Buck v. Bell*, that “...three generations of imbeciles [sic] are enough.”

The rise of institutions focused on ‘serving’ persons with disabilities played a significant role in the Eugenics movement. These institutions likely had access to information and technology to serve the medical needs of persons with disabilities that were better than what was available during ancient or medieval times. Yet at the same time, these institutions involved confinement, seclusion, and segregation, which disconnected persons with disabilities from their most intimate social relationships and impeded them their full enjoyment of rights. As a result of Indiana’s 1907 sterilization law, approximately 65,000 people, most of whom were institutionalized, were forcibly sterilized. The Eugenics movement, driven by the discourse of ‘modern medical science’ and the drive to ‘improve’ the human race, took hold in many American countries including the United States, Canada and Mexico, all of whom used combinations of sterilization, institutionalization and migration policies to rid themselves of persons with disabilities (Rembis, 2018).

Finally, modernity is associated with an expanding circle of empathy, or the capacity for humans to empathize with and respect individuals beyond close relatives. According to this thesis, the age of reason and the concurrent increase in commerce taught the important lesson that cooperation with fellow human beings was mutually beneficial and produced better outcomes than violence. With that, the circle of respect, the refraining from violence, and the granting of rights expanded beyond one’s immediate family and kin to one’s community, nation, and eventually humanity at large. One can see this process of expansion in the United States, where the Declaration of Independence, imbued with lofty ideals, was initially conceived as pertaining to only a small subset of the population—property-owning white males—but over the course of nearly two centuries, through civil war, social movements, and protests, was gradually extended to the property-less, women, blacks, gays and lesbians, and others (Pinker 2011; Singer 2011).



***The rise of modernity—
including reason, better
medical technology, and
empathy—in many ways
improved the position
of the PWD within the
wider society.***



This expansion did not seem to encompass persons with disabilities as well, as historically the onus for inclusion in society was placed squarely on persons with disabilities themselves, as long as such inclusion was possible through the normalization of persons bodies and minds. It was the persons with disabilities' physical impairments and economic dependency that needed to be changed. To be sure, reformers were often well-intentioned and aimed to help persons with disabilities integrate into society. But it was their own condition and capacity that needed to be "fixed" to fit into society and thrive. Few if any demands were placed on the wider society to strive for inclusivity of persons with disabilities.

However, starting in the 19th century, there were some who recognized the role that society at large played in creating disability.

For example, the social reformer Douglas C. McMurtrie (1919) wrote that for former soldiers disabled in war, "...the greatest handicap is not a loss of limb or other disability but the weight of public opinion."

In LAC, however, the pervasive view until well into the 20th century was that persons with a disability were subjects of pity or charity who had to be included in welfare systems, but were not fit to exercise their rights independently. In fact, many of the LAC statutory laws allowed states or families to take over the rights of persons with disabilities' properties or self-determination, reinforcing a paternalistic societal view (Courtis 2002).

One of the earliest signs of the schism between those promoting the medical model and those promoting what would later come to be known as the social model, occurred in the field of education of the deaf in the United States. On one side were the "manualists," who saw sign language as a complete language with its own syntax as sophisticated linguistically as any modern language, and as an appropriate manner for communication among the deaf. Sign language was developed by the deaf and used extensively by them for everyday communication. Early American schools thus followed the 18th century French model, which tended to stress the use of signing for communication.

Those known as "oralists," on the other hand, thought the deaf should learn to communicate via speaking. For oralists, sign language was inferior and a badge of savagery. American oralists, such as the educator Horace Mann, were impressed with Prussian methods of deaf education that stressed oral communication and lip reading (Burch 2001). The oral approach also received a boost from medical professionals who were making incremental advances towards preventing deafness and developing hearing aids. While these advances might have helped the hearing impaired, the advances also made, the normalization of the deaf

a seemingly plausible goal. Medicine would “solve” the problem of deafness, and oral education was seen as preparing the deaf for integration into the hearing and speaking world when the problem would be solved (Burch 2001).

Both manualists and oralists aimed to integrate the deaf into the society at large, and the motivations behind the differing approaches varied. Ultimately, it was the deaf themselves, who often taught in deaf schools and advocated tirelessly for manual education, along with accumulating evidence showing that the ability to acquire oral language depended on the age when one became deaf, that prevented the oralists from achieving hegemony over education of the deaf in the United States.

As this discussion of deaf education suggests, alternative perspectives to the strict medical model were emerging at least by the late 19th century. Throughout the 20th century, these alternative views simmered below the surface. Persons with disabilities and advocates of the rights of persons with disabilities recognized that their challenges stemmed, in part, from their treatment by the wider society. Mildred Scott, a pioneering advocate for the rights of persons with disabilities in the mid-20th century, argued that “unless opportunities and facilities to accomplish the desired end are available, and a better understanding of the capabilities of handicapped [sic], as workers, developed on the part of employers, all too many handicapped [sic] find the doors of hope and achievement closed in their faces” (Scott 1949). She viewed the obstacles put in place by society as what often disadvantaged persons with disabilities. Scott went on to become one of the early leaders of the American Federation of the Physically Handicapped (AFPH), which was founded in 1940 and styled itself as “a program which someday would bring about better conditions for the handicapped [sic] and the members of their families” (Jennings 2017, 22). The AFPH focused its energies on changing public attitudes and opinions towards persons with disabilities, and on effecting public policy to lessen discrimination against them. Towards these ends, the AFPH prompted the United States Congress to adopt National Employ the Physically Handicapped Week in 1962, with the goal of educating employers and the public about the capabilities of persons with disabilities. The AFPH was also instrumental in promoting vocational rehabilitation in the United States that has sought to provide training and retraining to persons with disabilities to enhance their employability. Although some of the efforts of the AFPH can be seen as continuing in the medical model tradition (e.g., vocational rehabilitation), a good deal of the organization’s focus was on changing society to make it more inclusive towards persons with disabilities. In this way, the motivations and actions of the AFPH and activists like Mildred Scott, along with activists and educators working on behalf of the persons with sensory disability, can be viewed as antecedents to the social model of disability that came to the fore during the last decades of the 20th century.

→ THE RISE OF A RIGHTS APPROACH TO DISABILITY

The social model of disability began to challenge the hegemony of the medical model around 1970 in the United Kingdom.

The social model of disability began to challenge the hegemony of the medical model around 1970 in the United Kingdom. At about this time a network of persons with disabilities activists, the Union of Physically Impaired Against Segregation (UPIAS), began to espouse the notion that persons with disabilities were an oppressed group, and that it was their oppression, and not their physical or mental impairments, that made them disabled. The social model activists were influenced by Marxism and perhaps the social movements of other oppressed groups such as racial and ethnic minorities, and women. In its manifesto, the UPIAS proclaimed:

“The Union aims to have all segregated facilities for physically impaired people replaced by arrangements for us to participate fully in society. These arrangements must include the necessary financial, medical, technical, educational and other help required from the State to enable us to gain the maximum possible independence in daily living activities, to achieve mobility, to undertake productive work, and to live where and how we choose with full control over our lives.”

“Our Union rejects entirely any idea of medical or other experts having the right to tell us how we should live, or withholding information from us, or take decisions behind our backs....We reject also the whole idea of expert and professionals holding forth on how we should accept our disabilities, or giving learned lectures about the psychology of disablement. We already know what it feels like to be poor, isolated, segregated, done good to, stared at, and talked down to – far better than any able-bodied expert. We as a Union are not interested in descriptions of how awful it is to be disabled. What we are interested in, are ways of changing our conditions of life, and thus overcoming the disabilities which are imposed on top our physical impairments by the way this society is organized to exclude us. In our view, it is only the actual impairment which we must accept; the additional and totally unnecessary problems caused by the way we are treated are essentially to be overcome and not accepted” (Union of the Physically Impaired Against Segregation 1970).

The UPIAS manifesto was revolutionary in the way it challenged conventional views of persons with disabilities. The “problems” confronting persons with disabilities were viewed not as internal or due to their impairments per se. Rather, their challenges arose from their treatment, or maltreatment, by the society at large.

The authority of the medical establishment to direct and supervise the lives of persons with disabilities was also challenged.

Thus, one saw expertise on disability passing from enchanter and priests in the premodern era to doctors and educators in the medical era, and finally to persons with disabilities themselves under the social model.

The social model has proved popular, with its ideology spreading far beyond the shores of the United Kingdom. The attractions of the social model are several. First, it has proved useful as a political mobilization tool, pointing the way towards enhancing inclusivity for persons with disabilities. In this manner, the rights of persons with disabilities can be viewed through a prism like other marginalized groups such as racial/ethnic minorities, women, or the LGBTQ+ community. Second, the model has great instrumental value because it points to a specific set of actions, the removal of barriers, and the need to organize to foster concrete improvements in the quality of life of persons with disabilities. Third, the social model aligns better with the needs and wants of persons with disabilities themselves.

The social model and an approach to disability from a rights perspective has achieved a number of successes. In 1970, the United Kingdom passed the Chronically Sick & Disabled Persons Act, perhaps the first national legislation promoting and protecting the rights of persons with disabilities. Among other things, the act promoted deinstitutionalization of persons with disabilities, required public buildings to be accessible, provided badges that allowed persons with disabilities to park more easily, and called for persons with disabilities to be represented on public bodies. In 1995, the United Kingdom passed the Disability Discrimination Act, which outlawed discrimination because of disability status in employment, the provision of goods and services, education, and transport.

In the United States, Section 504 of the Rehabilitation Act passed in 1973 prohibited discrimination against persons with disabilities in any program receiving federal financial assistance. This was closely followed by passage of the Education of All Handicapped Children Act in 1975. The passage of the Americans with Disabilities Act (ADA) in 1990 represented to many the high-water mark of activism by persons with disabilities in the United States. The ADA forbade discrimination against individuals with disabilities in all areas of public life, including jobs, schools, transportation, and all public and private places that are open to the general public. The ADA also sought to remove barriers in telecommunications. In many ways the ADA enshrined in law equal opportunity for persons with disabilities. While the ADA does not fully incorporate a social model of disability, it is largely considered the starting point of the disability rights

revolution, as it was the world's first comprehensive legal reform framing disability in a civil and political rights arena, rather than a traditional over-medicalize view of disability (Heyer, 2015). This paradigm shift that moves away from charity and pity-based policies and from the medical model as well, informed and inspired legal changes through the world, nourishing the discussions that lead to some of the postulates included in the UN Convention on the Rights of Persons with Disabilities of 2006.

The ADA also had an enormous impact on the laws that regulate the inclusion of persons with disabilities in other countries. The act's definition of disability as a substantial limitation on one or more of the major activities of life has been embedded in the legislation of various LAC countries, including Chile, Colombia, Costa Rica, Guatemala, Nicaragua, and Peru (Jimenez 2000). In addition, new legislation was passed that changed the legal landscape of persons with disabilities in Argentina (1994), Bolivia (1995), Brazil (1992), Chile (1994), Colombia (1997), Costa Rica (1996), Ecuador (1992), Guatemala (1996), Nicaragua (1995), Mexico (1995), Peru (1998), Uruguay (1989), and Venezuela (1993) (Courtis 2002).

→ **FROM THE ADA TO THE CRPD – THE CONSOLIDATION OF THE SOCIAL MODEL OF DISABILITY**

The ADA was the most comprehensive legislation for persons with disabilities in the United States and sparked a revolutionary transformation in the way in which disability rights were framed both in the United States and abroad. While Section 504 of the Rehabilitation Act of 1973 prohibited discrimination against people with disabilities, it did not offer protection against discrimination from employers, publicly funded programs nor required private-sector accommodations. The ADA, on the other hand, extended similar civil rights to persons with disabilities as those that other political minorities had (Karger and Rose, 2010). In placing disability on a par with race discrimination, the ADA became the world's reference in terms of positioning disability within a discussion of civil and political rights; a human-rights centered legislation, rather than one focused on pity or the medical aspect of disability. In the words of Justin Dart Jr., the “father of the ADA”, the ADA was “a landmark commandment of fundamental human morality” (Triano, 2010) that turned the somewhat ethereal principles of inclusion into specific, legally binding mandates that inspired and catalyzed a series of significant legal advances recognizing the rights of persons with disabilities around the globe (Gostin, 2015). Such legal advances included the UN's 1993 Standard Rules on Equalization of Opportunities for People with Disabilities and the 1999 Inter-American Convention on the Elimination of All Forms of Discrimination Against People with Disabilities (Jimenez, 2000).

Despite the successes of the rights revolution in changing the way that persons with disabilities were viewed and in promoting the adoption of policies that work to better integrate them into the wider society, the definition of disability included in the ADA did not completely supplant the medical model. Passage of new legislation does not of course instantly change the lives of persons with disabilities, and the need for further change is substantial. The ADA defines a person with disability as a person who “has a physical or mental impairment that substantially limits that person in one or more major life activities”, which perforce switches the conceptualization of disability back to the individual (Donoghue 2003). Such definition played a significant role in the way judges came to restrictively interpret the scope of beneficiaries of the Act (Areheart, 2008). The ADA’s Amendment Act of 2008 sought to broaden the definition of disability, which had been significantly narrowed by the US Supreme Court’s rulings but didn’t change the wording of the definition itself but rather expanded the list of major life activities to include limitations in activities such as working and communicating.

As important as the ADA’s passage was in transforming the way in which disability was framed from a policy perspective, and its impact on an international level during the 90’s as a baseline for legal transplant of new disability laws with a right’s approach, the lack of a proper adoption of the social model of disability in the definition of disability hindered on the Act’s ability to deliver on its promises. The social model of disability defines disability as a consequence of the interaction between impairments or functional characteristics, and social barriers. Disability, then, is not something innate to a person, but rather the effect of an inaccessible environment on persons with different functional characteristics. Key to the understanding of the social model of disability, and in clear opposition to the medical model, is the distinction between impairment and disability. While the medical model equates impairment with disability, the social model understands disability as a result of the interaction between barriers and the impairments, therefore situating disability in the interaction itself and not in the individuals with disability. From this conception of disability it follows that the ‘disability problem’ is not one of impairments, and therefore the solution is not ‘curing’ or normalizing persons with disabilities, but rather the disability problem is one of discrimination through barriers, therefore the solution to the ‘disability problem’ lies on the removal of said barriers.

The United Nations’ Convention on the Rights of Persons with Disabilities – CRPD, goes a step forward, and defines disability as “an evolving concept” that “results from the interaction between persons with impairments and environmental

barriers". By including impairments in the definition of disability, the CRPD clearly delimits who is a person with disability under the Convention, and by acknowledging that disability is the result of the interaction between the impairments and the barriers, and not just the consequence of the impairments themselves, the CRPD moves further away from the medical model that places disability exclusively in the individual. Most countries in the Americas have ratified the CRPD, and the influence of the CRPD and the social model of disability has taken root on the emerging legal frameworks of the ratifying countries of America. The adoption of the CRPD's postulates through means of its ratification has helped re-shape the way in which disability is conceptualized within the legal frameworks of the countries of the Americas, and allowed to direct social and State actions towards eliminating barriers through reasonable accommodations and universal design.

→ CONCLUSION

This chapter has provided a brief history of how disability has been conceptualized in the Americas and beyond. It draws a long arch that constitutes a substantial evolution of societies from indifference to charity and to human rights.

Our understanding of disability and who is a person with disability has evolved from perceiving disability as an absolute, categorical condition determined at the individual level to understanding a disability as the outcome of the relationship between a human being and the person's cultural, social, and physical environment. Therefore, the design and operation of mobility systems and infrastructure, the interplay between institutions and people, and the spatial layouts and programming of public spaces are essential elements to enable all people to become protagonists and full participants in their society. Inasmuch as we have the will, the ability, and the perseverance to include everyone, we become societies that are enabling for all.

While there is still a long way ahead for inclusion and the elimination of all forms of discrimination against persons with disabilities, the United Nations' Convention on the Rights of Persons with Disabilities, and its broad ratification among countries of the region and the world, stand as a great starting point. The inclusion in international legislation of disability as an evolving concept that emanates from the interaction between impairments and barriers gives way to a conceptualization of disability that is congruent with the social model and that allows for real social change towards accessibility. Likewise, the enforceability of the denial of reasonable accommodation as a form of discrimination on the basis of disability opens the doors to transformative changes towards cities enabling for all.



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The same person with an impairment can become PWD when encountering a nonadapted environment/situation, while in another environment/situation no disability occurs.



WHY DO PEOPLE WITH DISABILITIES HAVE TO ADAPT TO ENVIRONMENTS INSTEAD OF ENVIRONMENTS ADAPTING TO PEOPLE WITH DISABILITIES?

Juan Pablo Salazar

Thousands of years ago, in Sparta, children with disabilities were thrown off a cliff supposedly with the objective of not weakening the state's military power.

Things did not get much better in the first millennium of our era when PWD were no more than beggars in need of miracles to “cure” their diversity. Continuing the story, centuries later we see how in Shakespeare’s plays disabled characters such as Richard III still understand their condition as a punishment which fills them with resentment for which they must take revenge on the world. For most of history the role of PWD in society has been limited to being objects of miraculous healing, welfare, charity or even persecution because of characteristics that are part of human nature and that no one chooses to have. A curse.

Once Enlightenment arrived and what we understand today as modern medicine began to develop, PWD move to a new paradigm that places them in the microscope of scientific interventions. They become patients. They must wait to “get better” to achieve what is understood as “normal” and participate in society. With more surgeries, therapies, or new technologies they will be able to adapt to environments designed for people with no disability. It makes a lot of sense and hopefully science and technology will make a lot of progress.

But why do PWD have to adapt to environments instead of environments adapting to PWD?

Under a new human rights paradigm, disability is understood as a phenomenon that occurs through interaction between persons with impairments and barriers in the environment. There is a United Nations Convention that defines disability in this way and countries that have ratified this international law tool are committed to removing the barriers. This means that disability is not within individuals, but that each person has a series of characteristics and these characteristics are not a reason for them not to be able to access their rights.

It is a civil rights movement equivalent to the struggles of other social groups such as women, the LGBTQ+ population, indigenous peoples, etc.

Naturally, there are a thousand nuances and differences between each of these struggles and it is insensitive to the pain of many people to compare them equally. Today, PWD, for example, are not systematically persecuted by organized groups which does happen to other communities, and associated violence is much less. But they are comparable from an academic point of view in which this characteristic plus cultural or physical barriers are equal to discrimination.

For all these reasons, PWD are not objects of a karma curse or objects for scientific medical interventions or objects of welfare policies but citizens with rights.

Now, what does this mean in practice in cities?

The fact that cities are where most of the population of LAC and the Caribbean are concentrated means this challenge is particularly important in urban areas. A city that removes barriers for PWD and creates environments that can be used by as many people as possible is moving in the right direction for achieving true inclusion.

While this effort to remove barriers is not a favor but a right, it can also be understood from the benefit it brings to the cities themselves and the societies that inhabit them. More people, with more diversity, having more access to more opportunities, results in more development and lower costs.

Achieving accessible cities involves coordinating many actors on different fronts, each one playing their part: public policy, public and private investment, civil society activism, technical knowledge, media pressure, monitoring and sanctioning of legitimate and competent authorities, citizen culture, among others.

What tools can be used to apply this in practice?

Colonial cities in LAC are a true heritage of universal architecture. From Oaxaca cathedral to the little plazas scattered around Cuzco to the fountains of Ouro Preto, there are a thousand pearls to be discovered and every year millions of tourists delight in these emblems of the past that seem to be portals to something mystical. But there is one detail that the talented architects and town planners of these wonderful works of art forgot: accessibility. Although the first wheelchair was invented in the 16th century, precisely in Spain for King

Philip II, the infrastructure necessary for its use in safety and comfort and in an autonomous and natural way was still far from being perfected. Less excusable are the constructions and urban details in our cities which, although they were built only a few decades or even years ago, still do not have the basic criteria of accessibility for wheelchairs and people with any kind of disability.

So, what to do? Do we use a bulldozer to knock down colonial buildings to open new accessible spaces? Do we demolish transport systems, urban networks, and other public spaces to start over? No, that would be outrageous and foolish. Fortunately, the United Nations Convention on the Rights of Persons with Disabilities proposes two tools to solve this problem: reasonable accommodation and universal design.

In the world of architecture, reasonable accommodation is something of a revisionist view of the past. What do we have to do to make existing buildings accessible? Sometimes it is a simple ramp or ornamental elements that, using iron and wood, makes the magic to give PWD access without having to break the bricks that are part of our cultural heritage. In other words, it is a solution that is not perfect, but it is “reasonable.” It accommodates what already exists and converts it into something possible for everyone. It is a solution that “hacks” the system and leaves it open.

Universal design, by contrast, is more of a look into the future. All new constructions must take international accessibility parameters into consideration from the start, from the design itself, from the plan and the Autocad. We will not tear down colonial churches to make them accessible, but we will certainly build a new church that can be used on equal conditions by each and every citizen. This means that all buildings are accessible to everyone without segregation or “specialized” design: doors, bathrooms, urban planning, transport terminals, access to public buildings, etc. Everywhere, from natural areas to rural municipalities to large cities, states must guarantee good quality accessibility, involving the broad diversity of the population.

By applying reasonable accommodation and universal design, we will gradually transform our cities so that the values of the United Nations Convention are transformed into infrastructure, and disability becomes nothing more than an anecdotal detail in the many phases of a person's identity rather than a limitation on accessing their rights.





**By applying reasonable
accommodation and
universal design,
we will gradually
transform our cities.**





INCLUSIVE AND ACCESSIBLE CITIES

Victor Pineda,
Luis Artieda,
Katherine Chacón Martínez, and
Federico Poitier²

The world is urbanizing at a rapid rate.

More than 87 million people move into cities each year.

Over the next 35 years, cities will shape virtually every aspect of global development, including the way fundamental human rights are debated and implemented (Independent Group of Scientists 2019). Social exclusion, discrimination and marginalization pose significant difficulties for building inclusive cities, claiming rights, and providing equal access to opportunities in urban areas. Fostering cities and societies for human diversity, social inclusion and equality is becoming a priority and is key to a truly inclusive and sustainable future for all (UN DESA 2009).

The Global Infrastructure Hub (2019) estimates we will need US\$15 trillion in infrastructure investment to cope with ongoing urban transformation.

But it is vital that this expansion and transformation of urban environments considers the fact that one in seven people have a disability. Urbanization provides opportunities for social inclusion, equitable access to services and livelihoods, and engaging and mobilizing vulnerable populations at risk of exclusion. To benefit from these opportunities, cities must ensure that urban development is inclusive and enabling of the rights of all persons, particularly marginalized communities including persons with disabilities and older persons.

2. This case study was adapted from the Accessible and Inclusive Cities policy paper presented by World Enabled during the United Cities & Local Governments (UCLG) Assembly of local Majors and Leaders, occurred in Durban, South Africa, November 2019 (World Enabled 2019).

Today, persons with disabilities and older persons make up 25 percent of the global population and experience numerous barriers to their effective inclusion in cities (WHO 2011), such as lack of access to transport and public spaces, employment, and education. More than half of all persons with disabilities and older persons live in cities and towns today, and by 2050 it is estimated that more than 2 billion persons with disabilities and older persons will live in cities and towns (UN DESA 2015).

Around the world, persons with disabilities comprise approximately 13 percent of the population (Servimedia 2008; Kraus et al. 2018). However, the real numbers may be far higher than this; European statistics show that when considering self-reporting statistics rather than formal government accrediting documentation, up to 25 percent of the population may comprise persons with some kind of disability (Servimedia 2015).

Across LAC, statistics show that the prevalence of women with a disability is generally higher than for men (14.9 percent versus 10.9 percent in Chile, 10.4 percent versus 7.1 percent in Mexico and 11.6 percent versus 9.6 percent in Peru). In LAC, if we account for all the priority groups that are also affected by accessibility issues, including persons with disabilities, persons over 60 years of age, children under five years and pregnant women, the percentage rises to approximately 38 percent of the total population (EUROsociAL 2015).³

Recognizing the trends and opportunities of urban transformation, cities around the world must decide how to adapt their structures and services to be inclusive and ensure they are accessible for all persons.

By breaking down physical, mobility, digital, communications and participatory barriers and adopting inclusive urban development policies, investments and programs, cities can improve the social and economic outcomes for all individuals. Some initiatives that cities can adopt are policies that promote accessibility and universal design, improve access in urban areas, provide more affordable housing and transportation, improved mobility, safe public spaces and social inclusion programs that include minorities and welcome newcomers.⁴

3. In LAC, 30.1 percent corresponds to poverty strata, while 37.9 percent of the population are non-poor but vulnerable social strata.

4. Universal Design means the design of products, environments, programs and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. Universal design shall not exclude assistive devices for particular groups of persons with disabilities where this is needed (UN General Assembly 2006, Article 2).

→ THE LEGAL FRAMEWORK

Accessibility is a human right that must be guaranteed by all governments.

By establishing accessibility parameters, opportunities can be realized for the full social inclusion of persons with disabilities (World Enabled 2016).

Many governments that have ratified the UN *Convention on the Rights of Persons with Disabilities* (UN CRPD) and cities that have adopted the World Health Organization (WHO) *Age-friendly Cities Framework* are responsible for and committed to creating an inclusive and accessible society. Accessibility is also increasingly being recognized as a fundamental human right and a precondition for older persons and persons with disabilities to live independently and participate fully and equally in society. The adoption of the *Sustainable Development Goals (SDGs)*, the *New Urban Agenda*, and the *Sendai Framework for Disaster Risk Reduction*, with a clear mandate of leaving no one behind, provide critical opportunities for cities to shape a more inclusive and accessible urban future for all.

The inclusion of accessibility in the urban development process can be divided into three key aspects: physical environments and mobility systems, adequate housing, and information and digital infrastructure. These three aspects are raised in important multilateral agreements, standards and treaties. Even though these multilateral legal documents refer to comprehensive accessibility, each of them touches upon one or more of the three key aspects. For example, the UN CRPD has a direct focus on the physical environment and mobility systems in Article 20 of Personal Mobility as well as a broader approach to accessibility as a right and a general principle in Article 9 of Accessibility, which includes accessibility to buildings, roads, transportation, and housing, as well as accessibility in information and communication. Specific focus on adequate housing is included in Article 28 of Adequate standard of living and social protection of the UN CRPD, and specific focus on accessible information is included in Article 21 of Freedom of expression and opinion, and access to information (UN General Assembly 2006). The UN Sendai Framework for Disaster Risk Reduction, a 15-year voluntary non-binding agreement, focuses on climate change adaptation to reduce disaster risk and refers to accessibility in information and digital infrastructure in Articles 7, 18, 19, 24 and 30 (UN General Assembly 2015). The UN New Urban Agenda, an action-oriented document targeted to achieve sustainable urban development, mentions accessibility in relation to adequate housing in Articles 13, 14, 25, 32, 34, 36, 67 and 95 (UN 2017).

It is important to note that most of these multilateral documents are non-binding documents where signatory nations are not legally obligated to follow their terms. The exception to this is the UN CRPD, which is a binding treaty that has been signed by over 172 nations and parties.

There are other multilateral agreements and instruments that touch upon key aspects of urban development, including the UN *2030 Agenda for Sustainable Development* (the UN 17 Sustainable Development Goals), the UN *World Health Organization Age-Friendly Cities Initiative*, and the International Organization for Standardization (ISO)⁵.

Other documents that have a holistic vision on all aspects of accessibility are the UN *Universal Declaration of Human Rights*, which states in Article 21.2., “Everyone has the right to equal access to public service in his country”; and the Cities For All (2019) campaign declaration (*Global Compact on Inclusive and Accessible Cities*), which has six guiding principles to achieve inclusive and accessible cities: i) non-discrimination, ii) participation, iii) accessibility, iv) inclusive urban policies and programs, v) capacity building, and vi) data for development. The Cities For All guiding principles promote policies that protect the rights of persons with disabilities and combat exclusionary policies that perpetuate inequality.

It is also important to understand that despite being mandated at a federal level, nearly 70 percent of the Sustainable Development Goal targets will be won or lost at the local level. Inclusion is a central theme throughout the Sustainable Development Goals (UN 2015), however, it is not well measured or defined at the ground level in municipal governance.

Table 1 shows the legal framework in relation to the three key aspects and the signatory countries or cities for each of the international instruments. All the countries in LAC have signed the United Nations Agreements. However, only 21 LAC countries have signed the OAS *Inter-American Convention for the Elimination of All Forms of Discrimination against Persons with Disabilities*; 157 cities out of only nine LAC countries have join the WHO Global Network of Age-Friendly Cities and Communities⁶; and four cities in LAC have signed the Cities For All Global Compact.

5. ISO standards that refer to accessibility in Built Environment, Cities, and Digital Accessibility (ISO 21542, ISO 40500, ISO 37122) www.iso.org

6. The Framework and guide for WHO Global Network of Age-Friendly Cities and Communities can be found in “Membership in the Global Network of Age-friendly Cities and Communities (GNAFCC)” (WHO 2019), inspired by “The Global age-friendly cities: a guide” (WHO 2007).

→ **TABLE 1**

Intersections among multilateral legal documents and standards (with specific mentions and concepts regarding accessibility) across three different urban development areas.

	1 Physical environments and mobility systems	2 Adequate housing
UN Universal Declaration of Rights	Article 21.2	Article 21.2
UN Convention on the Rights of Persons with Disabilities	Articles 9, 20	Articles 19, 28
UN Agenda 2030 - Sustainable Development Goals	SDGs 11.2, 11.3, 11.7, 11.A, 11.B	SDGs 11.1, 11.3, 11.B, 11.C
UN New Urban Agenda	Articles 11, 13.a, 13.b, 13.f, 14.a, 14.b, 25, 32, 34, 36, 37, 55, 67, 95, 100, 114	Articles 13.a, 14.a, 25, 32, 34, 36, 67, 95
OAS Inter-American Convention for the Elimination of All Forms of Discrimination against PWD	Articles 3.a, 3.b, 3.c	Articles 3.a, 3.b, 3.c
UN Sendai Framework for Disaster Risk Reduction 2015-2030	Articles 7, 19.d, 30.k, 32	Articles 7, 19.d, 30.j, 30.k, 32
WHO Global strategy and action plan on ageing and health (WHO Age-Friendly Cities)⁷	Articles 1, 19, 29, 57, 59	Articles 55, 59
ISO Standards	ISO 40500, ISO 37122	ISO 21542
Cities For All - 6 Key Principles⁸	1. Non-Discrimination, 2. Participation, 3. Accessibility, 4. Inclusive Urban Policies and Programs, 5. Capacity Building, 6. Data for Development	

8. We list the Latin American cities signatory of this campaign, as of December 2019.

7. In this analysis “The WHO Global Strategy and Action Plan on Ageing and Health” (WHO 2017) is used as strategic policy document for the WHO Age Friendly Cities Initiative. The relationship is explained in “Membership in the Global Network of Age-friendly Cities and Communities (GNAFCC)”: “In 2002 WHO released Active ageing: a policy framework. “The Global age-friendly cities: a guide” built on this framework. In 2015, WHO’s issued a new framework for Healthy Ageing which has since been endorsed by 194 Member States and forms the basis of WHO’s Global Strategy and Action Plan on Ageing and Health (2016 – 2030). WHO’s new approach compliments our past approach by framing age- friendly actions towards meeting the goal of enhancing functional ability and by extending these concepts in a way that is relevant for all sectors and that can encourage them to work together” (WHO, 2019).

3 Information and digital infrastructure

Article 21.2

Articles 9, 20, 21

SDG 11.B

Articles 34, 36,
92, 156

Articles 3.a, 3.b, 3.c

Articles 7, 18.g, 19.d,
19.g, 24.e, 30.k

Articles 29, 59

ISO 40500,
ISO 37122

São Paulo, Rio de Janeiro,
and Curitiba (Brazil),
Puebla (Mexico), and
Otavalo (Venezuela).

LAC signatory countries:

Antigua and Barbuda
Argentina
Bahamas
Barbados
Belize
Bolivia
Brazil
Chile
Colombia
Costa Rica
Cuba
Dominica
Ecuador
El Salvador
Granada
Guatemala
Guyana
Haiti
Honduras
Jamaica
Mexico
Nicaragua
Panama
Paraguay
Peru
Dominican Republic
Saint Kitts and Nevis
Saint Vincent and the Grenadines
Saint Lucia
Suriname
Trinidad and Tobago
Uruguay
Venezuela

Argentina
Brazil
Chile
Costa Rica
Cuba
Mexico
Peru
Puerto Rico
Uruguay

*most countries except Venezuela and Grenada





Well-planned cities can dramatically improve social and economic outcomes for individuals with a range of disabilities, their families and the larger communities they participate in.

→ OPPORTUNITIES IN BUILDING CITIES FOR ALL

Women, men, girls, and boys with disabilities continue to face considerable discrimination regarding mobility and accessing urban infrastructure and services (e.g., housing, transport, clean water, education, employment, health services and information technology). This not only results in exclusion but fewer opportunities for employment, education, and political participation (World Enabled 2016).

Addressing these issues provides the opportunity to address not only inequality at the city-wide level, but also more broadly to address other critical issues that exist at the transversal level.

Some of the key opportunities at the local level include improving social and economic outcomes and incorporating universal design in planning processes and tourism infrastructure. At the transversal level, opportunities exist with relation to climate change and risk mitigation.

→ OPPORTUNITIES AT THE LOCAL LEVEL

Improving Social and Economic Outcomes

Well-planned cities can dramatically improve social and economic outcomes for individuals with a range of disabilities, their families and the larger communities they participate in.

The lower rates of economic and labor market participation of persons with disabilities impose a higher welfare burden on governments, highlighting the costs of exclusion, which are estimated to range from three to seven percent of GDP globally (Buckup 2009). In the USA, according to a 2010 survey from the US Census Bureau (Brault 2012), persons with disabilities are less likely to be employed, earn less per year when employed and are more likely to be in poverty. Low- and middle-income economies generally allocate limited resources to maximize utility, thus costs associated with the exclusion of a single group, such as persons with disabilities, from the labor force can lead to substantial losses equal to around seven percent of national GDP (UN 2016).

Attracting Tourism

In the tourism industry, which is vital for many LAC countries (especially the Caribbean where tourism accounts for close to 30 percent of GDP), costs associated with not adopting universal design principles in tourism infrastructure means failing to capture 20 percent of the global market (UN 2016).

Cost Savings

Incorporating accessibility principles and standards at the beginning of the planning process provides another important opportunity for cities.

For example, retrofitting for accessibility is vastly more expensive—by up to 20 percent of the original cost—than integrating accessibility and universal design principles into new buildings. By contrast, when incorporated early in the planning process, this cost represents only around one percent of the total cost (WHO 2011).

→ **OPPORTUNITIES AT THE TRANSVERSAL LEVEL**

Climate Change

Accessibility is a transversal issue that intersects with a diverse set of themes.

An example of this is how accessibility directly relates to environmental sustainability and resiliency (which itself is linked to disaster risk reduction efforts). It is estimated there will be at least 200 million people displaced by climatic events by 2050, of whom at least 30 million are likely to be persons with disabilities. And that number does not account for the many others who will be left behind to struggle for a livelihood in degraded environments (IOM 2016).

There are actions and initiatives that can increase accessibility in urban areas as well as decrease pollution directly linked to climate change (IPCC 2014). For instance, compact cities can help improve accessibility and low-carbon mobility in cities. Sprawling areas generally force people and goods to travel greater distances, compounding congestion and unsustainable movement patterns as well as reinforcing segregation.

9. The transport sector produces around 23 percent of global energy-related CO₂ emissions, equivalent to 6.7 gigatons of CO₂ in 2010 (IPCC 2014).

Urban environments can be accessible, low-carbon and human-centered; and can influence a community's health in the long term through measures that include minimum density standards, mixed-use regulations and a density bonus for developers. One example of such a measure is the Denmark Planning Act's 'Station Proximity Principle', which requires new offices over 1,500 square meters to be located within 600 meters of a rail station, leading to Copenhagen's efficient, compact urban form (LSE 2014). By reducing dependence on automobiles and encouraging more active forms of personal transportation, cities can improve health outcomes and increase mobility of those who are unable or unwilling to drive (e.g., youth, persons with disabilities, the elderly) (New Economy Report 2014).¹⁰ Fewer cars on the road also translates to reduced air pollution and greenhouse gas emissions with associated health and environmental benefits (World Enabled 2016; Transportation Research Board and National Research Council 2009).¹¹

Many cities around the world, including in LAC, have instituted strategies called transit oriented development (TOD) by concentrating higher density, mixed use development around transit stations and along transit lines.

This enables residents to more easily use transit services, reducing the need for personal automobile ownership. This results in a decreased need for parking spaces and other automobile-oriented infrastructure as well an increase in the availability of public space. Accessible improvements to TOD strategies include comprehensive 'way-finding' systems and easy-to-read information to help every user, including tourists, to navigate in complex environments such as public transit stations. Another example is low floor buses, pioneered in Curitiba, Brazil, to improve access to public transportation for the general public, particularly senior citizens and persons with disabilities, including those using wheelchairs and walkers (World Enabled 2016; WHO 2011).

10. "Urban transport is more complex than other transport sectors, not just because it involves the integration of different transport systems, but also because it co-produces accessibility jointly with spatial development" (New Economy Report 2014).

11. The National Research Council in the US estimates that doubling densities within metropolitan regions can reduce vehicle-kilometers-travelled (VKT) by up to 25 percent when also concentrating employment, and thus reduce greenhouse gas pollution from cars.

Lack of access to early warning systems, transportation, barrier-free housing and public buildings and spaces puts persons with disabilities and senior citizens at high risk with respect to disasters caused by natural hazards and conflicts or low-severity high-frequency disasters. UN 2013

For instance, research indicates that the mortality rate among persons with disabilities was twice that of the rest of the population during the 2011 Japan earthquake and tsunami (UN 2013).

Collaboration to mitigate such risks is already happening as is the case in Chakaria, Bangladesh. Following the 2015 floods, which were the highest in living memory, a coalition of civil society that included the Centre for Disability in Development (CDD), Christian Blind Mission (CBM) and the Social Assistance and Rehabilitation for the Physically Vulnerable, assisted the Housing and Building Research Institute and the Bangladesh Government in conducting a study to design and construct a house prototype. The prototype was accessible-for-all, flash flood resistant and was developed via a competition involving local universities (World Enabled 2016). The coalition met with the affected community and persons with disabilities to learn about their housing needs in general as well as during a flood situation.

Sixty-six students submitted 19 designs, providing an opportunity to select different accessibility and universal design features that addressed key criteria such as comfort, usability, safety, use of local materials, low cost, and easily replicable methods of construction (World Enabled 2016). After constructing a prototype and studying its resilience, CDD and CBM launched an advocacy campaign to promote the design and its innovation in terms of accessibility and universal design to any new housing construction project in flash flood zones. This provides a good example of how collaboration between national and local actors can be key to producing innovative models of accessibility, sustainability and resiliency.

→ CHALLENGES TO BUILDING CITIES FOR ALL

While the benefits to a city for acting on improving accessibility may be clear, numerous challenges remain that must be overcome to maximize the gains from inclusive urban design and development. Some of the major challenges, as well as examples of programs and practices used to mitigate them, are detailed below:

Involvement of vulnerable groups: Persons with disabilities and older persons should be involved in planning, designing, and monitoring urban development transformations. In Uzbekistan, the *Accessibility, Civic Consciousness, Employment and Social Support for PWD* program was developed. It involved the participation of different actors, including people with physical disabilities whose job it was to help develop the necessary laws related to accessibility issues as well as to monitor the accessibility of public buildings over time (UN 2016).

Use of accessibility indicators: Selecting indicators to be used in the design of urban planning policies and strategies that can measure and monitor inclusion can be difficult. One good practice used in LAC was the *Methodology for the Elaboration of Universal Accessibility Plans* in Ecuador. The program gathered national data on universal accessibility, which was then used to establish a baseline for upcoming evaluations in the implementation of universal adjustment (UN 2016).

Inter-agency coordination at the local and national level: Coordinating inclusion, accessibility and human rights approaches can be complex as their strategies and implementation are often siloed. The *One Quarter for All* forum held in Germany with the support of the Q8 initiative included participants from the community, officials, religious communities, associations and local foundations.¹² The forum was used to raise local initiatives and joint building ventures, and developed 30 goals and associated recommendations for inclusive architectural and urban development (UN 2016).

Awareness and understanding: Policy makers, urban planners, service providers and designers need awareness and understanding of the social, economic and innovation benefits of inclusion and accessibility for inclusive urban development. This awareness also needs to extend across the tools available to support inclusive urban development strategies. The *Action Plan towards Kuala Lumpur as an Accessible City*, which was developed in 2010, set out an implementation framework that included workshops, access auditing and a holistic focus on all three stages of the construction process: design, construction and post construction. It highlighted three priority areas: legislation, enforcement and monitoring, and awareness raising (UN 2016).

12. Q8 initiative is itself a project of Evangelische Stiftung Alsterdorf, a large Hamburg-based foundation dedicated in part to aiding individuals with disabilities (Fembeck 2017).

Training: Programs need to be developed for government policy makers, students and professionals on how to build accessible cities. The *Supporting architects and urban planners to understand accessibility* course from the Global Alliance on Accessible Technologies and Environments, (GAATES), which is ongoing, allows individuals to learn by taking quizzes at their own pace, whenever it is convenient for them. The course is designed to meet the continuing education needs of architects, landscape architects and urban planners, but is open to anyone interested in accessible design and its implementation in public spaces (UN 2016).

Inclusive and participatory budgets and financing mechanisms: These are needed in order to effectively implement inclusive urban development policies and strategies. A good example is the US program *Supportive Housing for Persons with Disabilities*. In the United States, federal, state and city funds as well as corporate equity investments are involved in the finance and development of housing. Government grants subsidize rents, allowing tenants to pay only one-third of their income in rent. Government grants, foundations and private philanthropy are used to fund the necessary support services (UN 2016).

Generation of inclusive and disaggregated data: This is required to better identify vulnerable populations in society and their specific barriers to accessing city public services. The visual and acoustic information program used on public buses in Spain was created to help enable the safe and independent use of public bus transportation for persons with visual or hearing impairments (UN 2016). It involved the use of an Open Data Platform, which allows third parties to develop apps and create additional functionalities.

Local government leadership: Supportive leadership on inclusive urban development and sustained commitment to programs are crucial factors in achieving beneficial outcomes. The *Accessibility Master Plan of Singapore* provides an example of strong leadership and commitment by city officials to create a user-friendly built environment. The Master Plan is a holistic framework that addresses both accessibility and universal design adoption with a multi-lever and multi-pronged approach to deal with accessibility concerns of past, present and future developments (UN 2016).

Provisions for safe and accessible public spaces: The Mexican project, *Transforming an unused piece of land into an inclusive public space*, provides a good example of how public space can be reclaimed by creating pocket parks. This involved an inclusive approach from an early stage where community participation and advice from accessibility experts were sought in the decision-making process (UN 2016).



Combating stigmas and negative attitudes against vulnerable populations:

Negative perceptions of persons with a disability are unfortunately not uncommon. This leads to perceptions of helplessness and can result in people being denied access to employment, education and housing on the basis of disability, age or gender. An example of a successful program to help combat this challenge was the Canadian *Liveable and Inclusive Communities for Seniors with Disabilities and All Citizens: Model and Tools for Actions*. The overall objectives of the program were to increase the general knowledge of policymakers, service providers and the community on how to create Liveable and Inclusive Communities (LICs); and to develop planning and evaluation frameworks based on the LIC concept model that can be shared by the community and government. These concept models were applied to ensure better activity coordination, decision-making and distribution of resources for all community members, including PWD (UN 2016).

→ CITY OFFICES AND SECRETARIATS OF PERSONS WITH DISABILITIES

Many cities around the world have specific agencies entrusted to manage programs that promote accessibility and inclusion, and more broadly, defend the rights of persons with disabilities.

In large metropolitan areas in the United States, the Office of Persons with Disabilities is the designated advisory body for compliance with the *Americans with Disabilities Act* (ADA) and advises the Mayor and City Council on matters affecting the disability community (The ADA National Network, 2020).¹³ Similarly, in some cities of LAC, municipalities have created Secretariats for Persons with Disabilities to act as a liaison between the municipality and the disability community.

This helps to ensure that the rights of the disability community are included in city programs, policies and services.

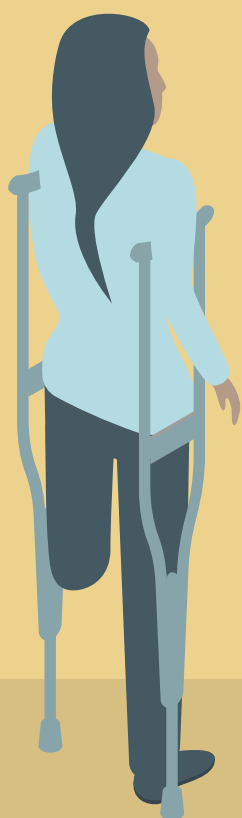
Two great examples are the cities of New York in the USA and São Paulo in Brazil. In New York City, the Mayor's Office of PWD (NYC MOPD) provides resources and develops its own initiatives by collaborating with diverse stakeholders including the private sector and civil society. São Paulo's Secretariat of Persons with Disabilities (SP SPD) is responsible for projects that promote accessibility and guarantee personal rights. These two agencies have diverse programs and initiatives, with some of the issues they have focused on highlighted in the following sections.

13. "The ADA is a civil rights law that prohibits discrimination against individuals with disabilities in all areas of public life, including jobs, schools, transportation, and all public and private places that are open to the general public. The purpose of the law is to make sure that PWD have the same rights and opportunities as everyone else" (The ADA National Network, 2020).



***In some cities of
Latin America and
the Caribbean,
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as a liaison between
the municipality and
the PWD community.***





→ DIGITAL ACCESSIBILITY

In 2019, the NYC MOPD published the second *Digital Accessibility Report* on the state of digital accessibility for the City of New York's agency websites. It covers accessibility enhancements to websites, mobile apps, maps, videos and other digital content over the past two years. The analysis is based on the City of New York Accessibility Scoring Methodology, which is derived from WCAG 2.0 Level AA standards (W3C 2008).¹⁴ Similarly, In São Paulo, SP SPD has created the Digital Accessibility Seal, which certifies local websites and electronic portals that meet the accessibility criteria established at the national and international levels (Artieda et al 2019).¹⁵ Also, SP SPD's Center of Intermediation in Libras (sign language) (CIL) allows people with hearing impairment, as well as deaf and deafblind persons to have access to any public service in the city (Artieda et al 2019).¹⁶ Hearing impaired citizens can download the app, which is available for free on Android or iOS phones and tablets, and via the website. When triggered, the service acts as a mediator between the user and an interpreter.

→ INCLUSIVE AND ACCESSIBLE BUILT ENVIRONMENT

New York City's *Inclusive Design Guidelines*, created by the NYC MOPD in partnership with the International Code Council, is a voluntary technical guide that helps construction builders and designers produce "multisensory enhanced" environments that accommodate a wide range of people regardless of their physical and mental abilities, sex or age. The guidelines include standards that harmonize with the *New York City Building Code* and the *2010 Americans with Disabilities Act Standards for Accessible Design*, plus other legal requirements (Piccolo 2017). In São Paulo since 2004, the SP SPD has issued "The Architectural Accessibility Seal" that certifies buildings that effectively mitigate physical barriers for persons with disabilities.¹⁷ The seal is granted by the city's Permanent Accessibility Commission and can be conferred to private and public buildings.¹⁸ The seal has been awarded to various buildings such as schools, religious temples, restaurants, banks and cultural centers.

14. "Web Content Accessibility Guidelines (WCAG) 2.0 defines how to make Web content more accessible to PWD. Accessibility involves a wide range of disabilities, including visual, auditory, physical, speech, cognitive, language, learning, and neurological disabilities". (W3C 2008).

15. For more information, see: https://www.prefeitura.sp.gov.br/cidade/secretarias/pessoa_com_deficiencia/selo_de_acessibilidade_digital/index.php

16. For more information, see : https://www.prefeitura.sp.gov.br/cidade/secretarias/pessoa_com_deficiencia/central_de_libras/index.php?p=203752

17. For more information, see : https://www.prefeitura.sp.gov.br/cidade/secretarias/pessoa_com_deficiencia/selo_de_acessibilidade_arquitetonica/index.php?p=259779

18. For more information, see : https://www.prefeitura.sp.gov.br/cidade/secretarias/pessoa_com_deficiencia/cpa/

→ INCLUSIVE URBAN GOVERNANCE

Both cities, New York and São Paulo, have created inter-agency collaborative programs to connect city programs with employees and service users with disabilities.

Since 2016, all New York City agencies are required to appoint a Disability Service Facilitator who coordinates with the Mayor's Office for PWD (NYC MOPD) and its efforts to comply with the *Americans with Disabilities Act* (ADA) and other regulations concerning accessibility for persons with disabilities. The facilitator's role includes:

serving as the primary contact within the agency for employees or citizens with disabilities requesting auxiliary services.

documenting records of complaints made pursuant to laws and regulations relating to persons with disabilities, and forwarding such complaints to the NYC MOPD; and

analyzing and making recommendations to the head of each agency and to the NYC MOPD to resolve physical and programmatic accessibility issues.¹⁹

Each year, the NYC MOPD releases an annual report, *AccessibleNYC*, which provides an update on the state of accessibility in the areas of transportation, employment, financial empowerment, housing, health, access to city services and education.²⁰

In São Paulo, the Permanent Accessibility Commission is a collegiate body of the Municipality of São Paulo linked to the Secretariat of Persons with Disabilities (SP SPD) and composed of representatives of various secretariats, municipal bodies and civil society.²¹ This collaborative inter-agency program was originally instituted in 1996 and amended subsequently in 2000, 2009 and 2010. The commission has an advisory and deliberative role in matters that include accessibility of buildings, public places, street furniture, transportation, and communication. The commission has engineers and architects among its members and provides courses and technical guidance, conducts surveys and project analysis, and coordinates integrated actions across the various departments of the municipal administration to eliminate architectural and communication barriers for the city.

19. For more about these facilitators: <https://www1.nyc.gov/site/mopd/initiatives/disability-service-facilitators-dsf.page>

20. For more about the report: <https://www1.nyc.gov/site/mopd/about/reports-publications.page>

21. For more information: https://www.prefeitura.sp.gov.br/cidade/secretarias/pessoa_com_deficiencia/cpa/

“We are proud that up to July 2019, almost five thousand deaf people have participated in the CIL program and we have certified 63 websites of the Municipal Government and nine private companies, which are fundamental issues for the role of persons with disabilities and their effective participation in society.”

Cid Torquato, Secretary of Persons with Disabilities of São Paulo

→ POLICY RECOMMENDATIONS FOR INCLUSIVE AND ACCESSIBLE URBAN DEVELOPMENT

To operationalize the principle of Leave No One Behind (LNOB), local and regional governments should structure their policies around inclusive human rights instruments and development frameworks including the *Convention on the Rights of Persons with Disabilities*, [Sustainable Development Goals](#), the [New Urban Agenda](#) and the [World Health Organization's Age-Friendly Cities and Communities Framework](#).

In addition to these frameworks, local and regional governments can tailor their objectives around six essential pillars for inclusion and accessibility, namely:

- 1 Non-discrimination:** Calling attention to the principle of Leave No One Behind, truly inclusive urban policies prioritize equitable, affordable and safe access to physical, social and digital infrastructure across all urban planning objectives and programs. This is needed to ensure the right to the city in all environments regardless of gender, age or disability and recognizes that all persons have a right to accessibility.
- 2 Participation:** Local government priorities must guarantee environments in which all stakeholders can actively engage in the development of inclusive urban and planning policies and programs. This is particularly the case for stakeholders who face attitudinal barriers limiting their participation, such as persons with disabilities and older persons. Participatory programs must guarantee socio-economic equity through inclusive programs in education, hiring practices and decent and productive employment. In most LAC countries on the National Council of Persons with Disabilities (CONADIS, for its acronym in Spanish), government agencies ensure compliance with the rights of persons with disabilities. These institutions in Ecuador, Peru, Brazil, Venezuela, Nicaragua, Colombia, Uruguay and Cuba actively interact with civil society, state and city officials and other stakeholders. In Ecuador, CONADIS is responsible for ensuring compliance with the rights of persons with disabilities. Currently, the organization is managing the National Agenda for Equality in Disabilities and has undertaken efforts in coordination with national ministers to implement actions in terms of universal accessibility (CONADIS 2019).

3 Accessibility: Implementation of urban and rural strategies and policies should prioritize accessibility as a measurable mechanism to guarantee participation and non-discriminatory environments. Prioritizing accessibility means, as a first step, addressing the elimination of barriers in the physical, digital and social environments of cities. A second measure involves the adjustments necessary so that all persons can access the tools and information needed to understand and exercise their rights in the city, including to participate in public life. This includes the provision of inclusive services and tools to facilitate access to public facilities, spaces, information, websites and online services.

4 Inclusive urban policies and programs: Local and regional governments should harmonize and localize international, regional and national standards on accessibility regulations and legislation including the International Organization for Standardization's (ISO) *71:2014 Guide for addressing accessibility in standards* and *21542:2011 Building construction – Accessibility and usability of the built environment*, and *Web Content Accessibility Guidelines 2.0*. These standards provide a strong baseline of technical guidelines. Any translation of the standards should go above baseline and be done in direct consultation with accountable institutions and civil society, particularly persons with disabilities and older persons. In the LAC region, most countries are members of the ISO Standards Committee, except Venezuela and Grenada. Some plans addressing inclusivity are listed in the following table:

Argentina	<u>National Accessibility Plan</u>
Bolivia	<u>National Plan of Equality and Equalization of Opportunities for PWD – 2006</u>
Brazil	<u>National Plan for the Rights of Persons with Disabilities -To Live without Limit</u>
Colombia	<u>National Plan of Action for interventions on Disability 2005 – 2007</u>
Cuba	<u>Third National Action Plan for Persons with Disabilities 2006-2010</u>
Dominican Republic	<u>Plan for the Decade of the Americas: for the Rights and Dignity of Persons with Disabilities of the Dominican Republic 2006-2016</u>
Ecuador	<u>Strategic Institutional Plan of the National Council for the Equality of Disabilities</u> <u>National Agenda for the Equality of Disabilities</u>
Guatemala	<u>Plan of Action on Disability 2008</u>
Haiti	<u>Five-year National Plan for the Integration of PWD (2010)</u>
Jamaica	<u>Vision 2030 Jamaica – National Development Plan. PWD Sector Plan 2009 – 2030</u>
Mexico	<u>National Program for the Development and the Inclusion of PWD 2014-2018</u>
Panama	<u>National Strategic Plan for the Social Inclusion of PWD and their families 2011 – 2014</u>
Peru	<u>Plan for the Equalization of Opportunities for PWD 2009 – 2018</u>
Trinidad and Tobago	<u>National Policy on Persons with Disabilities (2018)</u>

5 Capacity building: Local and regional governments should strengthen the community's ability to engage directly in efforts to improve standards and accessibility of services facilities. This needs to be achieved by promoting, developing, and deploying capacity development that strengthen civil society's influence in shaping inclusive governance processes and protecting human rights in urban and territorial decision-making. Part of this capacitation includes actively supporting programs and research through collaborations with universities and non-governmental organizations that aim to develop and improve accessible technological mechanisms for inclusive sharing and exchanging of information, knowledge, expertise, training, and mobility.

6 Data for development: Towards effectively informing future programs and monitoring existing ones, local and regional governments should procure and utilize evidence-based and inclusive data to systematically understand and address the barriers that limit inclusion and accessibility. Inclusive data is disaggregated by sex, age, disability type, income, geographic location and migration status, along with other characteristics that are relevant to the local context. Disaggregation should take place in all dimensions of the program. When developing baselines, and during the implementation and evaluation stages, local and regional governments should promote and utilize data to inform current and future planning for the city. They should build on shared knowledge and best practices in areas such as universal design and age-friendly cities by comparing both international and locally generated data.

→ THE COLLABORATIVE WAY FORWARD

Cities and partners operate in different contexts and are at different stages in the realization of inclusion and accessibility. In this regard, improving practices and achieving quality standards in inclusion and accessibility require a multi-stakeholder engagement for which local and regional governments should set priority actions (World Enabled 2016).

To support and accelerate the way forward, the principles and mechanism of the C4All *Global Compact on Inclusive and Accessible Cities* provide a framework for local and regional governments to begin developing and aligning their urban strategies towards inclusion. This includes the following:

- 1 Signing and committing to the *C4All Global Compact on Inclusive and Accessible Cities***, in which the city designates a focal point and agency to coordinate and communicate efforts (in many cases, this is the City's Office of Persons with Disabilities or the City's Secretariat for Persons with Disabilities). Cities are then invited to join the C4All Global Community of Practice on Inclusive and Accessible Cities. The Community of Practice is a space where cities can have a dialogue with other local government leaders and urban actors to exchange knowledge and good practices on inclusive urban development, and create partnerships to accelerate their local implementation, development and evaluation of inclusion and sustainability. Local and regional governments are also invited to share their local practices on inclusive urban development by utilizing and submitting the template form, which will be shared on the Cities4all webpage and among the Compact's network.
- 2 Utilizing** the Compact's global survey (in development) to analyze their current state of inclusion and identify gaps to be addressed in implementation efforts to build cities for all. During this assessment phase, local and regional governments should engage local civil society organizations, particularly organizations of persons with disabilities and older persons, along with the technical teams within the municipality, to incorporate their perspectives on developing capacities. Local and regional governments should also disseminate the principles of the Compact locally in the community through awareness raising activities, events and consultation.
- 3 Benchmarking** and monitoring progress by engaging in regular reporting of their efforts to mainstream and implement the Compact. This should be undertaken in coordination with other human rights instruments (e.g., the *Convention on the Rights of Persons with Disabilities*). The proposed mechanism for reporting is through the elaboration of a Global Summit on Inclusive and Accessible Cities, for assessment through a proposed Global Inclusion Index, and for sharing of efforts at the global level through the reporting structure of the Committee on the Rights of Persons with Disabilities, the High-Level Political Forum and the World Urban Forum.

→ **ENABLING ENVIRONMENTS FOR INCLUSIVE AND ACCESSIBLE URBAN DEVELOPMENT**

By setting priorities around the policy recommendations outlined in the previous section (Policy Recommendations for Inclusive Urban Development), local and regional governments can develop an effective baseline from which to measure inclusion and accessibility.

Evaluative criteria have been developed to assess programs and priorities implemented by local governments. The evaluative criteria can help policy makers evaluate the priorities according to their city's political agenda, and the examples provided below can be used by cities to take similar action.

To enable and measure inclusive urban development, local and regional governments should utilize this evaluative criterion, which assess legislative measures for inclusive environments; meaningful and active participation; inclusive health; security and independence; leadership and inclusive budgeting; capacity to deliver inclusive strategies and programs; and attitudes and beliefs.²²

→ **LEGISLATIVE MEASURES FOR INCLUSIVE ENVIRONMENTS**

As a priority step, local and regional governments should do an initial assessment of the current legislative measures in place at the local level, to ensure human rights and prioritize inclusion, universal design and accessibility for all—with a cross-sectoral and cross-departmental approach to city development plans (Pineda 2020). By having this legal precedence for inclusion within plans for the city, local governments ensure inclusion is institutionalized and can avoid fragmentation in the execution of projects that are not aligned with an inclusive urban development strategy.

The City of Oslo in Norway has developed a comprehensive plan for universal design. The “Common Principles of Universal Design” covers transportation, communication, construction, public property, outdoor areas and ICTs, with the goal that all municipal agencies and companies implement universal design requirements in their area of responsibility by 2025. “Each agency is developing its own action plan and measurable objectives, which need to be documented in their annual reports to the City Council. The municipal agencies cooperate with one another... [and involve] civil society, NGOs, persons with disabilities, the municipal councils on disability as well as the central council for seniors” (Fembeck 2018, 138).

22. Elements incorporated from: Disability Convention (DisCo) Policy Framework (Pineda 2020), WHO Age-Friendly Cities & Communities Framework (WHO 2019, 2020), World Bank Disability Inclusion & Accountability Framework (World Bank 2018), UN Flagship Report on Disability and Sustainable Development Goals (UN 2018), UN Disability Inclusion Strategy (UN 2019), UNICEF Child Friendly Cities Framework (UNICEF 2004, 2018)

→ MEANINGFUL AND ACTIVE PARTICIPATION


Participatory planning and decision-making with citizens should be a central activity in developing and enabling inclusive urban policies, particularly with vulnerable groups such as persons with disabilities and older persons (Pineda 2020). Addressing equitable participation by ensuring information is available in accessible formats; accessibility of public and private transportation; inclusive opportunities for civic, cultural, educational and voluntary engagement; and barrier-free and enabling interior and exterior spaces; can be effective methods in ensuring all persons are able to participate in urban transformation and make productive contributions to society (UN 2018, 2019).

Telemark's County Council in Norway (with the support of the Road Administration, Trekking Association and county councils for the elderly and for persons with disabilities) created a program to upgrade the walking trails from central urban areas to the surroundings of Telemark County. The groups offered guidance for the construction of the paths, including preferable textures that are firm and non-slip, maximum steepness of inclines, opportunities for resting, minimum widths, lighting, clear boundaries, simple directions and other orientation solutions for persons with visual, hearing or intellectual impairments. Four municipalities have already created plans and are preparing to begin work (Fembeck 2018).

→ INCLUSIVE HEALTH

Measures need to be put in place that ensure that all people can live a long and quality life by guaranteeing mechanisms that allow them to manage and decide on the appropriate health and social services that affect them. These services should address their needs and rights to the city through accessible places and programs for active leisure and socialization, inclusive activities, programs and information to promote health, social and spiritual well-being, accessible and appropriate community support and health services, and equal access to good air and clean water (WHO 2019, 2020) (UNICEF 2004, 2018).

In the United States, the Mary Free Bed YMCA is a 36 acre community center supporting children, adults, and families in Grand Rapids, Michigan. The facility was designed using the principles of Universal Design and is the first building in the world to be certified by the Global Universal Design Commission... With zero stairs throughout the 120,000 square foot facility... vertical circulation is achieved through a centrally-located ramp that creates equality among users. Color also plays a large role in terms of psychological effect and in guiding people with visual impairments... [Since its completion,] the Mary Free Bed YMCA has been growing in terms of sports membership, programmes, and partnerships. (Fembeck 2018, 120).



Safety should be a key aspect of inclusive cities to facilitate independence with urban policies and programs that address the security needs of vulnerable populations.

 Not all 
disabilities
are visible

→ SECURITY AND INDEPENDENCE

Safety should be a key aspect of inclusive cities to facilitate independence with urban policies and programs that address the social, financial and physical security needs of vulnerable populations and the communities and families that support them (World Bank 2018). This can be achieved by:

- 1 providing accessible and affordable housing
- 2 providing accessible home-safety designs and products
- 3 creating accessible and hazard-free streets and buildings
- 4 putting in place signage for drivers and pedestrians
- 5 creating safe, accessible, and affordable public transportation
- 6 establishing services to assist with household chores and home maintenance
- 7 providing support for caregivers
- 8 creating accessible stores, banks, professional services and access to public information and training
- 9 supporting appropriate and accessible employment opportunities and flexible work practices

In Israel, the “Help me help you: accessibility of public services” program provides municipal service providers with tools on how to assist persons with disabilities and offer more accessible service. This enables persons with disabilities to receive the services offered by the municipality with dignity, equality and independence. One of the advantages of the project is its immediate effect on the quality of accessible services offered in the municipality. “The project proved highly successful.... Feedback from these local authorities show[ed] that staff views of persons with disabilities ha[d] shifted, and new accessibility protocols and arrangements were developed and put in place for residents with disabilities. Having exposed workers to the value of inclusion, the project has opened the door to other inclusive ventures” (UN 2016, 85).

→ LEADERSHIP AND INCLUSIVE BUDGETING

Local government leaders should be championing inclusion and human rights as being of paramount importance to their urban development goals.

This commitment should also include participatory budget allocations and processes to support and finance inclusive urban planning and development (Pineda 2020). The budgetary supports in place to facilitate inclusive urban processes will affect the implementation and should be shaped by collective actions and direct consultations with all members of the community.

In Dubai, the Government of the Emirate of Dubai (UAE), has started to implement its *Dubai Universal Accessibility Strategy and Action Plan*. Fifteen relevant local governmental and semi-governmental entities in Dubai have been mandated to prepare a three-year... sectoral implementation plan to retrofit existing buildings, infrastructure, and facilities to ensure a barrier-free and fully inclusive physical environment... The Government of Dubai is aware of its obligation to accommodate the diverse needs of all its citizens and has expressed its intention to make the city fully accessible by 2020. (Fembeck 2018, 145)

→ CAPACITY TO DELIVER INCLUSIVE STRATEGIES AND PROGRAMS

The actual administrative and coordinating capacities of the institutions to develop and implement inclusive urban development processes across sectors should be assessed.

Assessment of local government capacities should look at agencies responsible for specific areas of urban life including transportation, health and housing (Pineda 2020). It should also include assessment of whether different agencies/sectors are communicating, if there are dedicated teams or personnel allocated to inclusion and accessibility in each policy area, and a focus on nurturing partnerships with other stakeholders such as organizations of older persons and persons with disabilities (Pineda 2020) (WHO 2020) (UN 2019).

In China, the Hong Kong SAR Government has implemented the “Accessibility and retrofitting to public premises” project. The Government’s established policy objective is “to provide a barrier-free environment for persons with disabilities with a view to enabling them to gain access to public and private premises and make use of the facilities on an equal basis with others, thereby facilitating” independent living and integration in society (UN 2016, 19).

The administration has already obtained funding approval of about HK\$292 million (US\$38 million) from the Finance Committee of the Legislative Council for the design of barrier-free facilities at about 180 public pedestrian footbridges and subways, as well as the first phase of retrofitting works (involving ten facilities). For the remaining retrofitting works, the administration intends to seek funding from the Legislative Council in several batches as soon as the design works have been completed... The major access retrofitting and improvement program covers about 3,700 government premises and facilities. (UN 2016, 20)

→ ATTITUDES AND BELIEFS

Inclusion should not only be reflected in policy, but also in the community's perspectives and beliefs of marginalized groups in society.

In each policy area, assessing perceptions and promoting positive images of persons with disabilities and older persons as active contributors in and to the city's development can help communities better understand attitudinal barriers present in urban life (Pineda 2020). It can also be used to highlight universal design as a common good and mechanism to guarantee that all groups can equally engage and shape urbanization (Pineda 2020) (UNICEF 2018).

In Germany, the *Inklusion Muss Laut Sein!* (German for Inclusion Must Be Loud) non-profit organization “allows persons with disabilities to enjoy events accompanied by a like-minded companion... [It] operates a European-wide network of volunteers who accompany persons with disabilities to various cultural events and provides information about accessible venues online. Thanks to the vast engagement of these volunteers, the service can be offered free of charge” (Fembeck 2018, 66). In 2016 and 2017, nearly one thousand people with various disabilities have used the service (Fembeck 2018, 66).

→ CONCLUSION

Building inclusive and accessible cities empowers every citizen universally, regardless of their economic means, gender, ethnicity, level of ability, age, or religion.

By unlocking the potential of all citizens, inclusive and accessible cities promote innovation and economic growth that is fueled by the city's diversity. City leaders, private actors, academics, and other stakeholders committed to implementing accessibility and inclusion goals at the local level have an enormous opportunity to create changes that can dramatically improve the lives of everyone living in the world's cities.

By adopting principles such as those outlined in the *Global Compact on Inclusive and Accessible Cities*, city leaders can put in place strategies that lead to tangible shifts in social equity and resilience in their cities. These principles form part of the solution to creating universally inclusive and accessible spaces that truly leave no one behind. Putting in place actions based on these principles and related evaluative criteria can enable inclusive urban development processes and empower local governments to realize the rights for all, to the city and all its environments.



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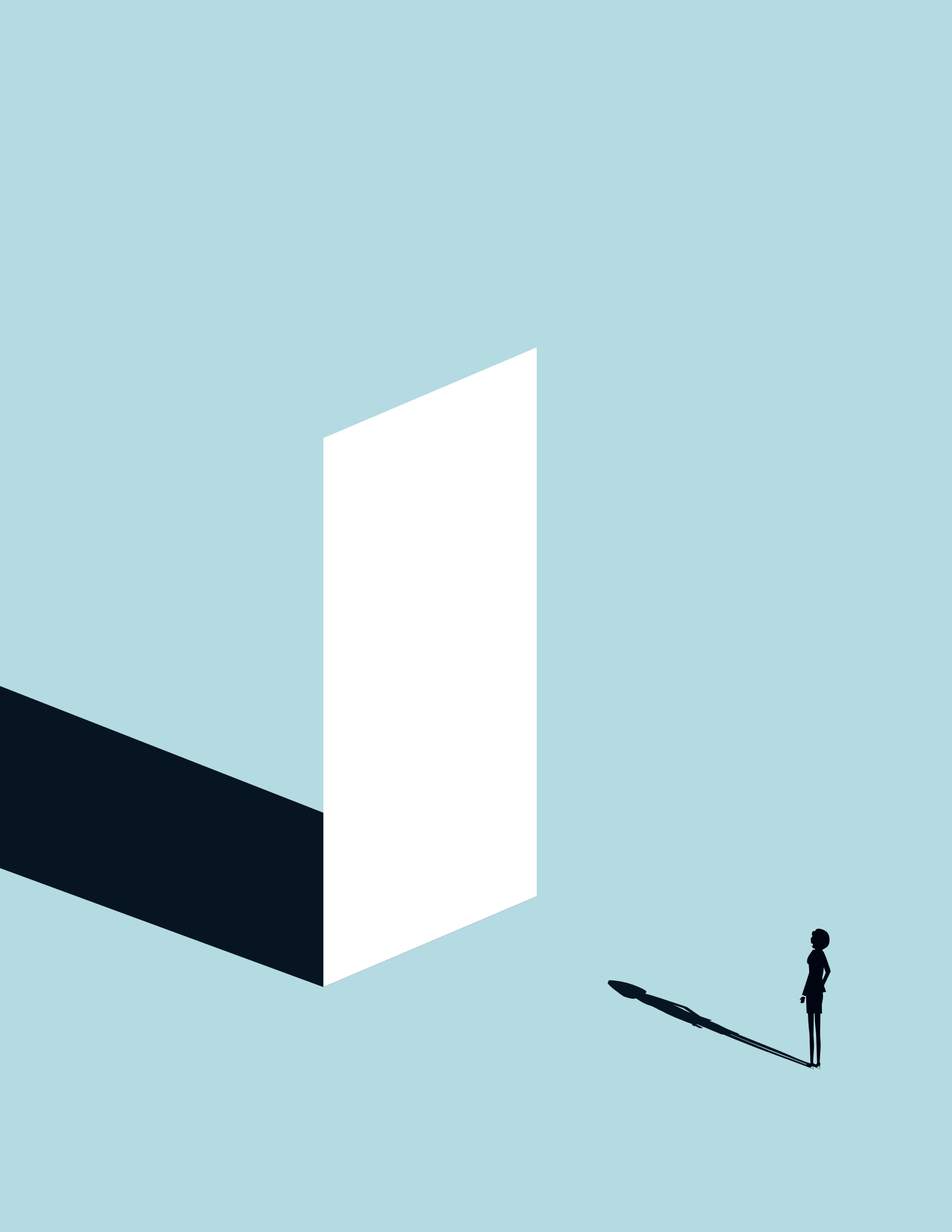
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***Our identity influences
the choices we make
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with others in social,
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realms of our lives.***



PLURAL IDENTITIES AND PUBLIC SPACE

I Ann Mitchell

About fifteen tourists watched intently as two young men moved in unison to the music blaring from a boombox resting on the ground, bold swaths of colorful graffiti art as a backdrop. Then one youth fell to the ground spinning on his back and the other grabbed a microphone and began rapping. A hat for collecting tips lay on the ground. This scene, which I witnessed in the middle of *Independencia*, a “popular” neighborhood of Medellin, Colombia, was made possible by the creation of public space.

The neighborhood’s streets, once too dangerous for tourists to enter, had been transformed by urban integration policies, which focused primarily on improving mobility and connectivity. By making the neighborhood accessible and safe for tourists to visit, a door had been opened for expanded social interaction through which outsiders and residents both could perhaps begin to appreciate the multifaceted identity of the neighborhood, its inhabitants and its visitors. As this essay will argue, public spaces designed to be accessible to all people (e.g., elderly, PWD, youth) can promote the social interaction necessary for people to learn about each other’s multidimensional identities and thereby foster social inclusion.

Identity refers to a person’s sense of self, who we believe we are. Psychology considers identity to be a cognitive construct of the self. It contains both core, enduring concepts (personal identity) and peripheral concepts that allow the individual to adapt to different social situations and adopt various roles and group identities (social identities) (Korte 2007).

Our identity influences the choices we make and how we interact with others in social, economic, political, cultural, and spiritual realms of our lives.

At the same time, our participation in these different spheres helps to shape our own identity. “Identity results from interaction in the social world and in turn guides interaction in the social world” (Simon 2004, 2).

This essay reflects on the concept of identity and how identity relates to public spaces. It argues that the ways in which our identities are defined by ourselves and by our communities have an important influence on the way we behave, interact with others, and relate to public spaces. At the same time, public spaces influence forms of interaction between individuals and groups, thereby altering the formation of identity at both the individual and the social levels. Gaining a greater understanding of the relationship between identity and public space can contribute to the design of more effective urban policies and interventions that consider disadvantaged groups, like the elderly, the PWD, and children, and therefore promote human development and social inclusion in cities.

The chapter begins by delineating the concept of social identity as defined in psychology and sociology. Then it explores what additional insights can be gleaned from Nobel prize winning economist and philosopher Amartya Sen's collection of essays titled *Identity and Violence*. I will argue that this book can provide relevant insights for understanding identity-based division and social exclusion in the urban context. Finally, it reflects upon how the recognition of the plurality of our affiliations can contribute to fostering social inclusion in today's fragmented urban world.

→ SOCIAL IDENTITY

In psychology, social identity is defined as “that part of an individual's self-concept which derives from his knowledge of his membership in a social group (or groups) together with the value or emotional significance attached to that membership”. (Tajfel 1978, 63).

People belong to multiple membership categories. Each is represented in a person's mind as a social identity which both describes and determines his or her attributes as a member of the group (Simon 2004).

The process of social identity formation usually involves processes of categorization and self-enhancement (Hogg, Terry and White 1995). Categorization refers to the simplification and ordering of social reality by classifying people into groups in a subjectively meaningful way. The need to maximize our own sense of self-worth leads us to evaluate and make comparisons between the ingroup (the group with which we identify) and the outgroup in a way that favors the ingroup. When a specific group membership becomes the most relevant and overarching group, self-perception and behavior take on stereotypical attributes of the group, perceptions about those outside of the group become stereotypical of the outgroup and intergroup relations become competitive and discriminatory (Hogg, Terry and White 1995).

Social groups tend to share the following three empirical features (Turner 1984). First, social groups are a collection of people defined as a group by themselves and by others (the identity criteria). Second, the members depend on each other for satisfaction of needs, achievement of common goals and the validation of norms and beliefs (the interdependence criteria). Third, the social interaction between members is organized and regulated by status structure and shared norms (the social structure criteria). Turner (1984) argues that while all three of these criteria contribute to the formation of small groups, shared identity alone is what agglutinates affiliation in large groups (sex, race, religion, occupation, etc.). In the latter type of group, the impetus for group formation is often derived from the fact that the group is recognized and treated in a homogeneous way by others.

Behavior in groups will also depend on the belief structure regarding the possibility for social mobility and structural change (Hogg, Terry and White 1995). When group members believe their group's lower status is legitimate and that movement to the dominant group²³ is possible, ingroup solidarity and intergroup competition will be low. In this situation, individual group members may seek to gain entry into the dominant group. In contrast, group members who believe their group's lower status is illegitimate, movement between groups is not possible and social change is viable will display within group solidarity and intergroup competition.

Social identity theory can account for a variety of types of group behavior, such as conformity, stereotyping, discrimination and prejudice, as well as altruism and cooperation.

Accentuation of ingroup and outgroup homogeneity is an additional aspect of intergroup relations. Lorenzi-Cioldi and Doise's (1990) analysis of the evidence indicates that more frequent exposure to other members of the ingroup favors differentiation within the group and a personalization of representation, whereas frequency of exposure has less of an effect on outgroup homogeneity. For example, members of a self-help group for PWD would tend to recognize the variation in the individual characteristics of group members but perceive nonmembers to be "all the same".

23. A dominant group refers to the social group that is perceived to have relatively more social prestige, economic status, political power, or other traits connected to categorical group membership (Turner, 1984). Akerlof and Kranton (2000) explain that usually "dominant groups define themselves vis-A-vis 'other(s),' and members of the dominant (excluded) groups benefit (lose)—materially and psychologically—from the differentiation.

The evidence also suggests that differences in the degree of ingroup versus outgroup homogeneity depend not only on the frequency, but also the quality and context of encounters within and between groups. High variation in the contexts of interaction between members of an ingroup promotes personalization.

When groups are involved in competitive relations (for example, competition between groups affiliated with opposing political parties), members of the outgroup will be perceived to be more homogeneous and adopt stereotypical attributes.

The psychology literature has also considered the relationship between space and identity. Nation, city, neighborhood, and other geographically bounded areas can be categories of group identity. The term “urban-related identity” has been used to refer to the social image or symbolic meaning (derived from spatial features, social composition or cultural characteristics) that make a city unique and differentiates its residents from members of other spatially defined groups (Lalli 1992). The literature also refers to a more individualized process of identity formation associated with urban space. Porshansky (1978, cited in Di Masso 2012, 167) coined the term “urban place identity” to refer to “a pattern of beliefs, feelings, and expectations regarding public spaces and places, and even more importantly, a dimension of competence relevant to how adequately the individual uses these physical settings as well as the appropriate strategies for successfully navigating through the settings”. It has also been shown that social identities form the basis on which spaces are transformed into meaningful places. As a result, the same physical space can take on different meanings for different social groups (Hopkins and Dixon 2006), and more importantly, for groups with different physical abilities.

Sociology views the self as comprised of multiple, socially constructed identities formed by the diverse roles we occupy within society (Hogg, Terry and White 1995).²⁴ These role identities provide meaning to the self, define role types, establish differences with respect to alternative categories and influence behavior. People tend to rank their role identities by level of importance; their behavior will be determined by what they consider to be the appropriate behavior of the role that is ranked highest in their identity salience hierarchy. An identity role will have greater salience if an individual perceives that many important social relationships depend on the occupancy of that role.

24. Hogg, Terry and White (1995) provide a comparative analysis of the theories of identity in sociology and psychology.

The use of behavior considered appropriate for the group both confirms a person's membership within the group and enhances self-esteem. While identity theory from sociology stresses how roles are defined by complementary or counter-roles (for example, father-mother, with and without disabilities), it does not explicitly explain intergroup behavior. Instead it focuses more on how social interaction between individuals influences identity.

→ SEN'S IDENTITY AND VIOLENCE

In *Identity and Violence*, Sen (2007) considers the ethical implications of how identities are formed and presents normative arguments in favor of a shift in attention from singular to multidimensional identities.

He brings to the analysis of identity key concepts that pervade the rest of his work, such as freedom, choice, value, and public reasoning.

Sen analyzes the concept of identity through the lens of his capability approach. This approach's central argument is that, when evaluating the level of wellbeing or poverty, the metric should not be income or resources but rather "capabilities", or the real freedoms people have to be and do what they value (Sen 1992). Examples of capabilities include being sheltered in a suitable dwelling, working in a safe environment, or having the freedom to walk on the street without fear or access a public sidewalk without difficulty. According to this approach, information on income is not sufficient for understanding wellbeing or poverty because the resources that each person needs to achieve real freedoms will vary according to his or her individual, social, and environmental characteristics. For example, the resources needed to guarantee mobility are higher for a person with a motor disability than for someone without one. If the person lives at the end of a narrow passageway in an informal settlement, even more resources will be needed to guarantee mobility within the city. The capability approach also gives central importance to the idea that people need to act as agents of their own lives and decide for themselves which objectives they value the most (Sen 1985).

Sen's book begins by noting that identity can be a motivating force behind both commendable displays of kindness and brutal acts of violence in the world. Identity can be a source of pride, joy, strength and confidence. Friendships between neighbors and acts of solidarity within communities are positive outcomes of group affiliation and common identities. Social capital is a resource produced through social interaction and the creation of bonds of trust between people.

Economic productivity depends on people's ability to work together and identify with other workers within a firm. Oppressed and excluded groups can gain recognition in society by forging a common identity. However, social cohesion and solidarity within groups can also cultivate division, social exclusion, conflict and violence. Group identity is a powerful weapon used by leaders to manipulate and garner support and is the force behind many atrocities in the world. Sen says that "the imposition of an allegedly unique identity is often a crucial component of the 'martial art' of fomenting sectarian confrontation" (Sen 2007, xiii).

Identity, Sen reminds us, is multidimensional. Each person is unique and is comprised of a unique combination of elements, such as gender, age, citizenship, religion, political affiliation, profession, social class, sexual orientation, place of residence, geographic origin, among many others.

Sen says "the same person can be, without any contradiction, an American citizen, of Caribbean origin, with African ancestry, a Christian, a liberal, a woman, a vegetarian, a long-distance runner, a historian, a schoolteacher, a novelist, a feminist..." (Sen 2007, xii). As each person's identity is formed by participation in multiple collectivities, none of them can be considered a person's sole membership category. All of them taken together form a person's identity.

The cultivation of singular identities defined by just one salient characteristic, Sen argues, incites conflict and violence. His book focuses primarily on the violence that has sprung from religious identities such as the Hindu-Muslim riots in India, the Israeli-Palestinian conflict and the clash between Islam and the West. Yet his ideas can also provide relevant lessons for understanding identity-based divisions in the urban context. The bifurcation of social identity into "us" and "them" is evident both in the violence produced by youth gang wars and in the oppression and exclusion experienced by persons with disabilities or the elderly.

Sen emphasizes the importance of the role of reasoning and choice in determining our loyalties and priorities toward different groups.

While each person must choose from a feasible set of possible identities determined by individual characteristics and circumstances, we still can decide how much importance to give to one aspect of our identity over multiple other categories. Although I cannot be a father or construction worker, I can choose the importance I give to my identity as a mother, an immigrant or a university professor.

Sen questions the “communitarian” idea that people cannot escape the identity defined by their social and cultural background.

The argument goes that a person’s social background determines their patterns of reasonings and beliefs and, as knowledge has not been gained of alternative modes of behavior, one will inevitably “discover” their community to be their predominant affiliation. Sen asserts that while community and culture likely affect beliefs and behavior, multiple other factors influence reasoning processes and will come into play when choosing (within constraints) the preeminent category with which one identifies. The communitarian view, moreover, underestimates individual capacity for reasoning and does not sufficiently recognize the variation in identity categories *within* communities, cultures and other social identities.

A problem occurs, however, when singular identities are imposed by others or are considered to be inevitable.

These types of constraints imposed by society can lead to stigma, discrimination, reduced aspiration, and violence. For example, a man with a motor or visual impairment may be stereotyped as unable to care for himself or as being unproductive. Common stereotypes associated with the elderly include diminished cognitive ability or inability to learn new labor market skills. Similarly, there is evidence that residents of informal settlements face discrimination solely based on their place of residence, making it difficult for them to break out of a singular identity imposed by society.²⁵

The spatial environment is another factor that places constraints on the formation of identity.

25. Prejudice and discrimination were common themes in the testimonies of young people interviewed for a study on secondary school drop out in the informal settlements of Buenos Aires (Mitchell, Del Monte and Deneulin 2018). Silva (2008) analyses the role of the media in constructing social stigma against the residents of Buenos Aires’ informal settlements, known locally as “villeros”.

Pineda (2008) argues, for example, that disability is not an individual property, but rather a function of the interaction between a person with a physical impairment and his or her environment.²⁶

Within Pineda's spatial model of disability, the process of construction of identity of a person with a disability is influenced by the degree to which the social, political and physical environments are enabling or disabling.


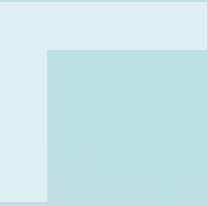
Sen (2007) argues that the remedy for identity-based violence in the world is not the suppression of identity (say, by downplaying one's identity as a homosexual, a Muslim or a person with a disability), but rather the recognition that identity is multidimensional. He writes that "the main hope of harmony in our troubled world lies in the plurality of our identities, which cut across each other and work against sharp divisions around one single hardened line of vehement division that allegedly cannot be resisted" (16).

One method for assessing the degree of recognition of the plurality of identities and the extent of social inclusion in society is to apply the evaluative framework proposed by the capability approach. This would lead us to evaluate the extent of freedom people have to promote or achieve the different things that they value. Do people have the freedom to define their own identity? Can people choose where to live, what kind of lifestyle to adopt or how to express their own culture?

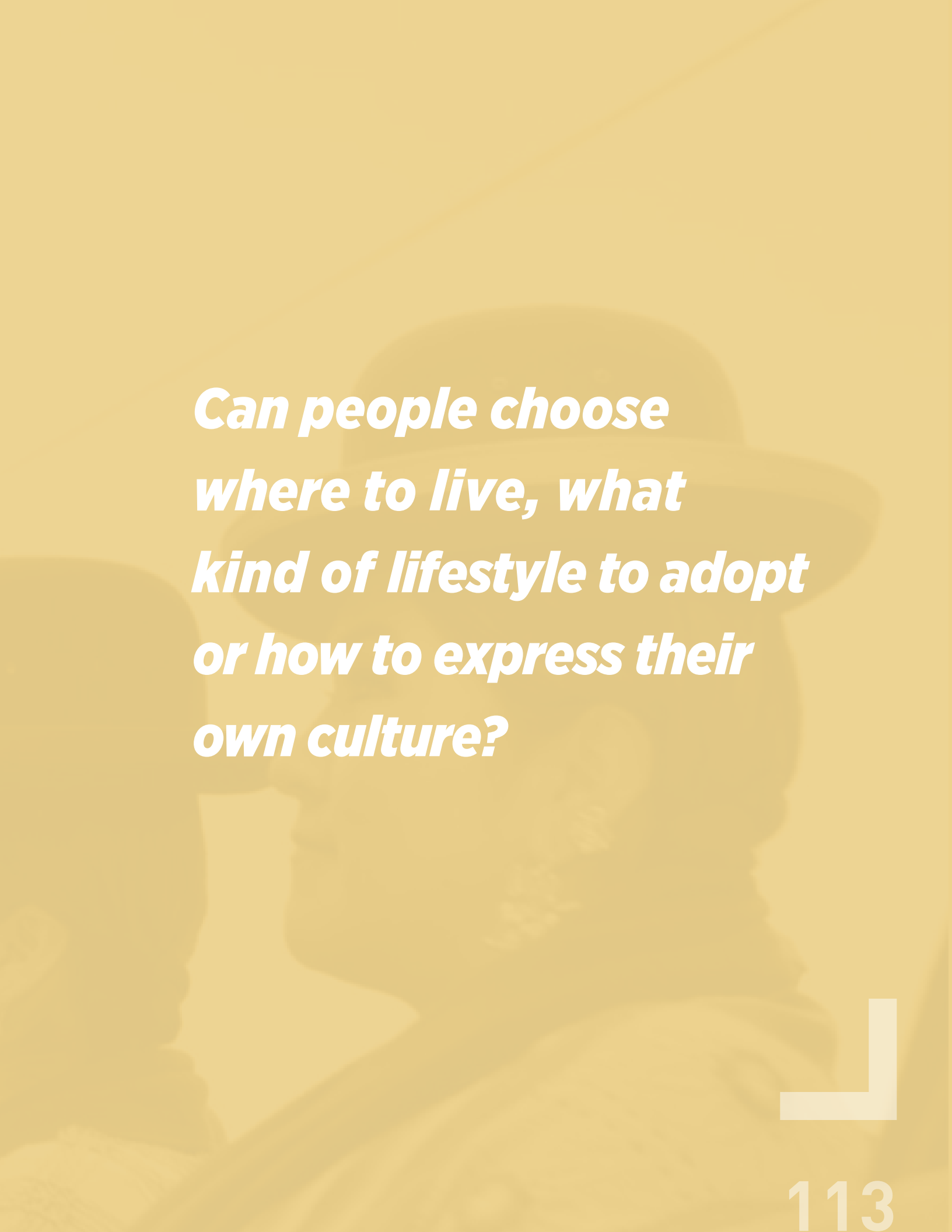
Do people, regardless of identity, have equal access to public services and spaces and to the economic, social and cultural benefits of living in cities?²⁷

26. Similarly, Mitra (2006), using the conceptual framework of the capability approach, defines disability as "a deprivation in terms of capabilities or functioning that results from the interaction of an individual's (a) personal characteristics (e.g., age, impairment), (b) basket of available goods (assets, income) and (c) environment (social, economic, political, cultural)". Disability can result either from social factors (such as stigma or discrimination related to an impairment) or the physical environment (when it restricts mobility) and will also be determined by individual access to resources.

27. Pineda (2008) proposes an alternative normative criterion for evaluating spatial justice based on Rawls' theory of justice, "where the distribution of space is only just if it is to the advantage of the least well-off stakeholders" (115-16).



***Do people have the
freedom to define
their own identity?***

The background of the page is a solid light orange color. Overlaid on this background is a faint, semi-transparent image of several people, likely of African descent, wearing traditional headwraps and clothing. The image is positioned such that it serves as a backdrop for the text.

***Can people choose
where to live, what
kind of lifestyle to adopt
or how to express their
own culture?***



In summary, Sen's book makes one overarching normative judgement about the process of identity formation in the world today. He argues that the singularization of identity is a cause of conflict and violence and therefore "the hope of harmony in the contemporary world lies to a great extent in a clearer understanding of the pluralities of human identity" (Sen 2007, xiv).

What insights can we draw from Sen's book for the processes of development of inclusive public spaces in cities? My reading of the literature on social identity and of Sen's insightful book suggests some possible connections between identity and public space.

First, public spaces can provide opportunities for people to learn about the varied facets of each of our multidimensional identities, by creating occasions for face-to-face interaction between people. Second, the ability to see beyond group stereotypes and personalize the members of other groups depends not only on the frequency of interaction, but also on the quality and variety of engagements and the extent of competition and discord between groups. Third, public spaces can play a central role in teaching about diversity, the myriad of different physical, cultural, social and spiritual aspects that make each person unique.

Educating about diversity can help reduce stereotyping and discrimination, enable people to make informed choices about which aspects of their identity they choose to give greater salience and foster informed debate and public reasoning processes.



→ IDENTITY AND PUBLIC SPACE IN CITIES

Streets, parks, squares, and other public spaces are, by definition, places that are open to all people.

Public spaces can recall a common history, bestow aesthetic beauty, satisfy a functional purpose or serve as a backdrop for public ceremonies or everyday life. Most importantly, public spaces are socially constructed. The French philosopher Lefebvre (1991) said that social space “appears as the intangible outcome of history, society and culture, all of which are supposedly combined within it” (92).

The way in which people appropriate public spaces and interact within them is intimately related to the process of identity formation.

Public spaces can serve to strengthen and affirm group membership. Monuments and central plazas like Mexico City’s Zócalo are designed to evoke national pride and forge a collective identity. Indigenous peoples use public areas to celebrate and communicate their cultural heritage. At the same time, white supremacy groups display propaganda in public spaces to profess racial hierarchy and foment division. Public expressions of group identity can be both positive and affirming and negative and exclusionary.

Public spaces traditionally have been used as venues for public deliberation and debate.

Although the expansion of digital information and communication technology has created new digital forms of interaction in the public sphere (Castells 2004), physical spaces continue to hold a central role in interpersonal and group interaction. Diverse types of social groups use public spaces to raise public awareness and make claims concerning their rights. Thousands of parents participated in “stroller marches” on the streets of Tel Aviv to demand greater governmental intervention in the provision of childcare services. In Cochabamba, Bolivia, PWD suspended themselves in wheelchairs from a bridge over a major highway and traversed hundreds of kilometers to raise public awareness of their cause and demand public pensions. Socially excluded groups often maintain that the occupation of public space is their only means for forcing people to take notice of their collective needs and demands.

While Sen (2007) points to how interaction between people and groups in the public sphere contributes to strengthening democracy, participation will be truly plural only to the extent that there is equality of access to places of assembly.

The degree to which public spaces foster interaction between individuals and help contribute to the recognition of multidimensional identities of PWD is one criterion that can be used to evaluate the quality of public spaces. Are public spaces safe, well-maintained, and accessible to all? Does the configuration of squares, parks and green areas within the city promote the mixing of people from multiple collectivities? Do transport networks enable access to public spaces for all, regardless of age, functionality, socioeconomic level, ethnic group, etc.? Do public spaces contribute to fostering a collective national or city-wide identity?

The social and spatial fragmentation of LAC cities reduces opportunities for social mixing across groups and contributes to the singularization of identities.

Gated communities and enclosed urban apartment complexes designed to protect residents from insecurity transform public spaces such as streets, playgrounds, and green areas into private spaces available only to residents. In the same way, violent inner-city neighborhoods and informal settlements become inaccessible to non-residents. At both ends of the socioeconomic spectrum, residential segregation hinders the type of social interaction necessary for people to recognize the plurality of each other's identities, thereby contributing to stereotyping, stigma, and discrimination.

Some urban integration experiences—such as the case of the neighborhood Independencia in Medellin, Colombia—show how improvements in mobility, security and the availability of public spaces can effectively foster social integration.

Urban integration policies in Medellin included the installation of aerial cable car lines to connect the vulnerable hillside neighborhood with the rest of the city, along with investments in social housing, public spaces, schools and libraries. The interventions were designed to promote universal accessibility and respect for the diversity of users. The neighborhood's vibrant graffiti street art became a pull for outside visitors. The evidence shows that these policies, along with participatory budgeting processes, which involved local residents in collective decision-making about the use of public investments, have contributed to improving quality of life, social inclusion and the local residents' sense of self-esteem (Dávila 2013).

In recent decades, there has been a shift in attention from investing in the technical and functional aspects of transport networks to improving the human and social aspects of mobility. This change has benefited from expanding interdisciplinary work which considers the social, political, time-related and environmental aspects of mobility (Cresswell 2010). If, as some argue (Urry 2000, cited in Cresswell 2010), identities are increasingly based on networks and movements of people, information and things, rather than on location of residence, then policies that foster human mobility could attain even greater relevance as policy tools for urban integration and social inclusion. It is also important to take into account, however, that successful experiences of improving transport and connectivity, such as the case of Medellín, need to be combined with other types of social and participatory policies (Dávila 2013). As each context is different, when there are tradeoffs in the costs and benefits of alternative integration strategies, the participation of civil society in the decision-making process takes on even greater significance.

Educational exclusion is another dimension of social fragmentation in urban LAC.

Divisions across public and private schools because of spatial segregation and the movement of higher income students to private schools have produced high levels of educational segregation by socioeconomic level throughout LAC (Rivas 2015). As a result, public education, which traditionally played an important role in the construction of ties across socioeconomic groups, now tends to reinforce social fragmentation (Kaztman 2001; Kaztman and Retamoso 2007).

The educational inclusion of students with disabilities is another challenge. Despite the policy shift toward inclusive schools in which all children learn together, regardless of their individual differences, lack of access to inclusive facilities (absence of elevators, inappropriate classroom facilities and inadequate transport) acts as a barrier to the educational inclusion of children with disabilities. Evidence shows that school attendance and completion rates are lower for children and adolescents with disabilities across LAC countries, especially at the secondary school level (Hincapié, Duryea and Hincapié 2019). Moreover, the close relationship between poverty and disability (Elwan 1999) means that marginalized communities have a higher prevalence of PWD, exacerbating the problem of educational exclusion in these neighborhoods (Pantano 2014). These challenges to educational integration are especially relevant given the role the educational system can play in teaching young people about human diversity and encouraging engagement in public reasoning processes.

Public spaces designed to be accessible to all people can serve to broaden the boundaries that define the physical space over which people can occupy.

In this way, accessibility can contribute to the types of social interaction necessary for people to learn about each other's multidimensional identities. It is my hope that Sen's reflections on the plurality of identity and the evaluative framework provided by the capability approach provide relevant conceptual tools for thinking about how the urban integration policies described in this book can contribute to fostering social inclusion in LAC.



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***Public spaces designed
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space over which people
can occupy.***





CASE STUDIES



BUILDING AN INCLUSIVE CITY THROUGH PLAY: INCLUSIVE PUBLIC SPACES AND RECREATIONAL PARKS IN CAMPINAS, BRAZIL

| Catarina Mastellaro

“Children in cities need a variety of places in which to play and to learn. They need, among other things, opportunities for all kinds of sports and exercise and physical skills.” Jane Jacobs (2011)

Cities and public spaces have been traditionally designed with the needs of full time (paid) workers in mind. This has led to the development of public spaces where children don't feel safe or cannot play with limited supervision. This compromises their development and increases the burden faced by their caregivers, in particular women, as they carry out at least two and a half times more unpaid household and care work than men (UN Women 2017). In the case of children with disabilities, the lack of adequate public spaces also affects their ability to play with other children (with or without disabilities). Within this perspective, the city of Campinas has decided to promote the construction of inclusive recreational parks where children of all abilities can play together, as part of a broader effort to promote accessibility and the construction of an inclusive city that works for all.

→ WHY DO PUBLIC AND RECREATIONAL SPACES MATTER?

“Playtime isn't just fun. It's every child's right. Play helps boost brain development, build social skills and helps bright young minds reach their full potential.”

(UNICEF, August 13, 2019)

Since the industrial revolution in the late nineteenth century, cities in most parts of the world have been understood as the sites of business and industrial production. This is reflected in the planning of transport systems designed around the needs of full-time workers or in the design of public spaces that offer little opportunity for young children to play safely while their caregivers can interact with each other.

While public spaces have been associated with productive work, residential spaces have been associated with domestic and care work, contributing to the design of cities that tend to favor productive work over reproductive work in the public sphere.

Given that women perform, on average, 2.5 times more unpaid household and care work than men (UN Women 2017), traditional city design has led to the development of cities that are not “gender neutral” as they were built to address the needs of full time workers and do not bear the needs of other groups in mind. This type of city planning has contributed to the reproduction of the sexual division of labor through the production of spaces with a marked segregation between the domestic and public dimensions, disproportionately affecting women’s opportunities in cities as they still bear most of the responsibilities of performing care work (Urban Development Vienna 2013; Urban 20 2018).

→ **FIGURE 1: CHILDREN PLAYING TOGETHER IN INCLUSIVE PARKS IN CAMPINAS (LEFT) AND INCLUSIVE PARK IN PARQUE TAQUARAL, CAMPINAS (RIGHT)**



→ **FIGURE 2: CHILD PLAYING HOPSCOTCH IN DOWNTOWN CAMPINAS**



Many authors working on the intersection between gender and urban development have highlighted this issue (Silbaugh 2008; Spain 2014) and called for cities that are designed to focus on the “sustainability of life” (Valdivia 2018) or, in other words, on those citizens who are the main recipients and providers of “care work”.²⁸ While this approach does not seek to “naturalize” the sexual division of work, it aims to contribute to alleviate some of the burden faced by (mainly) women and “prepare public spaces for a more equitable and just society where tasks that are still performed mainly by women are shared by men and women” (Campos 1996). Within this perspective, cities should not only work for those citizens who are employed and work 9-to-5 during weekdays; they should be designed to meet the demands of groups that are often marginalized—toddlers, children, caregivers, elders—paying attention to the intersection of identities that shape their disadvantage, including gender, disability, age, race, socio-economic situation and sexual orientation.

This means designing public spaces that are safe and easily accessible by all these groups and prioritizing public services that are needed by them.

For one of these groups in particular—children with and without disabilities of all socio-economic backgrounds—cities and their public spaces need to be safe for them and their caregivers to use. When children play outside of their homes, in public spaces, their brain development is enhanced, as studies suggest that exposure to green space early in life could result in beneficial structural changes in the brain (Dadvand et al. 2018). Moreover, public spaces should also try to be fun or at least promote playful attitudes, since in addition to being every child’s right, playing also helps boost brain development and build social skills (UNICEF 2016 and Ginsburg 2007).

The lack of “playful” cities—understood as places where citizens, in particular the youngest ones, can play or have a playful attitude including through art and music—is another consequence of this idea that urban planning should help create cities for productive work, and that residential neighborhoods should be the sites of reproductive work. Within this perspective, “play is seen to be the opposite of work” (Masson 2012), which also explains why governments struggle to justify public spending on playgrounds and the design of adequate public spaces. In addition to contributing to the wellbeing of children and youth, providing adequate and safe public spaces (including playgrounds) can also help alleviate some of the burden of care work carried by caregivers, and mothers. It can give them the opportunity to interact with other adults, helping them overcome the isolation sometimes associated with caregivers that oversee small children, particularly in the case of single mothers (Silbaugh 2008).

28. “Care work” is defined by the International Labour Organization (2007) as the work of looking after the physical, psychological, emotional and developmental needs of one or more other people.

Finally, it is worth stressing that child-friendly—and playful—cities should be more than just about building playgrounds; they should be about building cities that are safe for children and can improve children’s development, health and access to opportunities (ARUP 2017). While children need to have access to specific areas designed for them to play, they also need to be able to safely play and spend time in what Jane Jacobs (2011) referred to as “an unspecialized outdoor home base: sidewalks”. Within this perspective, cities that work for children are not the same as cities that invest only in building playgrounds for children. Child-friendly cities are those that provide safe streets and public spaces, giving children the ability to enjoy some level of independent mobility and socialize with other children in a comfortable way. In addition to recreational public spaces that are inclusive and exciting, cities should aim to be safe for children of all abilities to safely walk and hang around, giving them the opportunity to play everywhere and not just in pre-determined play areas.

→ WHAT ARE INCLUSIVE PUBLIC AND RECREATIONAL SPACES?

“Play appears to be as necessary to the quality of daily life for young children with disabilities as it does for all young children.”

Michelle Buchanan and Tricia Giovacco Johnson (2009)

The United Nations Convention on the Rights of the Child, adopted in 1989, is an international treaty that recognizes the right to play, stating in Article 31 that “every child has the right to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts” (UN General Assembly 1989). It also supports the idea stated in the section above that public recreational spaces matter and highlights that governments should promote the child’s right to play: “member governments shall respect and promote the right of the child to participate fully in cultural and artistic life and shall encourage the provision of appropriate and equal opportunities for cultural, artistic, recreational and leisure activity” (Article 31). In 2006, countries adopted the United Nations Convention of the Rights of Persons with Disabilities (UN General Assembly 2006), which acknowledges that “States Parties shall take all necessary measures to ensure the full enjoyment by children with disabilities of all human rights and fundamental freedoms on an equal basis with other children” (Article 7), and “shall take appropriate measures to ensure that children with disabilities have equal access with other children to participation in play, recreation and leisure and sporting activities” (Article 30). This statement is very helpful to remind all stakeholders that children with disabilities also play and they should have the opportunity to play in public spaces together with children of all abilities.

In the New Urban Agenda adopted in 2016, all countries have agreed to a vision of cities and human settlements that prioritizes “safe, inclusive, accessible, green and quality public spaces that are friendly for families, enhance social and intergenerational interactions, cultural expressions and political participation, as appropriate, and foster social cohesion, inclusion and safety in peaceful and pluralistic societies, where the needs of all inhabitants are met, recognizing the specific needs of those in vulnerable situations”. United Nations (2017)

Similarly, in the Sustainable Development Agenda, countries have agreed on Sustainable Development Goal (SDG) 11 to “make cities and human settlements inclusive, safe, resilient and sustainable” (United Nations 2015, Goal 11), which includes as one of its targets to “by 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities” (11.7). One of the indicators identified to evaluate the progress made by countries in relation to this SDG is the “average share of the built-up area of cities that is open space for public use for all, by sex, age and persons with disabilities” (UN Stats n.d.).²⁹

But how can we define what it takes for a public and recreational space to be “inclusive”?

The term “universal design”, credited to Ron Mace, refers to “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” (Mace 1985). It builds on seven principles to ensure that any environment is functional for all people:

- 1 Equitable use:** The design is useful and marketable to people with diverse abilities.
- 2 Flexibility in use:** The design accommodates a wide range of individual preferences and abilities.
- 3 Simple and intuitive use:** Use of the design is easy to understand, regardless of the user’s experience, knowledge, language skills or current concentration level.
- 4 Perceptible information:** The design communicates necessary information effectively to the user, regardless of environmental conditions or the user’s sensory abilities.

29. For more information, see the United Nations Statistics Division (UN Stats): https://unstats.un.org/sdgs/files/meetings/iaeg-sdgs-meeting-08/9b_11.7.1_UN%20Habitat_tier%20reclassification%20Nov%202018_final.pdf.

- 5 Tolerance for error:** The design minimizes hazards and the adverse consequences of accidental or unintended actions.
- 6 Low physical effort:** The design can be used efficiently and comfortably and with a minimum of fatigue.
- 7 Size and space for approach and use:** Appropriate size and space is provided for approach, reach, manipulation and use regardless of user's body size, posture, or mobility. (Mace 1985).

Universal design is often used interchangeably with concepts such as accessibility, barrier-free design, and inclusive design. According to these concepts, inclusive recreational facilities are those spaces that can be easily and comfortably accessed, used, and enjoyed by people with diverse abilities (Burke, 2013). As such, an inclusive recreational park is made up of two main parts: the playground itself and its surroundings (Palomero Ferrer 2015). Therefore, they should include accessible ramps and adapted play equipment, such as accessible swings and seesaws with safety belts, wheelchair-accessible carousels, multi-sensory toys, among others.

The first playground for children was built in a park in Manchester, United Kingdom, in 1859; one of the first inclusive playgrounds was built 140 years later in 1999 in Maryland, United States.³⁰

Shelley Kramm came up with this idea after having difficulties taking her daughter, Hadley, who has cerebral palsy, to regular playgrounds. Her initiative has since then inspired the construction of many similar inclusive playgrounds throughout the country.³¹ As of 2010 when the Americans with Disabilities Act (ADA) was revised to change the accessibility standards for playgrounds, inclusive playgrounds have become more popular in the United States.³² In developing countries, however, they are still scarce. In the following section we will study the case of the city of Campinas, Brazil, where the Mayor, Jonas Donizette; the Secretary for Persons with Disabilities and Human Rights, Eliane Jocelaine Pereira; representatives from civil society and other civil servants are committed to building inclusive public spaces and recreational parks in the city.

30. For more on the history of playgrounds, see: ESP. 2012. "The History of Playgrounds – Past, Present and Future". ESP Play. Accessed September 24, 2019. <https://www.espplay.co.uk/the-history-of-playgrounds/>.

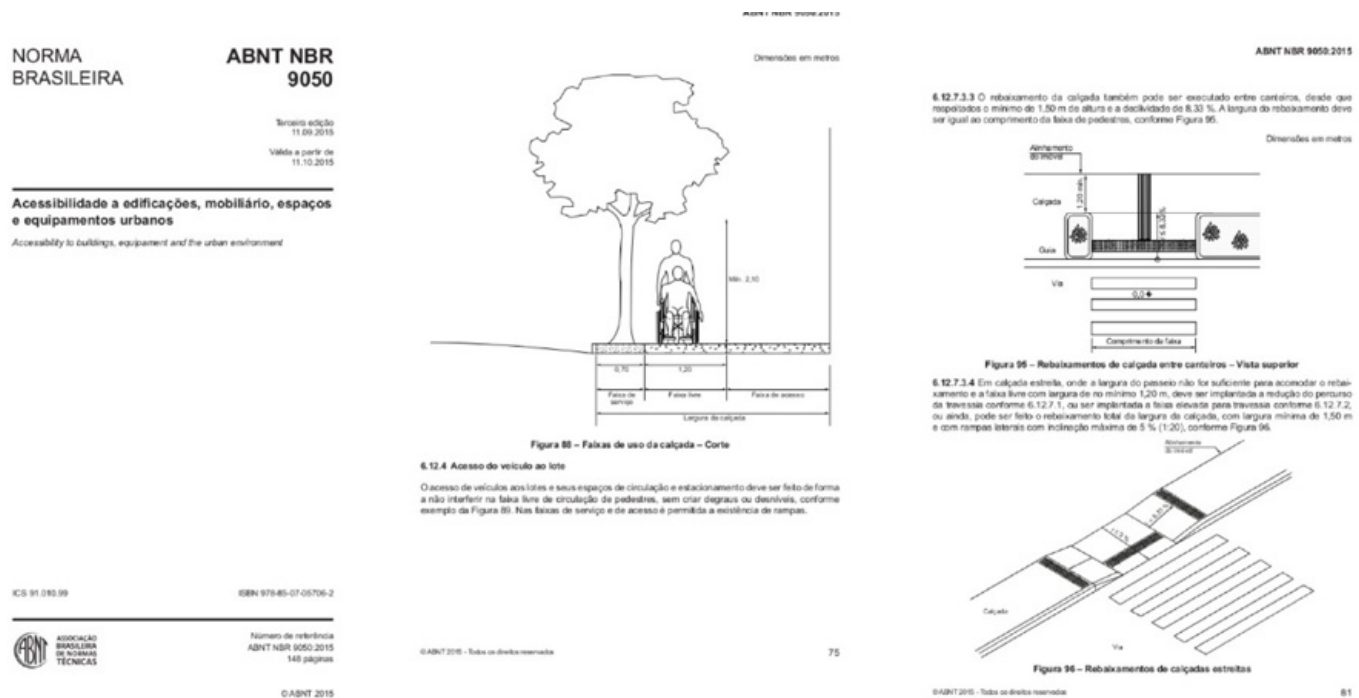
31. For more on this story, see: Rasicot, Julie. 1998. "A Playground for Hadley." Washington Post, October 1, 1998. <https://www.washingtonpost.com/archive/local/1998/10/01/a-playground-for-hadley/c46bd3f4-eebc-4909-b32d-5f86f74f7b03/>.

32. To learn more about ADA regulations, see https://www.ada.gov/2010_regs.htm.

→ NATIONAL STANDARDS PROMOTING ACCESSIBILITY AND UNIVERSAL DESIGN IN BRAZIL

In 1985, the Brazilian Association of Technical Standards (ABNT) created the first version of the national technical standard NBR 9050 under the title “Adequacy of buildings and street furniture for persons with disabilities”, which is now known as “Accessibility to buildings, equipment and the urban environment”.

→ FIGURE 3: THREE PAGES SHOWING STANDARDS AND GUIDELINES FROM THE ABNT NBR 9050



The standards set out by NBR 9050 were used as a national reference by technicians and professionals, but they were not enforced by law until 2004 following the approval of [Federal Decree No. 5.296 of December 2, 2004](#). With the adoption of [Federal Law No. 13.146 of July 6, 2015](#), also known as the Statute of the Person with Disabilities, the importance of ensuring the accessibility of the built environment was highlighted, understood as “the possibility of safe and autonomous use of spaces, urban furniture, urban equipment, buildings, transport, information and communication (including their systems and technologies), as well as other services and facilities open to the public, for public use or private but for collective use, both in urban and rural areas, by persons with disabilities or with reduced mobility” (Presidência da República 2015, Article 3.I). The standard, however, does not include any specific recommendation for playground facilities.

→ CASE STUDY: THE CITY OF CAMPINAS, BRAZIL

Campinas, the 10th richest city in Brazil, is located in the southeastern state of São Paulo. With an estimated population of 1,194,094 inhabitants in 2018, it constitutes the 14th largest city in the country.

Children between the ages of birth and nine years old are estimated as twelve percent of the total (139,166), and the total population with some type of disability is estimated at 5.6 percent of the total population living in the city, which represents approximately 60,000 people³³. The total area of the city is 795.7 km², with an average of 6.2 m² of green space per individual, which is below the minimum threshold of 9.0 m² of green space per individual recommended by the World Health Organization (2012, cited in Russo and Cirella 2018).

33. The definition of disability used by IBGE is based on the informant's perception of their difficulty hearing, seeing and walking or climbing stairs, even with facilitators such as hearing aids, contact lenses and walking sticks (Garcia, Benevides and Alencar: n.d.). The questionnaire also sought to identify intellectual and mental disabilities through the informant's understanding of the difficulty in performing their usual activities. The conceptual framework adopted for the Census was based on the International Classification of Functioning, Disability and Health (ICF) promoted by the World Health Organization (WHO) in 2001.

→ FIGURE 4: INCLUDES A MAP OF BRAZIL, HIGHLIGHTING THE STATE OF SÃO PAULO (LEFT) AND THEN THE CITY OF CAMPINAS



→ ENABLING ENVIRONMENT AT THE LOCAL LEVEL

With the aim of promoting peace and designing creative urban interventions that encourage peaceful and intergenerational exchanges between families and communities, and with a special focus on early childhood, the Secretariat for Persons with Disabilities and Human Rights of Campinas developed a municipal program called “Peace through Play”—A Paz em Língua de Brincar—with four pillars:

- 1 The organization of an Annual Play Week in May, aimed at promoting a culture of peace and the appreciation of play, reinforcing the relevance of play for the development of a healthy childhood.
- 2 The construction of inclusive playgrounds, through the identification of available public spaces and the acquisition of equipment as shown in Figure 3.
- 3 The promotion of creative and inclusive urban interventions throughout the city, giving the opportunity to University students and professors to design new or repurposed public and community spaces to stimulate play and interactions between families and communities.
- 4 The implementation of projects with the aim of rethinking the social use of the city, such as the construction of community gardens.

This municipal program is also aligned with the Municipal Early Childhood Plan adopted in 2018 by the city of Campinas, which includes among its objectives the creation of intergenerational programs in public spaces that promote social interactions between small children and the elderly, favoring care and respectful relationships; the organization of cultural and sports events for families and communities; as well as the promotion of accessibility and safety principles in public parks so that they are accessible and safe for children of all abilities (Prefeitura Municipal de Campinas 2018).

Another program led by city hall is “Campinas More Accessible” (Programa Campinas + Acessível), which aims to raise awareness regarding the rights of persons with disabilities and the importance of the involvement of all citizens in order to make Campinas more accessible. As part of this program, the city of Campinas provides technical guidance for residents, business owners and service providers to make the necessary adaptations to their sidewalks, including through the use of tactile paving, in accordance with the accessibility standards stated in the ABNT NBR 9050.

This ensures they become accessible and free of barriers that could impede the free movement of persons with disabilities or reduced mobility, children and pregnant women.

➔ **FIGURE 5: A BRAZILIAN FLYER EXPLAINING HOW TO USE THE INCLUSIVE PLAYGROUNDS IN CAMPINAS**



➔ **FIGURE 6: MUNICIPAL EARLY CHILDHOOD PLAN FOR CAMPINAS, WITH A FOCUS ON CHILDREN WITH DISABILITIES**



➔ **FIGURE 7: LOGO FOR “CAMPINAS ACESSÍVEL” PROGRAM**



As of September 2019, Campinas has built four public and recreational spaces with inclusive playgrounds.

These are located on the north, south, east, and southwest parts of the city as shown in the map below.



The idea of building inclusive playgrounds in existing public spaces of the city started as a demand from caregivers of children with disabilities, with the support of mothers who were part of a social movement called [LIA – Lazer, Inclusão e Acessibilidade](#) (Leisure, Inclusion and Accessibility). This demand was officially brought up by a group of mothers of children with disabilities during one of their monthly meetings with Eliane Jocelaine Pereira, the Secretary for Persons with Disabilities and Human Rights, and technical representatives from the Secretariat, as part of the Secretary’s initiative to collect suggestions of inclusive public policies from the population. The Secretariat organizes meetings with representatives from civil society, invited through the Council of Persons with Disabilities, to give them the opportunity to share their main concerns and suggestions for public policy.

The caregivers were concerned because they could not take their children with disabilities to play in the city’s public recreational parks, as they were not able to interact with the other children using the existing facilities.

The existing public playgrounds were not designed to be accessible by all children, including those with disabilities, whose only option was to play at home or at a center focused on children with disabilities, where inclusive playgrounds were already a reality. The caregivers wanted to know if city hall would be willing to build inclusive playgrounds in existing recreational areas, as had been done in other cities in Brazil, namely Curitiba and São Paulo.

The year was 2017 and the Secretariat for Persons with Disabilities and Human Rights did not have resources to fund the implementation of the first inclusive playground. So, the Secretary had to mobilize representatives from other Secretariats—the Secretariat for Environment and Sustainable Development—to look for resources. The Secretariat for Public Services, in charge of the maintenance of public parks, was also involved in the process. The Secretary convinced them it was an inexpensive intervention (less than 6,000 USD for each playground) that could have a high impact in the lives of the citizens of Campinas, of those with disabilities and their caregivers. Since the Secretariat for the Environment and Sustainable Development had resources from a “Consent Decree” signed with a private company, they agreed to launch together the first inclusive recreational playground at the Pedreira do Chapadão Park.³⁴

34. A “Consent Decree” is an agreement or settlement that resolves a dispute between two parties, in this case a private company and the city government.

Two years later, the city has already built four inclusive playgrounds for a total of 88,000 BRL (approximately 21,000 USD in September 2019). They are now part of a broader program (*Campinas pela Paz*) for the promotion of an inclusive and peaceful city, which includes the construction of inclusive playgrounds as one of its four pillars. These four inclusive parks are described below:

1 Pedreira do Chapadão: The first inclusive playground, built in March 2018 and totally funded by the private sector as part of a “Consent Decree” signed by a private company and the Secretariat for the Environment and Sustainable Development. It is in the Jardim Chapadão neighborhood on the north side of the city of Campinas, one of the highest points of the city. This area is home to a major commercial center, upscale buildings and gated communities, making it a prestigious neighborhood. The playground includes two inclusive swings, a seesaw and a carousel, and is totally accessible (including its surroundings). It cost 24,000 BRL (equivalent to 5,700 USD in September 2019) and represented a joint action between the Secretariats for Persons with Disabilities and Human Rights; Environment and Sustainable Development; and Public Services.

➔ **FIGURE 9: INCLUSIVE PLAYGROUND IN PEDREIRA DO CHAPADÃO**



2 Parque Dom Bosco: This is the second inclusive playground, built in October 2018 and funded by the “Municipal Fund for the Rights of Children and Adolescents” in partnership with the multisectoral committee in charge of the Municipal Plan for Early Childhood. It is in the Ouro Verde District to the southwest of the city, which is the district with the highest population concentration in the city. Bordered by two highways (Bandeirantes and Santos Dumont) and the Capivari River, the district was established during the mid-1950s by migrants coming from other regions of Brazil. The neighborhood surrounding the park is mainly inhabited by low- and middle-income residents. The park has two inclusive swings and a seesaw (teeter-totter) and cost 20,000 BRL (equivalent to 4,800 USD in September 2019).

→ **FIGURE 10: INCLUSIVE PLAYGROUND IN PARQUE DOM BOSCO**



IMG: Fernanda Sunega

3 Parque das Águas: This is the third inclusive playground, built in March 2019 as part of the efforts leading to the Multisectoral Plan for Early Childhood in Campinas. It is located in the Parque Jambreiro neighborhood to the south of the city, which includes an industrial zone. The playground is totally accessible and has an inclusive swing, a seesaw, and a carousel. It cost 20,000 BRL (equivalent to 4,800 USD in September 2019).

→ **FIGURE 11: INCLUSIVE PLAYGROUND IN PARQUE DAS ÁGUAS**



IMG: Carlos Bassan

4 Parque Taquaral: This is the fourth inclusive playground, built in August 2019 inside one of the largest parks in Campinas in an upscale residential neighborhood to the east of the city. It has two inclusive swings, a seesaw and a carousel and cost 24,000 BRL (equivalent to 5,700 USD in September 2019).

➔ **FIGURE 12: INCLUSIVE PLAYGROUND IN PARQUE TAQUARAL**



IMG: Catarina Mastellaró

The city of Campinas currently plans to build two more inclusive playgrounds by the end of 2020. One of the main challenges is related to a lack of resources for maintenance, which is currently the responsibility of the Secretariat for Public Services. Therefore, the city government currently counts on the support from citizens to maintain the facilities through the establishment of partnerships with private foundations willing to help keep the equipment in good condition.

As stated before, inclusive playgrounds allow children with and without disabilities to play together. Most of the time, children without disabilities are seen playing with this equipment, and the Secretariat for Persons with Disabilities and Human Rights tries to ensure that these inclusive playgrounds are built next to existing (regular) playgrounds. This collocation helps facilitate playful interaction between children without disabilities and children with disabilities and reduces the chance that children with disabilities are taken to a “segregated” play area, thereby promoting mutual respect among all children. Inclusive playgrounds are also very important for parents like Marina Barone Dantas, who has children with different abilities, as they provide the opportunity for the entire family to play and have fun together.

➔ **FIGURE 13: CHILDREN WITH AND WITHOUT DISABILITIES PLAYING AT THE INCLUSIVE PLAYGROUND IN PARQUE TAQUARAL**



IMG: Catarina Mastellaro

→ TESTIMONIAL

“The importance of inclusive playgrounds is to ensure the childhood of the child with disabilities. Playing is a child’s right, crucial for the development of any child and especially for the child with disabilities. Many children stay at home and do not know what it means to play in public spaces. In addition, the fact that the mother can pick up her child and go to the park to play on the weekend improves her self-esteem and confidence and allows her to take better care of her child as well. The right thing would be to have an inclusive playground in every public space because it is everyone’s right to play. I believe that the child who learns from a young age to play with everybody will grow up to become an adult with much more respect for people.”

Marina Barone Dantas³⁵

35. Testimonial provided on the 27th of August 2019 to the Secretariat for Persons with Disabilities and Human Rights

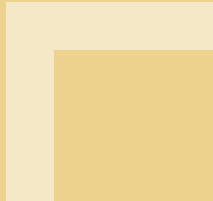
→ INCLUSIVE OUTDOOR FITNESS STATIONS

In addition to inclusive playgrounds, the city of Campinas has also built several inclusive outdoor fitness stations that can be used by persons who use wheelchairs.

In compliance with the principles outlined in the national standard NBR 9050, the outdoor fitness stations have accessible ramps, safety belts and low-height bars in every upper-limb aerobic exercise equipment. Each inclusive fitness station costs 20,000 BRL (equivalent to 4,800 USD in September 2019). These facilities are extremely relevant given that persons with disabilities have a greater risk of developing chronic and secondary health conditions compared to the general population (Rimmer et al. 2017).

→ **FIGURE 15: INCLUSIVE GYM
IN PARQUE TAQUARAL**





The importance of inclusive playgrounds is to ensure the childhood of the child with disabilities. Playing is a child's right, crucial for the development of any child.

→ SENSORY GARDENS

The inclusive playgrounds and outdoor fitness stations presented above cater predominantly to the needs of children and persons who use wheelchairs; however, they make little provision for the needs of children who have other impairments.

Since 2019, the city of Campinas has started building accessible gardens with sensory games aimed at persons with different types of impairments.

The Gisela Heller Gordon Garden of Senses is an inclusive space that offers people the possibility to stimulate their five senses: hearing, seeing, touching, smelling and tasting. The space is located close to a Reference Center for Rehabilitation and is imagined as a therapeutic space. Sense of smell can be stimulated by aromatic plants such as mint and lavender. In the “taste” area of the garden there are plants that can be eaten, such as medicinal and culinary herbs. In the “touch” area there are different textures, and for hearing there are metals, shells and bamboo that can be used to generate sounds. The garden is fully accessible, free of architectural barriers to ensure that persons with all types of disabilities can fully enjoy the space. The garden cost approximately 425,000 BRL (equivalent to 102,000 USD in September 2019).



IMG: Fernanda Sunega



IMG: Fernanda Sunega

→ **FIGURE 16: THREE IMAGES SHOWING THE GISELA HELLER GORDON GARDEN OF SENSES**



IMG: Fernanda Sunega

→ OTHER INITIATIVES FOR PROMOTING THE INCLUSION OF CHILDREN AND PERSONS WITH DISABILITIES IN URBAN SPACES

All the public spaces mentioned above comply with the Brazilian technical standard for universal design, NBR 9050, and the city of Campinas tries to guarantee they are easily accessible by everyone. As part of these efforts, the city has invested in promoting the accessibility of *public* sidewalks, buildings and buses.³⁶ The public transportation system currently has 1,142 buses in operation, of which 966 are accessible, representing 84.6 percent of the fleet. The new Bus Rapid Transit (BRT) system currently under construction is fully accessible.

The city of Campinas also provides an identification document for all persons with disabilities called “[Cartão Bem Acessível](#)”. It facilitates access to all municipal public services, including free access to the entire public transport network, without needing to bring medical reports or any other documents.

36. In the case of the sidewalks located in front of private buildings (homes, offices, commercial spaces), individual owners are responsible for them.



→ **FIGURE 17: ONE IMAGE SHOWING AN ACCESSIBLE PATH. ANOTHER IMAGE SHOWING ACCESSIBLE PUBLIC SIDEWALKS AND BUS SHELTERS.**

→ **FIGURE 18: GIRL HOLDING THE ACCESSIBILITY CARD “CARTÃO BEM ACESSÍVEL”**



→ INCLUSIVE URBAN GOVERNANCE

The Secretariat for Persons with Disabilities and Human Rights of Campinas was created in 2013. Its aim is to manage municipal services for the attention and social protection of persons with disabilities (such as with the Reference Center for Persons with Disabilities) and to promote multisectoral projects for the inclusion of persons with disabilities (including through ensuring universal design and accessibility of all public buildings). As part of its mandate, the Secretariat for Persons with Disabilities and Human Rights hosts the Municipal Council of Persons with Disabilities

The Council, led by elected representatives from the population of persons with disabilities, constitutes the deliberative, advisory and supervisory body of all political actions aimed at the promotion, social inclusion and defense of the rights of persons with disabilities.

The Council is made up of fifty-two members, half of them appointed by the government and the other half elected by civil society. It includes representatives from entities working with PWD and representatives from the population with disabilities. The Secretariat also supports the organization of the Municipal Conference on the Rights of Persons with Disabilities, which takes place every other year and aims to discuss issues relevant to the formulation of policy, programs and projects on the topic. The Secretariat is currently collaborating with the University of Campinas to compile data that can be used to demonstrate the impact of the program Campinas pela Paz (including the construction of inclusive playgrounds) on children's social and educational performance in the city.

→ CONCLUSION

The city of Campinas' efforts at building inclusive playgrounds in existing public parks throughout the city is an important example of a multisectoral and participatory effort supported by political leadership. It started as a demand from representatives of civil society—in particular, mothers in charge of children with disabilities who were lacking public facilities where their children could play. What began as a targeted intervention was transformed into a municipal policy as part of a broader program (Campinas pela Paz) for the promotion of an inclusive and peaceful city that works for all. It is an intervention that can be easily replicated in other cities in developing countries because it is not expensive. However, it should be combined with the provision of services for the attention and social protection of persons with disabilities and with other policies, to ensure the accessibility of these facilities as well as the promotion of a culture that favors respect and interaction among children of all abilities.

Inclusive Cities for Children

1 The design of public spaces must consider the needs of urban children, including their need for recreation opportunities.

2 Cities that are safe for children are good for adults.

3 Inclusive playgrounds allow all children to play in the same spaces, which improves the health of children and reduces the stress of their caregivers.





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***The team examined
global best practices,
consulted experts, and
met with city officials
to learn how best to fit
reforms into existing
work plans.***





CITY HALL EMBRACES EARLY CHILDHOOD DEVELOPMENT REACHING AN UNDERSERVED POPULATION IN TEL AVIV, 2016-2019

■ Gordon La Forge³⁷ - Bernard Van Leer Foundation

In 2016, Tel Aviv accepted an invitation to join an initiative called Urban95 that aimed to incorporate the needs of young children and their caregivers into city design, planning, and management.

The program asked, “If you could experience a city from 95 centimeters—the height of a three-year-old— what would you change?”

City leaders saw an opportunity to respond to increasing public demand for better family-friendly services, protests known as “the stroller marches.” The small team of city officials responsible for implementing the program had to build support for the reforms within the municipal government and help departments coordinate in new ways. To do so, they also had to trigger a change in mind-set by making early childhood development a city priority.



37. Gordon LaForge authored the original case study by Princeton University’s Innovations for Successful Societies program, drawing on interviews conducted in Tel Aviv in May 2019. That version is available at <https://successfulsocieties.princeton.edu/publications/city-hall-embraces-early-childhood-development-reaching-underserved-population-tel-aviv>. Sheila Mahoney produced this shorter version.

→ THE CHALLENGE

In many respects, Tel Aviv was unfriendly to young families. It ranked among the most expensive cities in the world, newcomers lacked social networks to rely on for childcare, and day care services were costly and unregulated. These problems were especially acute for residents of marginalized communities. Further, getting around the city with a stroller was a concern because of the crowded sidewalks buzzing with electric bikes and scooters.

For any real changes to occur, support from the mayor, Ron Huldai, and senior officials was crucial, but it was also essential that the municipal administrations (departments) find new ways to coordinate with each other and engage members of the public.

A 2015 survey by the Bloomberg Philanthropies innovation team—a research and advisory unit attached to the mayor’s office—began to turn the tide. The data supported a larger city goal to reduce the cost of living.

The city leadership agreed to support policy proposals that addressed this problem provided they did not expose the city to greater legal liability and proponents made a strong case that the initiatives made strategic sense.



→ FRAMING A RESPONSE

Just after the Bloomberg team conducted its survey, the Bernard van Leer Foundation, which helped decision-makers link policy to scientific evidence on early childhood development, sought to engage Tel Aviv in its Urban95 initiative. Urban95 aimed to help align investments in sidewalks, streets, parks, public transportation, and facilities with services families required to help their infants and toddlers flourish, thereby increasing access and impact.

At a 2016 conference, Daniella Ben-Attar, the Israel representative for the Bernard van Leer Foundation, met Hedva Finish, the deputy director of Tel Aviv's Strategic Planning Unit. Finish connected the Bloomberg team with Ben-Attar, who began contributing research funding and expert knowledge. This collaboration caught the notice of the Tel Aviv Foundation, the philanthropic arm of the municipality, which took the idea of an early childhood development grant to the mayor, arguing that Urban95 was an international initiative that would augment Tel Aviv's cachet as a leading global city.

The mayor gave the green light to bring a proposal to the city's Director General. The Bloomberg team, Ben-Attar, and the Tel Aviv Foundation staff worked to draw up parameters for an Urban95 project for Tel Aviv. In an addition to providing an urban environment that would help facilitate positive social interaction and learning, one of the goals was to help parents and caregivers acquire skills and knowledge they could use to advance their children's development.

The team examined global best practices, consulted experts, and met with city officials to learn how best to fit reforms into existing work plans.

The CEO accepted the proposal, which directed the resources towards public spaces and urban mobility as well as other priorities such as: municipal infrastructure for early childhood, citywide parenting services and increases in quality and affordability of childcare, and included a €1 million (US\$1.1 million) commitment from the Bernard van Leer Foundation that the city would match at least one-to-one. The grant created a position for an Urban95 project manager to work with city officials across administrations to implement the reforms. The CEO assigned Urban95 to the new Community, Culture, and Sports Administration (the Community Administration), which oversaw cultural, sports, and religious activities; youth organizations; and the city's 32 community centers. This administration would provide a framework to address early childhood development in all areas of a child's life.

→ GETTING DOWN TO WORK

Tel Aviv began to elaborate specific objectives and targets in each of five focus areas:

- 1 Developing** municipal organizational infrastructure to support early childhood.
- 2 Establishing** citywide parenting services and a digital platform for families of children three years and younger.
- 3 Adapting** public spaces to the needs of families with young children.
- 4 Enhancing** urban mobility so children and caregivers can efficiently reach the services they need.
- 5 Improving** the quality and affordability of childcare by reforming private day care facilities.

The issue that figured most prominently in public protest at the time—reforming day care facilities—was fraught and complex, so the city focused its energy on the other elements of the program in the initial years.

→ BUILDING A SHARED VISION

Bosmat Sfadia-Wolf was hired as the Urban95 project manager. Her first task was to build support within city government, taking the initiative beyond the strategic planning officials, including the mayor who was already on board, to senior decision-makers and the managers who would implement the early childhood development reforms in the proposal.

Over a six-month period, Sfadia-Wolf met with dozens of municipal employees and presented her case, focusing on the information of specific importance to each person or group. She also listened to what was needed and identified opportunities for Urban95 interventions.

To help build understanding and know-how, the Bernard van Leer Foundation sponsored study tours for municipal project teams. In May 2017, a handful of Tel Aviv municipality officials, along with teams from other countries, attended a foundation program focused on scaling early childhood development programs. The weeklong program introduced the municipal officials to the Foundation's approach to strategic planning and tools for scaling programs.

However, the trip that had the biggest impact on city managers was a visit to Copenhagen in late 2017. The capital of Denmark consistently ranked as one of the world's best cities in terms of quality of life and was known for people-centered urban design.³⁸ During three days of panel discussions, workshops, and tours of the city, the Tel Aviv group saw how Copenhagen had changed the city's design of playgrounds, sidewalks, and public squares with young children in mind. They also learned how the city had created quantitative and qualitative tools to study public life and observed how municipal officials collaborated across agencies and engaged the public. The trip not only provided information and experience, but also produced unexpected bonding among the participants.

Copenhagen was a turning point for the Urban95 program and for generating support and awareness for early childhood development reforms in the municipality.

→ **QUICK WINS AND BRANDING**

One of the first projects was a pop-up urban play space for toddlers designed by Ben-Yehuda, the director of parks and gardens. He used his own budget to procure the equipment and engaged the Community Administration for planning, design, and implementation. Working with Community Administration central division head Idan Gavish, Ben-Yehuda's team set up the space in Rabin Square, the city's most prominent public space, abutting city hall. Thousands of parents brought their children to play in sandboxes and climb on equipment, and the mayor and other city officials toured the site. The play space was as much for the high-level municipal officials as it was for Tel Aviv's young families. Several parents complimented the mayor on the play space and the city's commitment to young parents.

Another pilot program was toy sheds. Parents could check out toys to play with at playgrounds. The first two were mobile. Then an abandoned coffee shop on a busy pedestrian boulevard was converted to a more permanent toy shed.

The pop-up play space and the toy sheds were part of a strategy to rack up visible quick wins that would build support for the program by highlighting some of its potential benefits.

38. Website Centre de Cultura Contemporània de Barcelona, "Special Recognition of the 2016 Prize for the city of Copenhagen," <https://www.publicspace.org/multimedia/-/post/special-recognition-of-the-2016-prize-for-the-city-of-copenhagen>.

→ PARKS AND PLAYGROUNDS

Ben-Yehuda planned to add early childhood play spaces to 160 of the city's 475 playgrounds so that at least two playgrounds in each neighborhood were suitable for young children. He also adjusted the blueprints of 200 new planned parks and playgrounds. The CEO agreed to allocate Ben-Yehuda an additional \$10 million (a 25 percent increase) for development over the next two years. "He loved that I was proposing small investments in several sites across the city that would have a noticeable impact," Ben-Yehuda said.

In designing several of the new parks and playgrounds, Ben-Yehuda consulted with residents to incorporate their wishes into the spaces.

For one large playground renovation, the city surveyed 750 respondents on various aspects of the design. The logic was that if residents felt they had played a role in creating the space, they would use the space and exercise stewardship over it.

Els Verbakel, an architect who specialized in public spaces, was contracted to conduct research that would inform these urban design solutions. In squares, boulevards, and playgrounds, his team photographed pedestrian activity and distributed questionnaires to measure satisfaction with issues such as noise and safety. The findings suggested that the most successful spaces were those that invited parents with children to stay, not just pass through. New and renovated playgrounds displayed signs explaining Urban95 and how the new elements and equipment enhanced early childhood development.

At first, playground staff resisted because of the increased workload and because some regarded early childhood development irrelevant. Ben-Yehuda wanted his staff to experience playgrounds from the height of a three-year-old and understand the obstacles a young child faced, so he got down on his knees, toddled about, and invited his staff members to do the same.

Ben-Yehuda moved quickly and did not initially gather data on the impact the changes had. "We took Urban95 and made things happen fast. If you really want a project like this to come true, you don't have to wait until you plan everything," he said. Michael Vole, head of the development and strategy unit of the Community Administration, recalled, "We never had to invest much money in his projects. In the beginning, we were worried whether he would invest in the right things, but it was his budget and we couldn't stop him." Vole added that Ben-Yehuda's team was careful not to build facilities that were expensive to maintain, having learned that lesson on other projects in the past.

→ THE 15-MINUTE NEIGHBORHOOD

Starting in 2016, Tel Aviv began to improve and expand services and to make them more accessible for young parents.

The primary points of service between the municipality and young parents were the 15 well-baby clinics, which provided basic prenatal and postnatal care—such as vaccinations and infant development checkups—at no cost to parents.³⁹

In 2016, Sharon Melamed, director of the Social Services and Public Health Administration, launched a major effort—independent of Urban95—to reform the well-baby clinics. Seeing young families as clients was one priority, while coming into the digital age was another. The administration improved the aesthetics of the buildings to make them more welcoming to young families, including creating play spaces, and introduced an online appointment system. Further, it started offering free courses and services for young parents on such subjects as speech therapy, parental coaching, and psychological counseling.

Around the same time, Urban95 was facilitating reforms in community centers, which are free and open to all residents, and provide libraries, youth clubs, shared co-working spaces, and athletic fields, among other services. Though tens of thousands of elementary school kids, teenagers, and older adults frequented the centers, there were barely any services for babies and toddlers.

Sfadia-Wolf's presentation about the importance of early childhood development had a profound effect on Amnon Eshel, head of building and infrastructure in the Community Administration and a new grandfather.

Eshel was already renovating or expanding 30 community centers, and now he worked with the Urban95 team to install or improve indoor play spaces.

Ronit Ferber, director of the Community Administration, secured a budget increase from the CEO for the renovations, and Eshel sought to persuade community center managers, who had a great deal of autonomy with regard to the designs and services of their centers.

The Community Administration, with support from the Urban95 team, piloted new indoor playgrounds at five community centers in 2018 and, after receiving positive feedback from community center managers, planned to finish five more in 2019. Parents told Noam Bar Levy, director of one community center that installed a new

39. Bernard van Leer Foundation. Internal Document. Urban95: Tel Aviv Municipal data.



play space, and his staff that the indoor play space was amazing. Families were having good experiences playing with their babies, instead of sitting on the sidelines looking at their phones. Levy believed the change was likely thanks to the thinking that went into the design.

Further, the Urban95 team developed activities specifically for young parents and their babies, such as expectant-mother yoga, breastfeeding clinics, baby massages, interactive storytelling, and coaching sessions on such topics as infant sleep, nutrition, and language learning.

The programs were held in community centers and, though parents had to pay for each session, the city subsidized the cost.

In early 2018, Sfadia-Wolf met with Melamed and Ferber to review a map of Tel Aviv that showed the density of three-years-and-under populations plus the locations of community centers and well-baby clinics.

They noticed that some families might be close to a community center but far from a clinic or vice versa. They decided that the problem could be solved by offering both kinds of services at both kinds of facilities.

Sfadia-Wolf said, “If I’m a mother, I don’t care whether a breastfeeding seminar is provided by the Social Services Administration or by the Community Administration. I just care that I can access that service as easily as possible.”

The group came up with the idea of the 15-minute neighborhood, whereby every parent should be only a 15-minute walk from most services. There were limits—doctors would remain exclusively in the clinics—but the community centers could deliver basic health services. The Social Services and Public Health Administration would take responsibility for the health-related services and the Community Administration the others—no matter which facility was delivering them.

In deciding what to include in a standard basket of services, Sfadia-Wolf enrolled Dana Shai, a psychologist from the Academic College of Tel Aviv-Yafo who specialized in early childhood development, to evaluate whether a particular workshop or activity advanced the cognitive, linguistic, or motor development of young children.

Each program “... had to address the parent infant relationship and the parent’s well-being. It had to be playful, enjoyable, structured. It had to be modular and flexible so it could fit different populations,” Shai said.

The final basket included workshops on language development, nutrition, first aid, breastfeeding, arts and culture, and strengthening caregiver–child relationships, among others.

The team sent the list to community center heads together with an instruction book about the features of indoor play spaces. “Until Urban95, every community center more or less did its own thing,” recalled Gavish. “Now there are standards. If you open a play space, you know how it should be in every aspect: human resources, capacity, what kind of equipment it should have.”

Creating the 15-minute neighborhood citywide increased the pressure on staff at both the clinics and the community centers.

Services expanded rapidly to an estimated 400 parent–child activities, workshops, and clinics per month. Labor regulations precluded dismissing community center employees who lacked certain competencies, so the Urban95 team began training existing employees in how to help maintain the new play spaces and administer the expanded basket of services. Also seven new early-childhood-development managers were hired to oversee services across community centers.

In addition, Urban95 held a series of educational seminars aimed at training municipal workers in key early-childhood-development areas. More than 120 municipal employees—many of whom worked directly with babies and toddlers—attended the conference.

→ DIGITAF

The 2015 Bloomberg cost-of-living research found that many young parents were not aware of activities available to them in Tel Aviv. The Bloomberg team fleshed out a digital platform that could provide young parents with citywide event and activity information and the Urban95 grant proposal included the idea.

At around that time, Shirly Dim was returning to work in the city Spokesman’s Office after maternity leave. She helped manage DigiTel, Tel Aviv’s online civic engagement platform, and wanted to do something for lonely new parents. She created a DigiTel event for a daytime stroller walk for mothers on maternity leave that was well attended. With her boss’s authorization, Dim created other activities.



Along with the Bloomberg team, Urban95, and other administrations, Dim's office developed a dedicated offshoot of DigiTel for young parents; they called it Digitaf (*Taf* being the Hebrew word for *toddler*). The city formally launched Digitaf at the end of 2017. The Spokesman's Office automatically enrolled any parent who was registered for DigiTel and had a child three years old or younger. The office asked well-baby clinics to encourage pregnant women to register. When a woman gave birth, she received a Digitaf card with her child's name on it and a small care package that included a diaper bag and a Born in Tel Aviv onesie. Within a year, the parents of 76 percent of children from birth through three years of age were registered with Digitaf.

The Digitaf card granted young parents certain benefits, including free access to municipal services and activities, as well as meet-ups for stroller time.

One successful event was a children's "takeover" of city hall, an afternoon event when offices on all 12 stories of the building featured storytelling, arts and crafts, music, and other activities for young children. More than 7,000 parents attended with their children.

The office held Digitaf activities at city hall, municipal libraries, museums, hospitals, parks, and the community centers and well-baby clinics. The staff worked with the Urban95 team to create and refine the offerings as time went on.

The office also created a Digitaf Facebook group and posted activity announcements and other information, including live presentations by early-childhood-development experts. The group was also a platform for parents to relay complaints and feedback to the municipality. By 2019, more than 13,500 Tel Aviv parents were members of the group and around 12,000 were actively engaged.⁴⁰

The Digitaf platform and Facebook group enabled parents to coalesce as a community. Its success speaks volumes about how much has changed in the city's mind-set.

40. Tel Aviv City Spokesman's Office data. For more information, see "New Basket of Parenting Services Being Piloted in Six Community Centres in Tel Aviv, Bernard van Leer Foundation, October 2018, accessed at <https://bernardvanleer.org/news/new-basket-of-parenting-services-being-piloted-in-six-community-centres-in-tel-aviv/> (This source contains different numbers.)

→ IMPROVING URBAN MOBILITY

The Strategic Planning Unit, supported by the Urban95 team, explored ways to make the city more walkable for parents with young children.

The urban mobility pilot moved much more slowly than the others, partly because of the need to navigate complicated inter-governmental relationships and partly because the transportation team faced competing priorities.

In early 2018, the unit held six focus groups to determine how parents with children moved about the city and to identify the greatest barriers. They found that families with young children preferred private cars primarily for safety. They decided to respond to this concern by making parts of the city more walkable, with fewer obstacles. To plan and implement two pilot projects, the unit worked with Urban95 project manager Sfadia-Wolf to form a steering committee that included the city engineer, a public participation adviser, and an early childhood manager, among others. As of mid-2019, the committee had selected two sites for pilots—one in the city center and another in the south—but was still gathering data and brainstorming.

→ ADDRESSING INEQUALITY

In the Urban95 grant, Ben-Attar included a condition that at least 50 percent of funding go to low-income populations. Municipal officials sought to deliver expanded services to those in greatest need, including lower-income residents, asylum seekers, and migrant workers living primarily in the south and east of Tel Aviv, as well as the Arab minority in the ancient city of Jaffa. Administrations offered more services and facilities per capita in those areas than anywhere else in the city. Five of the well-baby clinics in poor neighborhoods dedicated specific areas of their facilities to early childhood development and offered an expanded battery of courses.

Even with expanded services, marginalized groups weren't using the services as much as hoped.

Alma Shiran, head of the Community Administration's southern division, noted that families most in need of services access fewer of them. Barriers included the need for lower-income families to focus on making ends meet and mistrust based on adversarial experiences with municipal authorities. Further, uptake of early childhood programming and use of facilities cleaved along ethnic and racial lines. Even in

marginalized areas, members of the Jewish, Hebrew-speaking majority were the predominant users and providers of services. According to Melamed, many parents living in African and Arab communities initially brought their infants to the well-baby clinic only for vaccinations, not for other services that could help their children develop and prepare for preschool and kindergarten.

The municipality launched outreach efforts. Social workers encouraged parents to attend courses and seminars. Nurses called families and reserved spots for them in clinics.

Community Administration workers identified parents who were neighborhood pillars and persuaded them to attend a workshop or clinic and then in turn persuade others. Only very gradually did use of other services begin to rise. Vole said that it would take a much deeper mapping process to identify barriers asylum seekers and minority populations faced, as well as multi-lingual services.

→ PRIVATE DAY CARE OPERATIONS

In 2016, Anat Dayagi's child died in a private day care. The caregiver had no training in either CPR or basic first aid and had been alone with eight infants. On the one-year anniversary of her infant's death, Dayagi wrote a lengthy post on Facebook that went viral.

A group of people, calling itself Parents for Responsibility from Birth Tel Aviv, created policy recommendations aimed at improving the quality and increasing the supply of private day care facilities. The group said the city should build or lease more spaces for such operations; streamline the lengthy, expensive, and opaque process of obtaining a permit to use a residential space for day care services; provide pedagogical and safety training for day care operators; and establish a network among those operators.

In June 2018, Dayagi and a few others presented their recommendations to city officials. Vole recalled, "She shared her heartbreaking story, and there wasn't a dry eye in the room. Add to that the fact that they, as residents, had done their own research and come with policy proposals, and it was hard to say no."

The Education Administration partnered with Urban95 and the Bloomberg team to plan for building or renovating spaces to lease to private day care operators at low rents.



The well-baby clinics began offering CPR, first aid, and other courses specifically directed toward private day care operators.

In a sign of its commitment to address the day care problem, the municipality created a new early childhood division in the Education Administration, taking responsibility for improvements in child care for children from birth through three years of age.

→ OVERCOMING OBSTACLES

Municipal officials were accustomed to working efficiently and fast, relying on their eyes and ears to get a quick sense of success or failure. Though the Bernard van Leer Foundation valued quick implementation, it also wanted data on key performance indicators. Data was essential to guarantee that interventions aligned with objectives:

Did a workshop equip parents with new child-developing skills?

Surveys could tell.

Did parents with toddlers stop to use a newly installed sandbox in a public square?

A monitor with a stopwatch and a clipboard could record whether parents stopped and for how long.

In early 2018, Ben-Attar hired an external strategic planning firm to help city officials think through their program goals and develop metrics. Subsequently, the foundation hired a research and measurement coordinator to be part of Sfadia-Wolf's team. Beginning in late 2018, Keren Raz, a social and economic policy researcher with a master's degree in public policy, began developing measurement and evaluation tools to gather data on the impact of Urban95 programs. Raz approached evaluation in a flexible, modest way that suited the dynamic, fast-moving context in which she worked. For example, she would administer a survey right after a parenting workshop and feed it right back to the organizers.

Raz also took responsibility for other forms of research and evaluation. For example, she created an implementation database to record the city's various actions, and she coordinated research to help establish standards, based partly on parent input, for facilities like indoor play areas. Further, she began to introduce a culture of learning from data in devising new programs.

→ ASSESSING RESULTS

By mid-2019, Urban95 had been active in Tel Aviv for two and a half years, and it was too early to assess whether the program would have lasting impact. Still, several things indicated that early childhood development had become a municipal priority. First, the city had made a significant financial commitment. Second, early-childhood-development agendas were in the 2019 work plans of six municipal administrations—community, social services, parks and gardens, transportation, education, and engineering (strategy), as well as the city spokesperson (Digitaf)—and other departments reported that they now considered it in their planning. Further, after the 2018 municipal election, the mayor appointed a deputy mayor with explicit responsibility for early-childhood-development services, a first for a deputy mayor portfolio.

There were seven deputy mayors in Tel Aviv, each with a different portfolio and each also a member of the 31-seat city council.

New personnel were hired and trained to focus on early childhood development. The Community Administration employed seven new early childhood managers for community centers. The Education Administration created a new early childhood division, signifying a commitment to improving private day care facilities. Urban95 estimated that 45 frontline workers and 170 managers and supervisors participated in early childhood development-focused knowledge-building workshops.

Pilots and renovations to public spaces were visible across the city. About 160 public spaces included elements for babies and toddlers, including 77 playground renovations. There were two permanent and seven mobile toy sheds. The city planned to establish two large early childhood centers: one in the city center and another in the south.

By 2019, 10 community centers were offering the full basket of early childhood services, and 13,000 parents had participated in parent-child activities. According to the Spokesman's Office, there were 400 to 600 Digitaf activities per month, and 22,000 parents of children three years and younger had Digitaf cards.⁴¹

The Urban95 team was still gathering data, but initial surveys suggested parents felt the workshops were equipping them with new tools and strategies that improved their relationships with their young children.

In mid-2019, the CEO instructed municipal officials to develop a proposal and prepare the co-investments for a second phase (2020 through 2023) of the Urban95 project.

41. Bernard van Leer Foundation Israel Cluster Report, 2019.

→ REFLECTIONS

The early-stage experience of the Tel Aviv Urban95 initiative offered several lessons about effective coordination, drivers of success, and scaling up projects.

- 1 Timing.** The CEO's support was essential. Young parents had organized themselves and put pressure on the municipality to act.
- 2 Urban95's position in the municipal organization.** Embedded in the Community Administration, the Urban95 initiative had tools and people to implement projects
- 3 Leveraging networks.** The Urban95 team built ad hoc networks to support implementation and to work effectively within the municipal government.
- 4 Leadership.** The tactic of implementing several pilots to score quick wins got the project off the ground.

Though Urban95 had started to extend support to marginalized communities, inequality remained a challenge. "We need to take the apparatus we and our colleagues built and use it where there is the greatest need in the city," said Vole.

"It's the disadvantaged groups that need us most, and that's where we should enhance the drive to invest."

Inclusive Cities for Small Children

- 1** Cities that want to support young families need to offer public spaces where small children can play safely.
- 2** Integrated children's play is a powerful tool to promote social activities among their caretakers.
- 3** Visible quick wins -such as recreational activities in public spaces- build support for long term investments by highlighting some of the potential benefits of investing in spaces for small children.

→ ANNEX 1: METRICS AND EARLY RESULTS

Metric Area	Performance Indicators	Results to Date	Data Collection
Child development outcomes	Parent-reported measure of language use/ vocabulary (children 18- to 47-months) Physical development [Socioemotional development indicators under development]	Parents reported reading more books to children after reading workshops 26 new topics added to reading workshops	In progress
Caregiver behavior	Reading to a young child at least once a week Increasing parents' self-perceived ability Increasing time spent with infants or toddlers outdoors More walking or cycling in daily routes Increasing caregiver-infant playtime	91 percent parents who participated in workshops reported they read more to their children than they had before the workshops they attended 75 percent of parents said the workshop "provided me with information I did not have before" 100 percent of participants said that "the workshops provided me with new tools I will use in the future"	Parent self-reports
Caregiver well-being	Reduction in depression (particularly post-natal) Reduction in stress Increased sense of self-efficacy Increased sense of security Increased sense of community	Improvement in ease of making appointments with well-baby clinics 3,000 views of child development broadcasts Positive feedback on parenting, sexual well-being, and mental health workshops for women	Working on detailed, concrete indicators for the evaluation program Urban95 research coordinator Municipal survey through Digitaf

Metric Area	Performance Indicators	Results to Date	Data Collection
Parent coaching	Number, length, accessibility, affordability, and quality of parent coaching on different issues	In evaluations of brain-building workshop, 62 percent of parents said it exceeded their expectations	Urban95 progress report
	Number of parents participating	75 percent said it introduced new knowledge	Mesila progress report
	Level of satisfaction with parent coaching among participants	100 percent said it provided new tools they planned to use in the future	
	Knowledge and new tools gained by parents		
Public space	Significant increase in the number of playgrounds designed for ages birth to three years	Creation of 150 new facilities/public-spaces elements	Progress reports
	Increased infant-caregiver interactions (specifically play)	20 new sandboxes	
	Number of infant- and toddler-friendly walking routes, especially in poor areas	4 imagination playground blocks by Urban95	
	Increase in community/public events focused on infants and their families	5 imagination play blocks purchased by municipality	
Mobility	Accessibility of services and facilities for ages birth to three years	Baseline mapping showed high automobile usage but high interest by parents in walking	Mobility mapping of Tel Aviv
	Increased safety and ease of travel	Mobility pilot in progress	Progress report
	Reduction in travel time on daily routes		

Metric Area	Performance Indicators	Results to Date	Data Collection
Sustainable data collection	<p>Effective and up-to-date data collection and preservation</p> <p>Data sharing (accessibility of relevant, unified data to all units)</p> <p>Allocation of human resources and funds for the purpose of data collection and use</p> <p>Actual use of data in decision-making</p> <p>Monitoring and evaluation integrated into units' regular work</p>	<p>A coordinator for research and measurement joined the team</p> <p>Expansion of metric and data collection scheduled for 2019</p>	Progress report
Sustainable finance	<p>Allocation of funds for implementation of Urban95 projects</p> <p>Funding allocated to appropriate units to complete scheduled projects</p>	Provision of €1.3 million (US\$1.2 million) in matching funds —and leveraged further without other sources of support—	Tel Aviv Foundation report
Sustainable management structure	<p>Appointment of human resources for early childhood development advancement</p> <p>Changes in work plans and structures of units that implement Urban95 projects</p> <p>Establishment of collaboration mechanisms and procedures</p> <p>Implementation of training courses</p> <p>Agreement on shared language and goals</p> <p>Steps to mainstream Urban95 ideas into decision-making</p>	<p>Copenhagen Committee established</p> <p>New unit on early childhood education, and a senior manager was hired</p> <p>New deputy mayor for early childhood hired</p> <p>Series of Urban95 training course implemented</p>	Progress reports



***Achieving inclusive
cities for older adults
means that cities have
to adapt their structures
and provide services for
people with different
capacities and needs.***





CREATING SPACE FOR ADULTS WITH LIMITED MOBILITY: PARTICIPATORY GOVERNANCE, SOCIAL INCLUSION, AND PUBLIC PLANNING IN MÁLAGA, SPAIN

Carolyn Angius⁴²

This case study explores the challenges and opportunities of population aging and some of the approaches being used by the city of Málaga, Spain to increase access to the public realm for older adults and those with limited mobility. Málaga is on Spain's southern coast in the autonomous community of Andalucía and is the sixth-largest city in Spain. It is known for its temperate climate and ocean beaches, but Málaga's population is also representative of a shift happening worldwide: the city's older population is growing and representing an increasing share of the total population. As Málaga strives to meet the needs of a growing elderly population within fiscal constraints, city departments have implemented innovative approaches to participatory governance, urban planning, and design to ensure that Málaga remains inclusive for all its residents.

42. The author is grateful to the city of Málaga for providing information necessary to complete this case study. Particular thanks is extended to the Area of Social Rights (Area de Derechos Sociales), the Area of Mobility (Area de la Movilidad), the Area of Parks and Gardens (Area de los Parques y Jardines), and the Housing Institute (Instituto de la Vivienda). The author also thanks Málaga community members and users of the Senior Parks who shared their experiences.

➔ POPULATION AGING: CHALLENGES AND OPPORTUNITIES FOR LOCAL GOVERNMENTS ADAPTING TO DEMOGRAPHIC SHIFTS

Málaga's approach provides insights for other municipalities seeking creative approaches to bolstering accessibility for persons with limited mobility.

Across the globe, life expectancy and the average age are both rising. Since 1980, the global population age 60 and older has doubled to 962 million. This number is expected to double again to over 2 billion by 2050 (United Nations 2017). As life expectancy increases, the balance of global demographics is shifting: people over 60 will outnumber children by 2030 and adolescents by 2050 (United Nations 2017).

While the causes of population aging are complex and vary across different contexts, longer lifespans present new challenges and opportunities for all local governments.

One of the greatest challenges faced by many older people is reduced mobility. While people of all ages may have wide ranges of mobility for diverse reasons, older people are disproportionately likely to be affected by mobility issues.

Seniors face increased vulnerability to disabilities such as hearing and vision loss and other impairments that reduce mobility.

Older age can also reduce stamina, strength, and balance and reduce one's ability to move freely and accomplish daily tasks. In addition, limited mobility can contribute to a person's broader social vulnerability: older adults and those with disabilities are more likely to be affected by poverty, homelessness, social isolation, and mental illness (Samman and Rodriguez-Takeuchi 2013). Adding further complexity, the effects are not felt proportionately by all. For example, women are more vulnerable to many challenges associated with aging and related reductions in mobility than are men because they tend to live longer, are more likely to live alone, and are more likely to have earned less than men during working age (United Nations 2017).

At a broader, societal level, limited mobility can dramatically reduce access to the public realm. Mobility challenges can limit a person's ability to comfortably and safely ride public transportation or operate or ride in a private vehicle. They can also disrupt one's sense of comfort, safety, and belonging in public spaces like parks, plazas, and other community spaces. Reduced mobility can limit a person's capacity to perform daily tasks, and ultimately contribute to a sense of social isolation (Bastos et al. 2015; Macdonald et al. 2018; Levy-Storms, Chen, and Loukaitou-Sideris 2018). These limitations can reduce a person's sense of purpose, social connectivity, and voice in community affairs.

For government, population aging places additional pressure on what are often already-strained budgets. As populations age, demand for services for seniors increases, often without a comparable increase in the local formal employment sector or taxpaying population.

Despite these challenges for both individuals and governments, population aging also presents unique opportunities. Families may benefit from multi-generational living and the related childcare and financial support provided by older family members. At the community level, studies have also demonstrated the developmental and health benefits of cross-generational interaction for youth and older adults alike (Carr and Gunderson 2016; Bowers et al 2012; Lu et al. 2018). Children can benefit from

social development, including learning empathy, patience, sharing, and acceptance of difference, while older people can experience increased energy and stamina, new social connections, and improved cognitive function (American Planning Association 2011; Butts 2018). At the local level, longer lifespans may provide new opportunities for labor markets. Older residents also often serve as community stewards, looking after a neighborhood's shared spaces and taking leadership roles in community organizations and events.

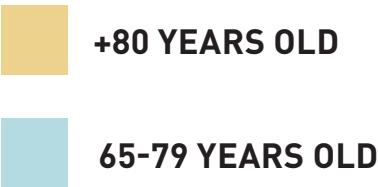
Of course, older adults and those with limited mobility are not a monolithic bloc of people. Aging affects every individual differently and cannot be extricated from many other complex factors involved in social, mental, and physical well-being. However, governments have begun implementing innovative policy, planning, and design strategies to make urban areas more accessible to elderly residents. Central to these strategies is a focus on planning for those with limited mobility.



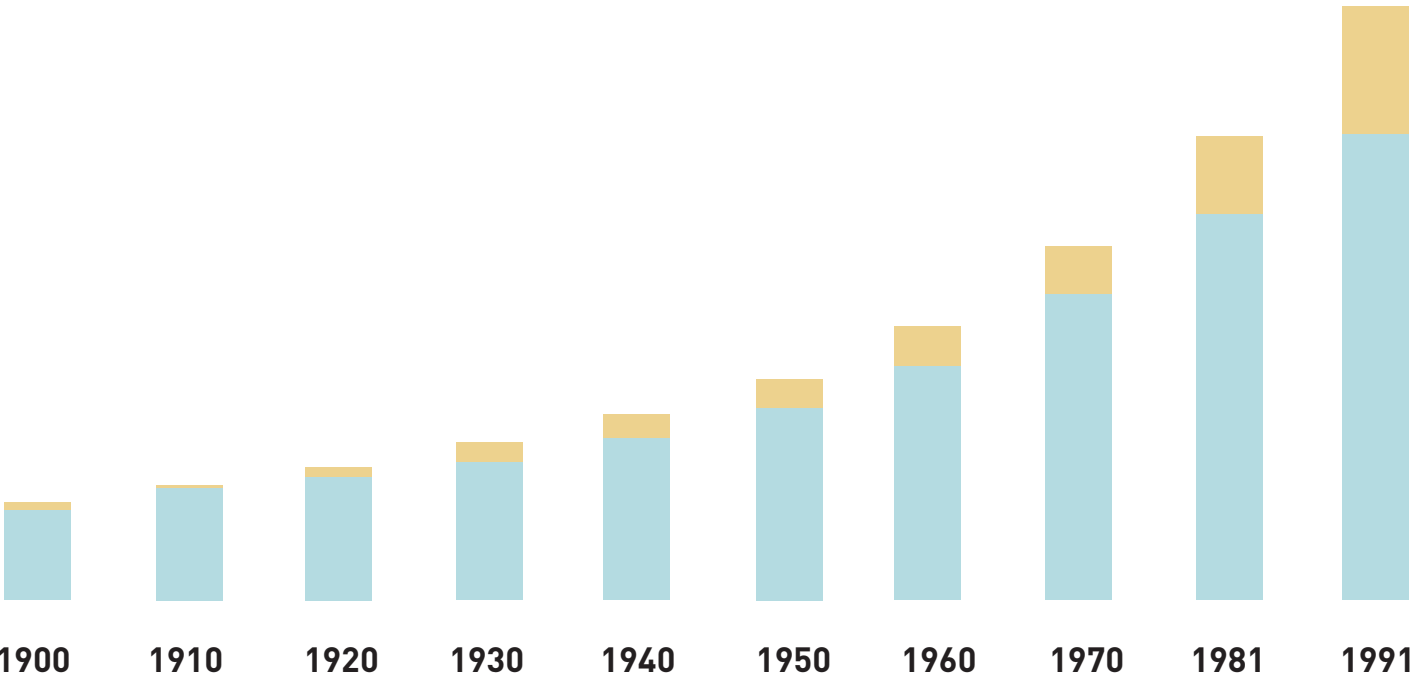
→ **DEMOGRAPHIC SHIFTS IN SPAIN**

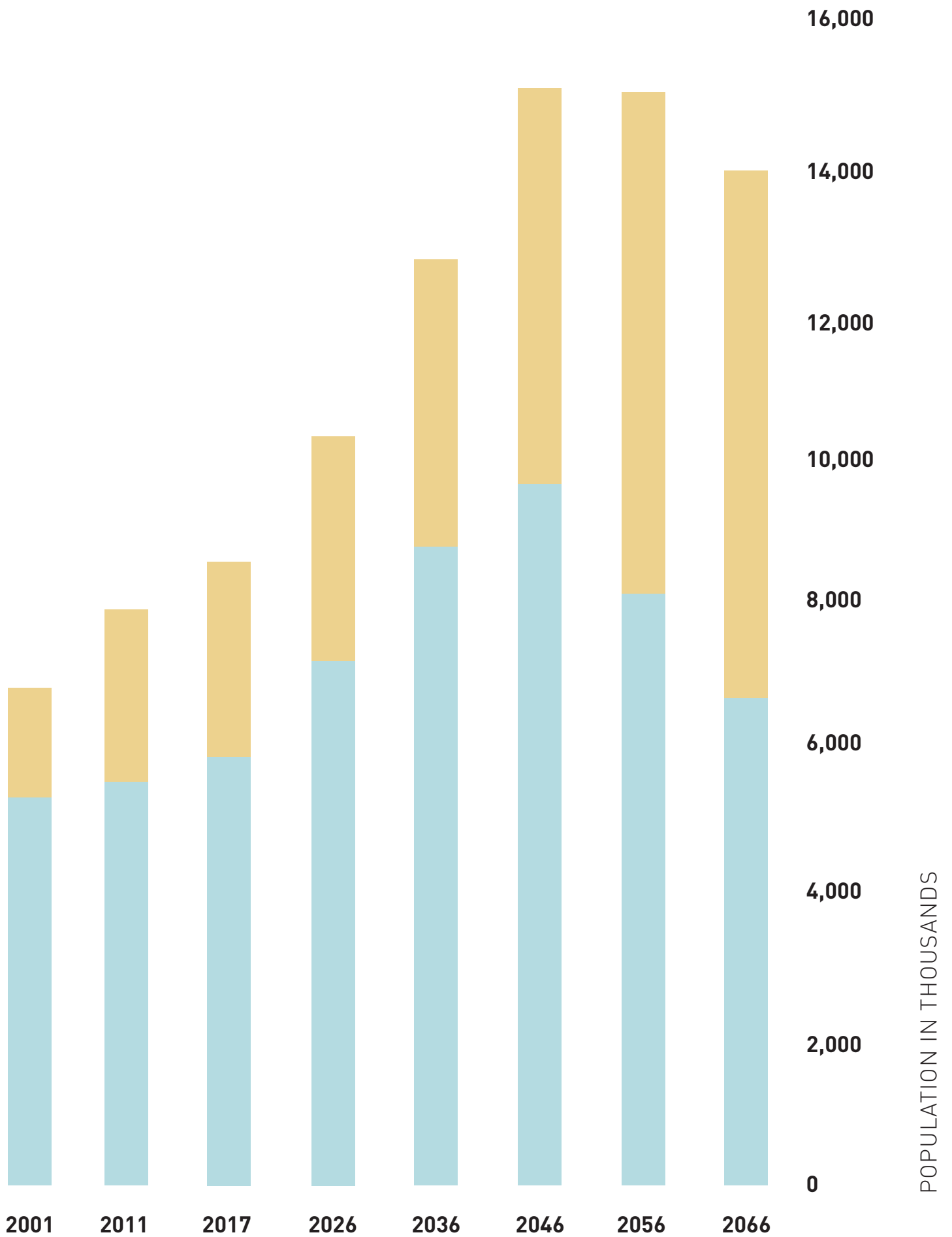
Population aging is most advanced in Europe, where people over age 60 currently account for 20 percent of the population and are expected to account for 35 percent by 2050. Spain is no exception to these trends: by 2050, Spain will have the second oldest population in the world, with almost 42 percent of its residents age 60 years or older (Figure 1) (Faraz 2017; United Nations 2017; Ayuntamiento de Málaga 2019).

→ **FIGURE 1. POPULATION AGING IN SPAIN, 1900-2066**



Source: Abellán García et al. (2018)

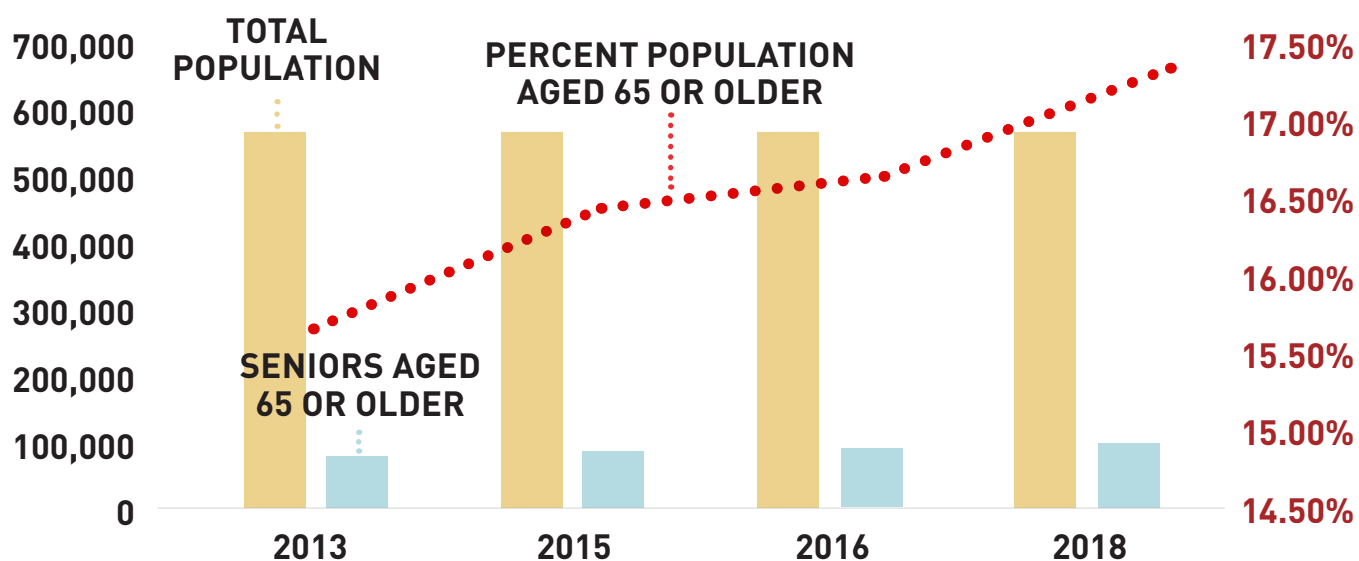




Málaga, Spain has focused on better including the elderly and adults with limited mobility in the public realm since the mid-1990s. In Málaga, a city of just over 573,000 residents, demographic shifts over the last few decades have mirrored those in Spain's national population. While the total municipal population has decreased slightly since 2013, the population of residents 65 and older has increased from 15.7 to 17.4 percent (Figure 2). Older residents tend to live in the city's central, historic neighborhoods, with over 78 percent of the population age 65 and older living in four neighborhoods.⁴³ Malaga also draws visitors and part-time residents from around the world, many of whom are of older age and more likely to be affected by mobility limitations. Because of its warm, dry climate, Malaga is a retirement destination for people from other cities and countries around the world. Prioritizing inclusion of those with limited mobility not only improves accessibility for full-time residents, it also supports the tourism economy by ensuring Malaga is welcoming to persons of all ages and mobility levels.

43. Ayuntamiento de Malaga (undated); and interviews with staff from the City of Malaga's Area of Social Rights, October 30, 2019.

➔ **FIGURE 2. POPULATION AGING IN MÁLAGA, 2013-2018**



Source: Ayuntamiento de Málaga "Padrón de Habitantes." 2013–2018. Available at: http://gestrisam.malaga.eu/portal/menu/seccion_0007/secciones/subSeccion_0002?id=119 [accessed January 1, 2018].

In 1995, new political leadership assumed office in Málaga and catalyzed a renewed commitment to inclusion of older adults and those with limited mobility. The city established a new Department for Seniors (*Sección de Mayor*) and included new programs focused on older residents in its 1996 Social Services Plan (Ayuntamiento de Málaga 2019). In 2006, the city established a participatory process to increase direct involvement of older residents in city planning and decision-making.

Today, Málaga's strategy to improve the quality of life of older residents and support their independence is driven by three main goals:

- 1** Promotion of active aging and leisure activities for older adults to help build a sense of purpose and reduce social isolation
- 2** Prevention of mental and physical health challenges
- 3** Participation of elderly residents in the public realm and city decision-making (Ayuntamiento de Málaga 2019).

→ **SENIOR ASSOCIATIONS: EMPOWERMENT AND PARTICIPATORY GOVERNANCE TO IMPROVE ACCESS TO THE PUBLIC REALM**

One of the cornerstones of Málaga's efforts to bolster civic engagement by elderly residents and increase their access to the public realm is the Senior Associations network. Today, there are 99 associations city-wide. The districts with the greatest share of elderly residents have the greatest number of associations, but every municipal district is home to at least one. The associations provide free programming for members, ranging from theater workshops to cognitive health clinics and digital literacy courses. Additionally, public agencies and service providers partner with associations to deliver health and wellness services to elderly community members. Beyond their more tangible benefits, the associations also help provide social connectivity and a sense of purpose to members.

Each month, elected association presidents meet with staff from the city's Area of Social Rights (*Área de Derechos Sociales*). This entity serves as an intermediary between often-siloed city departments and older residents in the associations. Every month, the Area of Social Rights hosts a meeting with the presidents of the associations to share information about city events, resources, and opportunities particularly relevant to older adults, and to invite feedback about what is working well and what can be improved across the city. Francisca Ramos Montero, head of the Seniors Section within the Area of Social Rights, says "[The association

presidents] are my team....It is a relationship of equals.” Ramos receives vital feedback and inspiring ideas from association members and presidents. Ramos describes the associations as having power, and explains that because the city has limited resources, “we can’t do everything we want, but we can empower residents.” The monthly meetings allow association presidents to advocate on behalf of their members, in turn providing Ramos and her colleagues the ability to coordinate with city departments such as those for transportation, housing, and recreation to implement feasible changes in response to association feedback.

Many of the associations also have a dedicated building for social gatherings and events. The city began developing Senior Social Centers (*Centros Sociales para Mayores*) in response to the associations’ desire for dedicated spaces for regular programming and workshops, as well as informal gatherings like card games, conversation, and meals. The centers provide dynamic social space for elderly residents, many of whom have limited access to other public spaces near their homes due to health challenges, reduced mobility, limited park and open space in the city’s historic neighborhoods, and limited transportation access. The centers also offer a diverse range of educational and civic programming. Some workshops are taught by members, providing leadership opportunities, while others are taught by youth volunteers to foster cross-generational connections. Local experts also give presentations about topics like healthy aging. Some centers even provide fixed-menu lunches and dinners at discounted prices (5 to 7 euros), which is especially important for seniors and adults with disabilities who may be living on a fixed income.

One of the greatest benefits of the associations and the centers is their social function.

Loneliness is one of the most profound challenges facing the city’s elderly population and persons with limited mobility. In Málaga, almost one-fourth of residents over age 65 live alone (European Commission, undated). The vast majority of those living alone—almost 70 percent—have experienced the death of a partner, while some are separated or divorced, and others simply live on their own. While social isolation is complex and related to a wide range of other social determinants of health, it is a risk factor of social vulnerability and can contribute to cognitive degeneration and other mental health concerns, as well as morbidity and earlier death (Andrew and Keefe 2014). Women are disproportionately vulnerable to social isolation and loneliness—three-fourths of those 65 and older living alone in Málaga are women (Ayuntamiento de Malaga 2019).

To date, the city has 50 Senior Social Centers, of which 22 are stand-alone centers and 23 are incorporated into larger, multi-use Citizen Centers with spaces, programming,

and resources for elderly residents, as well as for children, families, teens, and other community members. The centers provide critical services, and, importantly, improve participation by older residents in the public realm. For those with limited mobility, the centers provide an accessible and safe space for socializing, learning, community-building, and connecting with important resources. The locations of the centers also provide opportunities for multi-generational socialization. For instance, the Citizen Center (*Centro Ciudadano*) in Málaga's Parque del Oeste is easily accessible by transit, located near dense multi-family housing, and adjacent to comfortable, shaded outdoor seating, basketball courts, children's play areas, public sport courts, and an adult exercise area. The center includes a Senior Center, while also offering opportunities for cross-generational socialization and inclusion of elderly visitors in broader community events and gatherings.

The associations and city-run centers have empowered older adults to imagine and lead their own initiatives.

As an example, *Solera* is a bi-monthly magazine entirely written and edited by association members and published by the city.⁴⁴ The magazine features art, poetry, photography, literature, and other contributions by Málaga community members, in addition to providing a platform for knowledge-sharing between the city's older residents. Association members also produce a weekly, hour-long radio program called Seniors' Voice (*La Voz de los Mayores*).⁴⁵ The program features interviews with association members, doctors, city staff, and other community members and is an important vehicle for information-sharing and entertainment. Additionally, the program helps combat social isolation through virtual connection. It also empowers its creators and producers, providing an exciting sense of purpose and opportunity to give back to their community.

The associations have empowered elderly residents to influence broader city development decisions. For instance, an association member had an idea for a mixed-use development with senior affordable housing and a health center. Staff in the Area of Social Rights coordinated with the city's Housing Institute to implement that idea through the Institute's subsidized housing program. As a result, Málaga's new Healthy Aging Center (*Centro de Envejecimiento Saludable*) opened in 2016 and is near neighborhoods with the highest percentages of residents over age 65.

44. See the Revista Solera website, available at: <http://derechossociales.malaga.eu/es/documentos/publicaciones-periodicas/revista-solera/#.XdhONehKhPY>

45. See "La Voz de los Mayores" on the Canal Málaga website, available at: <http://www.canalmalaga.es/la-voz-de-los-mayores>.

The center was specifically designed to meet the needs and reduce the vulnerabilities of older adults. Housing units open into a common courtyard to foster communication and visibility between neighbors and encourage social connectivity. The layout also allows residents to take notice if they haven't seen a neighbor recently or observe any other potential causes of concern. Housing units are small to provide affordability for seniors on low and/or fixed incomes, and shared community rooms and courtyards provide gathering spaces for socializing near home. Small unit size also allows the city to maximize the number of housing units to help provide affordable housing for as many seniors as possible, while also increasing rental revenue and the cost-effectiveness of construction. Community rooms are used by the center and other organizations for workshops and classes to encourage healthy aging and continuing education. The building itself encourages community-building between residents and neighbors: it opens onto the Plaza Pepito Vargas, an active public space where children play, families relax, and adults and youth living in the neighborhood gather. Co-locating other uses within and adjacent to senior housing helps reduce vulnerability to social isolation for older adults, particularly those living alone.

→ **FISCAL INNOVATION: MORE EFFICIENT GOVERNANCE THROUGH EMPOWERMENT OF ELDERLY RESIDENTS**

The association network is an inspiring example for cities with limited resources. Málaga, like many cities, has limited new revenue streams with which to expand staff or undertake new, large-scale programs. Fiscal constraints are likely to be particularly tight in cities with aging populations because a growing portion of the tax base is past the traditional working age. The association structure is an innovative approach to increase the reach of city programs and respond to community needs without increasing spending. The association presidents and members work hand-in-hand with city staff, serving as an extension of the city by spreading knowledge about resources and sharing community member feedback with city staff. The association structure improves efficiency across other city departments. For instance, by sharing the recommendations and concerns of older residents with relevant city departments, the Area of Social Rights reduces staff and budget demands on each department to conduct independent community outreach. Also, co-locating Senior Centers in existing Citizen Centers reduces the pressure to build and maintain new spaces while still meeting the unique needs of aging adults and those with limited mobility.

→ ACCESSIBLE HOUSING FOR THOSE OF ALL ABILITY LEVELS

Quality, affordable, and well-located housing is a key determinant of health and opportunity for all but can be especially important for persons with limited mobility.

People with limited mobility may require housing that is located near accessible transit, food, health, and other essential services, that has a specific floorplan, and that has furnishings that are affordable for living on a fixed or low income.

The city of Málaga has three main approaches to addressing housing challenges for persons with limited mobility. First, the city requires that 2 percent of all new housing units be equipped for persons with disabilities. Second, the Housing Institute (*Instituto de la Vivienda*) builds subsidized public housing for elderly residents and other vulnerable groups earning below a specified income threshold. Finally, the Housing Institute manages a retrofit program to add elevators to existing apartment buildings that lack them. The program subsidizes elevator construction in buildings with five or fewer stories—buildings taller than five stories are generally newer and therefore are almost always built with an elevator during initial construction. While elevators benefit nearly all users—including parents traveling with strollers or dependents, children, adults carrying bags, and others—the program has an outsized impact on access for seniors who are more likely to live in central, historic neighborhoods with older building stock.

Despite these city programs, housing affordability remains one of the greatest challenges to ensuring equitable access to the public realm for seniors in Málaga. Quality, affordable housing is a critical determinant of a person's physical and mental health, and the proximity of housing to other uses greatly impacts access to the public realm for those with limited mobility. Seniors, especially older women, along with people with disabilities, face particular challenges accessing quality, affordable housing, as they are disproportionately likely to be impoverished or live on fixed incomes. While the city operates the aforementioned programs to help meet demand for affordable housing, pressure on the local housing market exceeds resources for subsidized housing production. Málaga is under particular pressure from the vacation rental and second-home markets, which reduce the supply of affordable full-time, permanent housing for local residents. Tourism provides important revenue streams and benefits to the city, but local agencies striving to preserve accessibility for all must also grapple with the impact of vacation real estate on housing affordability.

→ PUBLIC SPACE THAT WELCOMES AND CELEBRATES PERSONS OF ALL ABILITY LEVELS

In addition to designing housing for persons with limited mobility, the city of Málaga considers age and mobility in public space design. As one ages, loss of mobility is not only biological, but can also result from lower levels of activity. The reverse is also true: increased physical activity can reduce seniors' vulnerability to future mobility impairments, support independence, and improve quality of life (Pahor et al. 2006; Romo Pérez 2014). One of the greatest barriers to exercise for people with reduced mobility is lack of access to safe, comfortable public spaces near home.⁴⁶ Accessible open spaces support walkable neighborhoods and the ability of older people to healthfully age in place (Gardner 2011).

Since 2009, the city of Málaga has built what are locally called Senior Parks (*Parques De Mayores*), which include open-air exercise equipment that promotes balance, flexibility, and strength for users of all ability levels.⁴⁷ Today, there are between 100 and 150 such parks throughout the city with approximately 1,000 pieces of exercise equipment.⁴⁸ Equipment such as shoulder wheels and finger ladders are designed to maintain joint and muscle mobility (Levy-Storms, Chen, and Loukaitou-Sideris 2018). The equipment serves a two-pronged purpose: it is accessible to those with limited mobility while also helping reduce vulnerability to further mobility impairment (Levy-Storms, Chen, and Loukaitou-Sideris 2018). In addition, infrastructure at the parks such as ramps and stairs is designed to facilitate independence and maintain one's ability to take trips outside the home (Martin et al. 2007).

While the parks are an important venue for exercise, they provide more than physical benefits (Gardner 2011). Málaga's older residents often gather in their neighborhood Senior Park to talk and read the newspaper, as well as to use the exercise machines together. While cycling on a low-resistance recumbent bike designed to build strength, promote cardio health, and maintain joint flexibility, a woman who comes to a Senior Park near her home said simply: "I see friends here every day."⁴⁹ Other users come less frequently, but seek out the Senior Park as a place of relaxation and repose. One man said that he comes on days when he "feels like exercising and walking around" and because the park is "shaded and comfortable."⁵⁰

46. For instance, studies in Greece and China found that lack of access to public spaces where one can engage in physical activity was a barrier to healthy aging. See Aparicio et al. (2010),

47. There are also Senior Parks in municipalities throughout the Province of Malaga, but this case study focuses on those within the city jurisdiction.

48. Interview by the author with employees of the City of Malaga Area of Parks and Gardens (Area de los Parques y Jardines) on October 31, 2019.

49. Interview by the author with elderly community member in Malaga on October 31, 2019

50. Ibid.

The location of Senior Parks is also an important part of their success. The parks increase the visibility of older users in the public realm while also providing a safe space for people with mobility challenges. Senior Parks across the city are demarcated with consistent signage and coloring and many are slightly separate from nearby play and exercise areas used by other members of the community. Creating a dedicated exercise area helps make some people with disabilities, like unsteady balance or other mobility challenges feel more safe, welcome, and secure. For instance, a user with compromised balance might not feel steady and comfortable using the Senior Park if children moving much more quickly are also playing on the equipment. However, the Senior Parks strike a balance between separation and integration: while the equipment for persons with limited mobility is in a clustered area, it is adjacent to other areas such as children's playgrounds, mainstream exercise equipment, and/or community facilities like Citizen Centers or sport courts. Co-location helps prevent social isolation and provides opportunities for cross-generational interaction. It also allows entire families to recreate together in the same area with spaces designed to meet the needs of all generations. Co-location also improves safety. Different users are likely to use the space at different times of the day—older adults may go to the Senior Park in the morning, while young children and their parents may go to the playground in the afternoon after school, and teens and working-age adults may go in the evening after work. This helps activate the space around the clock to increase safety and access for all users.

The city also uses community programming to increase the participation and visibility of persons with limited mobility in the public realm. The city hosts many senior-focused public celebrations such as *Carnaval del Mayor*, *Semana de Mayores*, and *Día Internacional del Mayor* to celebrate older adults. Such events are designed to help seniors feel that their identities are reflected in the public realm. The city and its partner organizations also try to increase the accessibility of ongoing public events that do not focus on any particular demographic. For instance, the city incorporates performances by older residents, as well as gatherings specifically for older residents, in the annual *Féria* celebration. This inclusion can help provide a sense of purpose and belonging for older participants and performers. In addition, the city makes accommodations to encourage participation by persons with limited mobility at public events. For instance, during *Semana Santa*, the city places chairs and tables in 142 plazas hosting public events to ensure that persons of all ages and mobility levels can attend. Finally, these events provide a platform for raising awareness about opportunities for older residents such as volunteering, health services, free classes, and more.

→ LESSONS FOR CITIES IN LAC COUNTRIES

The city of Málaga is committed to a public realm that is safe, supportive, and welcoming for the elderly and for persons with limited mobility. As the global population continues to age, Málaga's approach lends insight into potential local strategies. Some of the city's most innovative approaches to increasing inclusivity in the public realm include:

Participatory governance structures such as Senior Associations that empower older residents and expand the reach of city services without significant additional public spending.

Dedicated public spaces for older residents like the Senior Centers and Senior Parks near areas used by children, families, and other adults that help improve access to the public realm for persons with limited mobility while fostering social connectivity and combatting social isolation.

Spaces for virtual connection and information-sharing for people with limited mobility that are conceptualized and created by older community residents, such as *Solera* magazine and the *Voz de Los Mayores* radio station

Co-location of affordable housing, community space and programming, and health services in neighborhoods with high senior populations. An example is the Healthy Aging Center (*Centro de Envejecimiento Saludable*), designed specifically to promote healthy aging-in-place and social connectivity

These initiatives and others have helped foster a sense of ownership of the city among older residents. Málaga's strategies have empowered people who traditionally had limited opportunities for civic engagement and participation in the public realm to take leadership roles in conceptualizing and building a more inclusive, connected, and accessible city for residents of all ages and mobility levels.

Inclusive Cities for Elders

1 Urban services that increase the independence of older residents benefit the whole community.

2 Affordable and well-designed housing options are essential for keeping older residents in cities.

3 Cities that are successful in attracting older residents increase their local economic activities.



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DAY CENTER PROGRAM IN BOGOTÁ, COLOMBIA

| María Camila Ariza Franco

In recent years, cities have not only experienced rapid growth but also an aging population due to declining mortality rates and rising life expectancy.

According to the World Health Organization (WHO), between 2000 and 2050 the world population over 60 will double from 11 percent to 22 percent of the total.⁵¹

In the Latin American and Caribbean region, more than eight million older adults cannot independently carry out at least one basic activity of daily life, such as bathing, eating, or getting in and out of bed. This is known as functional dependence and affects 12 percent of people over 60 in our region and almost 27 percent of over 80s⁵². Both the magnitude and intensity of dependency increase with the age of the population. Among all age groups, women are the most affected⁵³.

This population trend has resulted in greater differences in the quality of life in cities, and in the need to adapt urban spaces to provide services that respond to the physical and mental conditions of older adults, guaranteeing them well-being and access to their immediate environment.

51. Pan American Health Organization, Envejecimiento y cambios demográficos, https://www.paho.org/salud-en-las-americas-2017/?post_type=post_t_es&p=314&lang=es [consulted in June 2020].

52. Gianluca Cafagna, Natalia Aranco, Pablo Ibarrarán, María L. Olivery, Nadin Medellín and Marco Stampini. "Age with Care: Long-term Care in Latin America and the Caribbean," Inter-American Development Bank, <https://publications.iadb.org/es/envejecer-con-cuidado-atencion-la-dependencia-en-america-latina-y-el-caribe> [consulted in June 2020].

53. Natalia Aranco, Marco Stampini, Pablo Ibarrarán and Nadin Medellín. "Panorama de envejecimiento y dependencia de América Latina y el Caribe", Inter-American Development Bank, <https://publications.iadb.org/publications/spanish/document/Panorama-de-envejecimiento-y-dependencia-en-America-Latina-y-el-Caribe.pdf> (Secretaría Distrital de Integración Social 2018), p. 1 [consulted in June 2020].

Achieving inclusive cities for older adults means that cities have to adapt their structures and provide services for people with different capacities and needs, including greater security, spaces for recreation and development, health services, and attention and care, among others. This way of developing cities becomes a tool for increasing life expectancy and inspiring citizens to age with dignity and to continue participating actively in society.

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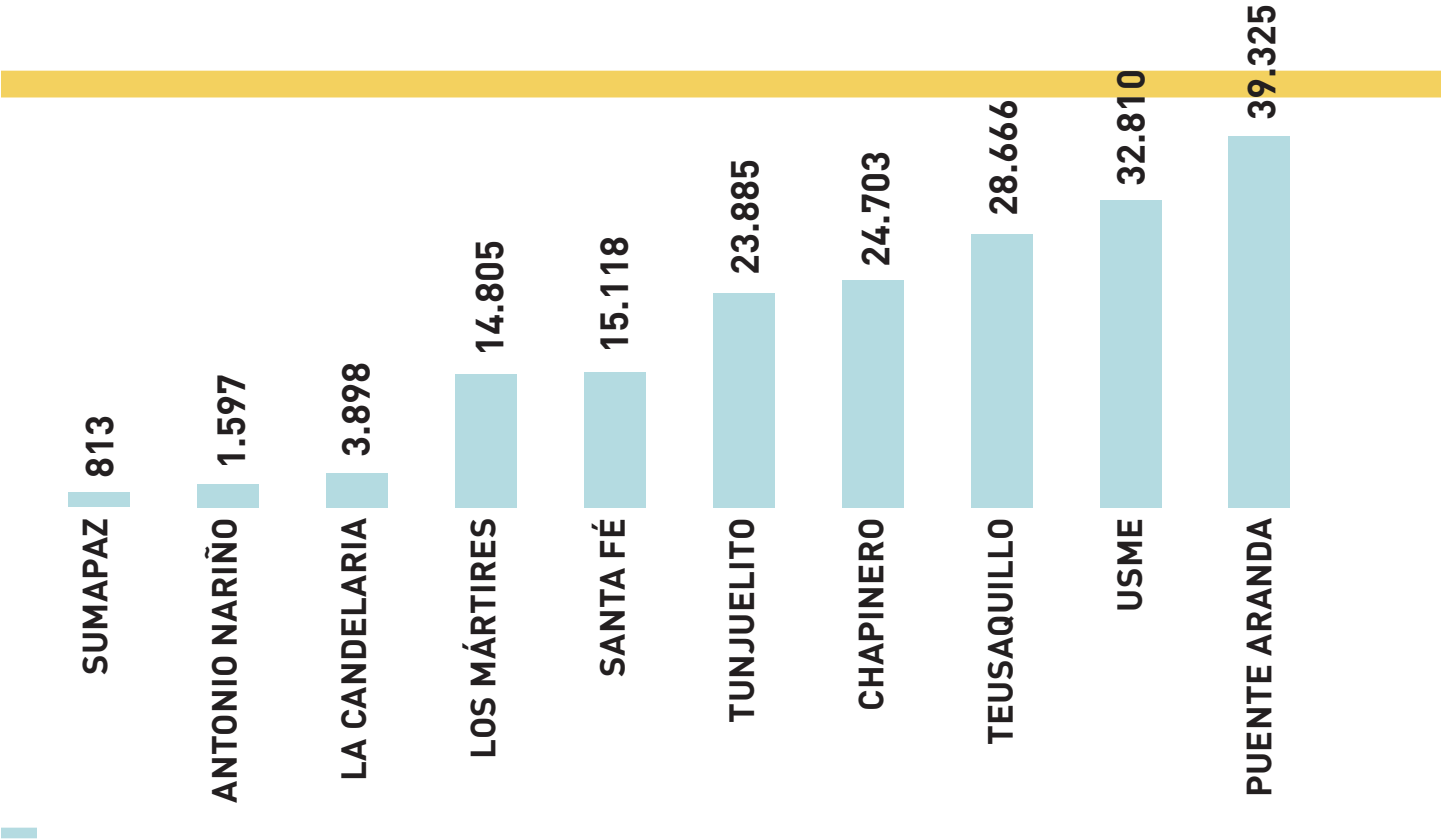


➔ **DAY CENTER PROGRAM-BOGOTÁ, COLOMBIA**

Bogotá, the capital of Colombia, has more than 8,200,000 inhabitants. According to estimates from the Colombian National Department of Statistics (DANE), the population of Bogotá aged over 60 increased from 560,875 in 2005 to 902,614 in 2015. The projection for this population group in 2020 is 1,153,194 people, which will be 13.8 percent of the total city population.

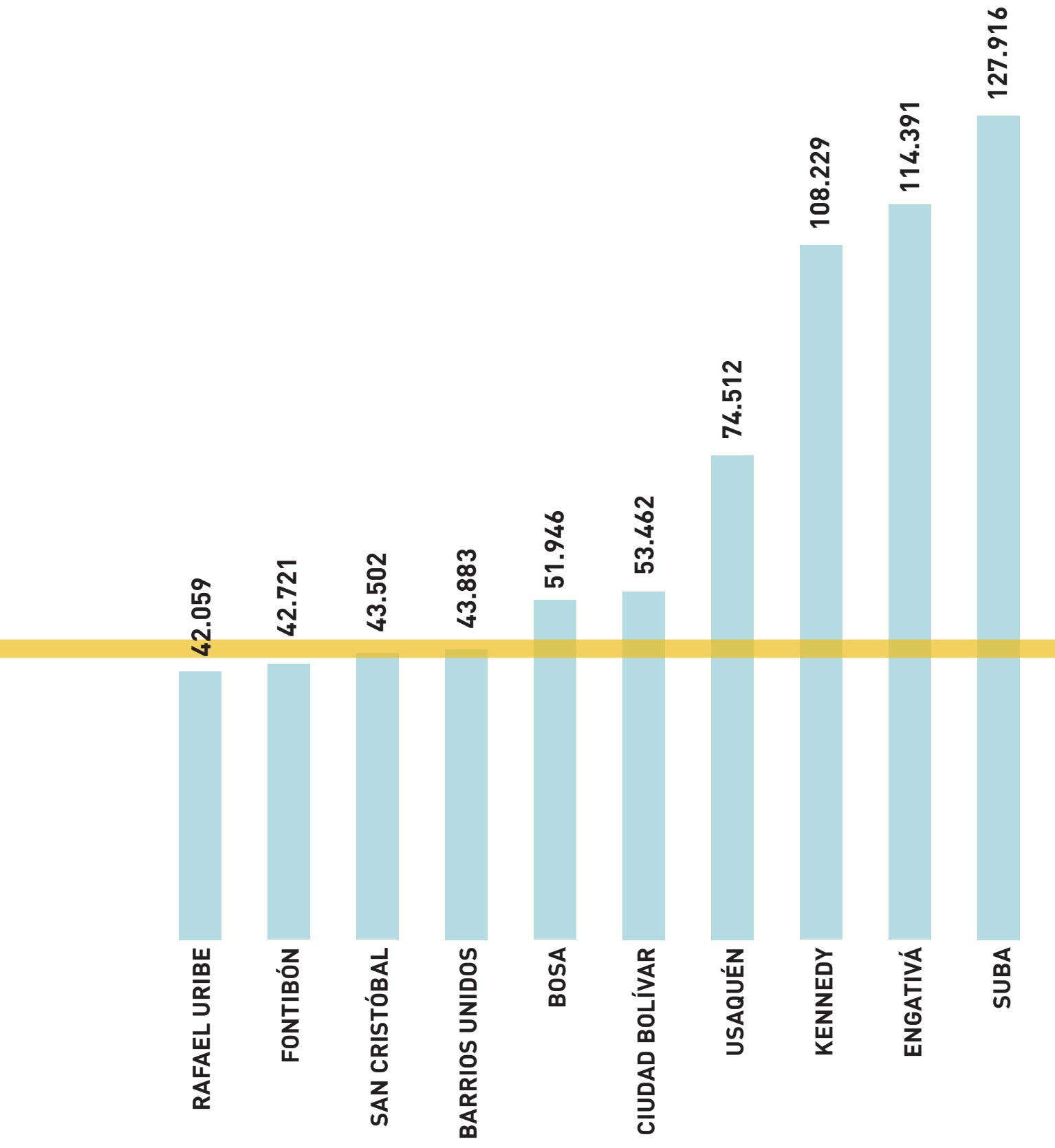
Considering that Bogotá has more than 20 localities, the largest presence of older adults is in the localities of Suba, Engativá, and Kennedy, where also large percentages of the population live in poverty⁵⁴.

➔ **ILLUSTRATION 1 – DISTRIBUTION OF THE POPULATION OVER 60 BY LOCALITY⁵⁵**



54. Política Pública para el Envejecimiento y la Vejez. Informe de Seguimiento de los Planes de Acción Distritales de las Políticas Sociales (Bogotá, D.C., Secretaria Distrital de Integración Social, April 2018), p. 4, http://www.sdp.gov.co/sites/default/files/informe_cualitativo_ppsev_2017.pdf

55. Política Pública para el Envejecimiento y la Vejez. Informe de Seguimiento de los Planes de Acción Distritales de las Políticas Sociales, p. 5.



The District Department of Social Integration, through the Sub-department for the Elderly, has made great contributions to services for the older population by implementing the Public Social Policy for Aging and the Elderly (PPSEV), adopted by Decree 345 of 2010 and Resolution 0511 of 2011. The PPSEV, with a life of about fifteen years, is based on a regulatory framework that guarantees the human rights and well-being of the adult population, as well as changing the view of old age as a less vulnerable stage.

According to the latest available data, 21.2 percent of the population over 60 in Colombia has some degree of dependency, equivalent to more than one million people.

If the upward trend in the incidence of chronic diseases continues, as it has so far, this figure may rise to over 2.1 million in the next 10 years, representing over a quarter (26.4 percent) of the population over 60.

Given this phenomenon of demographic aging that Bogotá is facing, there is a need to promote new ways of assisting older adults that go beyond institutionalization, subsidies or hospitalization, which is the way this population has traditionally been served. There has been recognition of the urgency of promoting development of public spaces and guaranteeing greater social participation so that the over-60s, as well as living together, can receive care and better living conditions.

As a result, thanks to Law 1276 of 2009, fixed resources from the national tax stamp have been established to provide compulsory comprehensive care for older adults in situations of vulnerability, isolation or lack of social support⁵⁶. With these resources, the Day Center program was set up to provide tools to give the older population of Bogotá a dignified old age and active aging, guaranteeing the human rights of adults and transforming the perception of old age in the capital. The program began in 2010 and has become the city's window where older adults can strengthen their autonomy and continue contributing to society and to building a city through development of skills and experiences.

56. Carmen E. Flórez, Laura Martínez Rodríguez y Natalia Aranco. "Envejecimiento y atención a la dependencia en Colombia. Inter-American Development Bank, 2019, <https://www.gerontologia.org/portal/archivosUpload/uploadManual/> [Stampini 2019] Envejecimiento_y_atencion_a_la_dependencia_en_Colombia.pdf, p. 56.

The program provides comprehensive care for older people in spaces that are not very common in their communities; spaces where they can receive psychosocial and primary health care, take part in sporting and cultural activities, and be recognized as unique and capable people.

Day Centers are also places where these adults come to share and create support networks, a meeting place where they transform their lives and are seen as older people and citizens with rights and possibilities in the city.

At Day Centers, aside from creation of area care routes or of isolated activities without great impact, it has been important to work directly with the population, identifying the risk factors that generate violence and vulnerability for older people so they do not lose their integrity and autonomy, and to connect with families, community, civil society organizations and the private sector, among other local actors.



→ LIGHT OF HOPE

In the locality of Engativá, where 14.9 percent are over 60, the ‘Light of Hope’ Day Center was handed over to the community in 2018.

The center benefits every day more than 150 adults aged over 60 from this sector of the city. It is one of eight spaces that came into operation between 2018 and 2019, and one of the 27 Day Centers that serve more than 1,400 vulnerable older people in Bogotá every day. Twenty-three of these centers are owned by the Social Integration Department, and four work through agreements with other organizations that operate the programs and finance their operation as Night Centers.

The importance of this project is evident in the social impact on the beneficiary population and their families, and also in the exercise of participation and renewal which has changed the face of the area by providing solutions to a number of social and security problems. In only 10 months, an abandoned area of the town was rebuilt and transformed from what was originally a fire station and later an area with high levels of insecurity and abandoned structures which were a focus for the sale and consumption of illegal substances. The sector had unpaved streets, no lighting, unfinished sidewalks and abandoned adjacent areas that were becoming urban and social challenges. This trend was reversed by the Day Center and an investment of nearly 2.2 billion pesos (approximately US\$670,000).

Development of this Center was a challenge for the Social Integration Department because of the physical characteristics and social problems of the area, and the difficulties this created in the process of bringing in the older population. A very important factor in this process was the collaboration of neighborhood volunteers and their participation in active search exercises, taking suggestions from the population and with a community need to find tools to improve the security of the local environment and increase government presence in the area. From the start, one example of collaboration with residents in developing the program was constant dialogue with the staff at the neighboring recycling plant so that it became an ally in jointly organizing the work needed to care for the area.

‘Light of Hope’ Center now has an area of 700 square meters where comprehensive care is provided, where beneficiaries are able to develop autonomy through physical, manual and artistic activities and human development meetings, and family problems which affect their dynamics can be identified, such as abuse of older adults in families, and meetings arranged which bring families and carers together.

→ 'LIGHT OF HOPE' DAY CENTER MURAL PAINTED
BY YOUNG PEOPLE AND OLDER ADULTS FROM THE CITY



To expand its efforts to provide a dignified life for this population group and develop an inclusive city, Light of Hope Day Center also works with other actors in the city, such as schools and other spaces where adults meet other generations.

These efforts help transform the imaginaries that have developed, teaching young people and children about the virtues of older adults, changing stigmas, and giving back value and capacity to old age. As a result, the Center has become a space in the city for intergenerational exchanges, achieving a public policy for old age and for aging which is cross-cutting to all ages of development.

“As we are all going to get old, we want children not only to learn to respect and value the elderly, but also to learn to age. We want them to be physically active, to eat well, to understand that the life cycle is a permanent process and that what you do as a child impacts your adulthood, and that ultimately older adults are useful people to society who can contribute to and have an impact on the community,” says Julieta Gómez, director of Light of Hope Center. “One of the biggest benefits of this Day Center is being able to work with young people who do not discriminate against the elderly, but who fill us with energy and enjoy working with us. They do not discriminate against us because of our limitations and we don’t feel rejected. They make us feel important and part of the city,” says Virginia Rodríguez, 65, a beneficiary of Light of Hope Center.

The Social Integration Department has also made efforts to work together and coordinate with other departments and local government bodies to strengthen the work with the older population and their development in the city.

For example, they work with the District Education Department to integrate beneficiaries into training programs to help them to complete their basic studies along with people from other generations. Likewise, the Ministry of Health, through a community strategy, has invited midwives and nurses from the Afro-community to work with Day Center beneficiaries to teach them about body self-care and preparation of creams and oils with natural products. Lastly, with the Ministry of Economic Development, the department has worked to identify programs that finance entrepreneurial projects to help older adults who are interested in applying and succeeding in their businesses. According to Virginia Rodríguez “this entrepreneurial tool has been one of the best the Day Center has offered. Many of us grandparents have discovered skills we had, and others have been able to get help to sell their products and have a job. These programs help us discover new opportunities, have work to do and feel useful because we are doing something new. We didn’t know about the venture until we got here and were taught how to start and gain self-confidence.”

For people with limited physical independence and considering that a high percentage of the adult population is in this condition, the program has integrated them and provided them with tools to access services. Although one of the objectives of the service is to help older people achieve complete autonomy and look after themselves, the service could not be selective. Since the space is provided to attend the population, services must be adapted to people, not people to services. Accordingly, the professionals who develop the activities and workshops in the Center adapt the dynamics so that all beneficiaries can take part regardless of their abilities and limitations.

With respect to inclusion of gender in the program, there is a special characteristic which is that women make up between 80 percent and 85 percent of beneficiaries who register at Day Centers and receive the services.

This makes it possible to recognize the processes of aging in the population by gender and identify patterns of behavior of women in these localities who prefer to age in company and take part in activities during the day. The higher female participation has also made it possible to deal with actions of violence against women that have occurred in the city, organizing activities in which other actors in the city participate, such as universities and local organizations working for empowerment of women.

The program also aims to provide older adults with a different view of their city and to integrate them through trips around the area, giving them the opportunity to get to know public, cultural and historical places, among others, taking the program outside the building where the Day Center operates.

To offer a solution to the problem of accessibility, which is one of the main limitations on the older population enjoying and taking back their city, the Day Center program offers transport services during the day to bring the community closer to the program, considering that many of the streets in the area are not designed for walking by older adults because some sectors have small streets, narrow sidewalks and other mobility restrictions. According to Ligia Laverde, a 62-year-old beneficiary of the program, the transport service has helped many people to get to the activities, given them the opportunity to become integrated, get to know each other and create networks between neighbors to create a community around the Center and also in other areas and thus connect the city and its inhabitants.



The program has also taken an intercultural approach through the Muya program, meaning ‘garden’ in Quechua, consisting of developing urban gardens on the terraces of the place where Day Centers operate, as well as in the homes of the beneficiaries who have optimal spaces and conditions for this activity.

These urban gardens have succeeded in recovering the historical memory, and people have begun to see the area in a different way. Many of them remember their past when, before coming to live in the cities, they lived in the country. Through agreements with professionals and institutions such as the Botanical Garden, participants have learned techniques for cultivation and upkeep of vegetable, medicinal and aromatic gardens. Many of the adults have also developed products such as creams, oils and soaps, which have become exercises in productivity and entrepreneurship.

According to Julieta Gómez, who has been working on these programs for more than eight years, one of the main challenges relates to these productivity exercises. It has been difficult to break with the way older people think about their own lives and to get them to recognize their knowledge and resources and make them feel useful again despite their age. This has been done through activities that strengthen participation linking the beneficiaries with other organizations to make the most of their knowledge, and working with strategic allies that support their endeavors.

One of the program's greatest strengths is that its operation and funding by the Social Integration Department is established by Law 1276 of 2009 mentioned previously.

This means that, despite changes in the city administration, the program continues to operate with no effect on its scope and development. Changes can take place in the dynamics and focus of the program's agendas, but not in its financing.

Consequently, the program is protected by law and this continuity has made it possible to maintain its work of supporting older people in the city, strengthening its resources over time and developing more public spaces for support services and participation to improve the quality of life of the city's inhabitants.

As part of the productivity activities of the ‘Light of Hope’ Day Center, many of the beneficiary grandparents have participated in training programs to develop their businesses. Such is the case of a couple aged 78 who have been making shoes for more than 40 years and who, thanks to the tools of the Day Center, have even expanded their business. In December 2019 their efforts were recognized by a local newspaper.

The Day Center program is an example of how planning plays a unique role in providing solutions to challenges that, until a few years ago, were assumed to be disconnected, and how provision of public services capable of adapting to the needs of all citizens can help provide solutions at local and urban level. Currently, Bogotá has been making progress in creating a city that provides older people with spaces to guarantee them an active and dignified old age through activities that enhance their capabilities, provide them with care and attention and reduce the risks in their lives. Day Centers are an example of how development of a training center can become a place where urban, social and economic development opportunities come together.⁵⁷

For Ligia Laverde, a participant in Light of Hope Day Center, the program helps older people to find spaces in the city where they feel protected and happy.

“Before, you heard that people received support such as food parcels or subsidies, now we have Day Centers everywhere so we older people no longer feel isolated from the city, but we have activities and the possibility of integrating. We are no longer the old people of the city; now we have activities such as dancing, crafts, and we can go out together and get around the city and share.”

Multigenerational Cities

- 1 Good cities create opportunities where youth and elders can use the same urban public spaces.**
- 2 Urban transportation networks that accommodate the need of young and old residents increase opportunities for local development.**
- 3 Cities that support local entrepreneurs of all-ages contribute to the emotional wellbeing and the financial independence of their residents.**

57. Marco Stampini, “Peinar canas da trabajo”. El País, June 25, 2019. Opinión. https://elpais.com/elpais/2019/06/24/planeta_futuro/1561371915_322436.html



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TANDANA AND GUÁPULO PARK'S ROLE IN QUITO'S TRANSFORMATION TOWARD A MORE INCLUSIVE CITY

I Vanessa Guerra

Public spaces are a shared resource in cities in which many benefits are promoted.

They act as a platform for leisure, entertainment and cultural activities; promote social interaction and social cohesion; contribute to the development of citizens' identity, civic empowerment and sense of belonging; and facilitate economic, environmental and sustainable productivity (Avritzer, 2009; Gehl, 2011; Mitchell, 2003). Because of this, public space plays a vital role in determining people's quality of life (Mean and Tims 2005). According to the UN-Habitat (2015), cities that have adequate public space and access to it are more livable and productive.

However, the majority of public space in cities does not take into account the diverse needs of all users (Madanipour 2016). Based on data from 220 cities in 77 countries, only 21 percent of city populations have appropriate access to public spaces (UN-Habitat 2015). Although these statistics do not necessarily mean that the area dedicated to public space in these cities is deficient, it does imply that people's access to this shared service and their ability to safely engage with it is unequal. Cities in the Latin American and Caribbean region are not an exception.

The lack of recognition of the different needs of the diverse members of a city is contributing to the exclusion and segregation of the most vulnerable groups of society, which is challenging the pre-established role of public space (Nielsen 2019). In this context of segregation, citizens, practitioners and scholars are questioning if public space is still an important tool for achieving social cohesion (Carr et al. 1992; Madanipour 2016). To answer this query, identifying successful examples of inclusive public spaces, with interventions in both their spatial and social dimensions, is helpful to establish a general understanding of how this urban design practice promotes social cohesion.

This chapter seeks to describe the case of Tandana, an inclusionary urban space located at Guápulo's scenic overlook, in Quito, Ecuador.

“Tandana is a non-profit project which aims to break paradigms, coalesce different struggles and movements together into one: the integral promotion of nature’s rights, and all animals, including humans” (Tandana / Fundación Libera Ecuador 2019). The project’s success is based on its conscious efforts to promote sustainable practices; the promotion of animal and environmental rights; and the inclusion of historically segregated groups such as people with mobility and cognitive disabilities, people in situation of human mobility (refugees), ethnic minorities, LGBT groups, among others. This is very relevant in the case of Quito, considering that it is a very multicultural city with about 14 percent of the population coming from racial minorities including Indigenous groups (7 percent) and Afro-Ecuadorians (7 percent) (World Bank 2018). In addition, Quito is a city with a vast migrant population since an average of 2,600 Venezuelan migrants entered Ecuador every day during 2018 (Ripoll and Navas-Alemán 2018). Although Tandana has the support of Quito’s municipality, the project was promoted and is managed by Libera NGO and Guápulo community members.

Through the collection of both theoretical and empirical data, this case study describes the social context in which Tandana was established, outlines how the project operates and analyzes the multiple roles of this self-promoted inclusive urban space in the city of Quito. It also provides useful lessons for other cities.

→ THE ROLE OF PUBLIC SPACE IN CITIES’ TRANSFORMATION

Public space has a crucial role in cities’ social, economic, and environmental transformation. It can be defined as all those commons spaces where social interaction and social inclusion happen (Gehl 2011). Therefore, public space includes streets, public open spaces, public urban facilities and public buildings (Hyunji 2019; UN-Habitat 2015). These shared resources have several dimensions and roles in cities. According to UN-Habitat (2015), they promote urban interaction and community engagement, identity, agency and civility, and social and economic development. They also contribute to achieving environmental sustainability, public health, safety, equity and social cohesion (Mitchell 2003). Because of this, public space represents a vital element to create vibrant, livable and thriving cities (UN-Habitat 2015).

Since public space is considered a shared resource, it should also be inclusionary. Inclusionary spaces are those that, through its spatial and social dimensions, promote equal access and social cohesion among its diverse users.

The spatial dimension of public space determines the level of accessibility, while the social aspect determines the level of engagement and safety the different users can experience.

Therefore, inclusionary urban space should be equitably distributed and easily accessible by people with disabilities, and by walking and public transportation modes (Hyunji 2019; UN-Habitat 2015). It should also have flexible and multi-use spaces to adapt to the changing needs of citizens, along with accessible infrastructure to address the diverse needs of the entire population (UN-Habitat 2015, 2019). In addition to the spatial dimension, inclusionary public space should consider its social aspect by promoting engagement among its users through the facilitation of inclusive and dynamic activities (UN-Habitat 2015).

Although the importance of inclusionary urban space has been widely recognized in the literature, many cities around the world still fall short of achieving it and are working toward the improvement of public space quality and accessibility. This case study focuses on a successful example of social transformation through inclusive public space in Quito, Ecuador.

→ POSITIONING ECUADOR IN THE LAC CONTEXT

LAC cities are continually challenged by the effects of accelerated population growth. Ecuador, a country of 16 million people straddling the equator on South America's west coast, is not an exception. Ecuador's rural to urban migration has dramatically intensified during the last 30 years (MIDUVI 2016). As a consequence, 60 percent of Ecuadorians live in urban areas (MIDUVI 2016) and according to UN-Habitat (Nyakairu, Kuria, and Mbogori 2013), Ecuador has reached a population growth rate that can be described as an "urban explosion."

Accordingly, two of the main challenges cities in Ecuador are facing are increasingly unsustainable practices and insufficient infrastructure provision, including public space (MIDUVI 2016).

Although the implications of such challenges affect all citizens, repercussions are greater toward the most vulnerable groups of society.

On the one hand, cities' efforts to keep up with the increasing infrastructure demands have led to extremely unsustainable practices (MIDUVI 2015). Some of the main issues are related to exacerbated patterns of production and consumption, waste generation, deforestation and pollution (MIDUVI 2016). As a result, productivity and livability in Ecuadorian cities are becoming compromised (MIDUVI 2016). For instance, deforestation and pollution are increasingly jeopardizing Quito's air quality, and therefore, its citizens' health and productivity.

On the other hand, green areas and public space are scarce and of low quality in most cities of the country (MIDUVI 2015). According to the World Health Organization (WHO), cities should provide 9 m² of green space per capita within a 15 minute walking distance of their home (cited in Coronado 2019). Ecuador's urban green index is 4.7 m² per inhabitant, and only 5 percent (10 of 221 municipalities) of the country's municipalities meet the standards recommended by WHO (MIDUVI 2016). However, although Quito meets WHO recommendations, most of its available space is not accessible nor inclusive to the diversity of needs of all kinds of people (MIDUVI 2016).

Quito's public spaces lack accessible facilities and activities that promote the engagement and inclusion of its diverse users. These practices generate the physical patterns and social behaviors that reinforce the exclusion of the most vulnerable groups in the city. As a consequence, 16 percent of the Ecuadorian population feels directly discriminated against for some reason; and it is perceived that 37 percent of the population suffers discrimination (SENPLADES 2013). Some of the most commonly excluded groups include women, which represents 50 percent of Ecuador's population; racial minorities, which represent 14 percent of the population; gender minorities such as LGBT groups, people with cognitive and physical disabilities, refugees and children, which make up 20 percent of the population; and elders, who make up 7 percent of the population (SENPLADES 2013; Villacís and Carrillo 2012; World Bank 2018).

This reality is illustrated by violence and discrimination trends in the city. For example, 24 percent of women that reported psychological violence in Ecuador suffered it in public and social spaces (Camacho 2014), and 50 percent of the LGBT population across 10 cities of Ecuador reported having experienced some type of intergender violence in public spaces (Botello-Peñaloza and Guerrero-Rincón 2018). Another illustration is Ecuador's trends of discrimination and xenophobia toward refugees. Although immigration is not correlated to insecurity, about 60 percent of the population believes that immigrants generate insecurity and take work away from Ecuadorians, while 48 percent of the population feel that immigrants weaken the country's identity (Ripoll and Navas-Alemán 2018). Additionally, there is a stigma that associates people with mental disabilities and crime. And although people with cognitive disabilities and mental disorders are 68 percent less likely to be involved in a criminal act than people without one, this group is commonly excluded and isolated from community engagement opportunities in Quito (Dubois 2019).

→ ECUADOR'S EFFORTS TOWARD INCLUSIVE AND SUSTAINABLE PUBLIC SPACE

To address these issues that have historically reinforced unequal power relations, the government of Ecuador committed to a change (MIDUVI 2016). The starting point of this work was the 2008 Constitution in which several rights were claimed, including the rights to nature, to the city and its public spaces, and to the social and environmental function of property (MIDUVI 2016). Through this declaration, Ecuador was the first country to recognize rights to nature in its Constitution.

Ecuador's constitutional reform was accompanied by other regulatory frameworks in support of protection of human and nature rights. All regulatory frameworks emphasize three principles: *Buen Vivir* ("Good Living"), *Right to the City*, and *Rights to Nature* (MIDUVI 2016). *Buen Vivir* promotes equality, social cohesion, social inclusion and socio-spatial equity to all individuals and groups, especially to the most vulnerable ones (SENPLADES 2013). *Right to the City* focuses on the collective well-being of city inhabitants in conditions of equality and justice, democratic participation and fair redistribution of the burdens and benefits generated by urban development (MIDUVI 2016). *Rights to Nature* fosters environmental sustainability in urban development processes (Asamblea Constituyente Ecuador 2008; MIDUVI 2016).

Although progress in the regulatory and institutional level is only one step toward change, transformation is starting to happen.

Several municipalities in the country shifted their direction toward the pursuit of these principles. Cuenca, Ibarra and Quito, for instance, initiated efforts to rehabilitate and redesign public spaces for all (SENPLADES 2013). Some examples include: Cuenca's Circo Social, an inclusive park with inclusive playgrounds (Acción Social Municipal del Cantón Cuenca); Ibarra's efforts to make public sports facilities accessible to elders and children; and Quito's efforts to include all-ability playgrounds (for children with and without disabilities) in La Carolina park, Las Cuadras neighborhood, Bicentenario park and Salomé Reyes park (PMSJ 2019; Ultimas Noticias 2019).

Ecuador's effort to promote inclusion comes from the municipalities, but also from civil society.

The Tandana project, an inclusionary urban space in the city of Quito, is an example. Understanding the project's conception, management and current use is the first step toward the promotion, dissemination and even replication of this successful urban inclusion initiative.

→ RESEARCH QUESTIONS

The following research questions explain how Tandana functions as an inclusive urban space in the city:

- 1 What is the Tandana project and how was it established?
- 2 How does the project function?
- 3 What is its role in Quito's social transformation toward a more inclusive city?
- 4 What are the lessons learned that could be useful for other Latin American and Caribbean cities?

→ TANDANA KIDS COOKING WORKSHOP



→ METHODOLOGY

Case Selection. The Tandana project is a unique self-promoted inclusive urban space located in Guápulo district in the city of Quito. The project is a public urban space supported by the city of Quito but promoted and managed by the combined efforts of Libera NGO and community members. The project is situated in Guápulo's scenic overlook, an area with challenging geographical and social conditions. Geographically, the project borders Quito's steep hills and its eastern valley. Socially, it is located at the intersection of the historic and traditional neighborhood of Guápulo and the new "high-end" neighborhood of Gonzales Suarez. It is in this context of convergence that the Tandana project emerges.

Data Collection. Data collection involved field observations and semi-structured interviews during August 2019. Field notes were taken during site visits and observations of Tandana Fest, Festival de Biomurales. Observations and experiences were documented in a journal. Interviews were conducted with Tandana's key actors and stakeholders. Subjects were selected purposefully based on their knowledge of and interaction with the project. Heterogeneity in the subjects of study was attempted by including participants from different groups of society who have been involved in different phases of the project. Half of the selected subjects had six months or less of experience with the project, while the other half were involved in the project since its early stages. A total of 22 interviews were conducted with Tandana's staff members, volunteers and users. Staff members and volunteers were previously contacted, and interviews were scheduled by phone. Users were approached at the project site. For all groups, interviews were conducted either in person or by telephone. To protect the confidentiality of users, which include groups that are traditionally discriminated against in the city, pseudonyms are used in the following sections to refer to all users.

Data Analysis. Field notes and interviews were transcribed, excerpted, coded and categorized with Dedoose software according to Miles, Huberman and Saldaña's (2014) coding protocol. Once the data was coded, a pattern-matching analytical strategy was applied to identify central themes within the interviewees' responses. This logic consisted of matching empirically observed events to theoretically predicted sustainable and inclusionary urban features in both the spatial and social dimensions (Yin 2014). This analytic technique was useful to focus attention on certain data and to guide the presentation of evidence into a rich explanation of the analyzed case (Creswell 2013; Yin 2014). Finally, field notes were used to amplify, develop, or corroborate specific points that the in-person interviews suggested.

→ RESULTS AND DISCUSSION

→ 1. TANDANA AND GUÁPULO SCENIC OVERLOOK PARK

“Tandana is a Kichwa word, an ancestral language of Ecuador. It means uniting, bringing together, protecting the unprotected. But the word is not exclusively for human beings, but also for other species such as animals and the environment. It does not discriminate in any way, and that is the core vision of this project.”

Pedro Berméo Guarderas, Founder and Coordinator

Tandana and Guápulo Scenic Overlook Park emerged to compensate for the lack of inclusive public space in Quito. Community members, supported by Libera NGO, came up with a project to get the municipality on board and start working toward three main objectives. The objectives included: rehabilitate the previously abandoned Guápulo Scenic Overlook Park, create an inclusive public space in which no one is discriminated against and create a space of confluence for citizens and activists. Although the project has the support of the municipality of Quito, it was promoted and managed by Libera NGO and community members.

The project mission is to promote the protection of all lives without discrimination, including animals and human beings, and environmental rights. For this, the project includes four main areas: a non-profit vegan restaurant, called Tandana, a cultural center, urban gardens and Guápulo Scenic Overlook Park. Tandana restaurant is the project's financial backbone, whose profits finance park rehabilitation, development, and maintenance of all its elements. The project was designed as an inclusionary urban space in both the spatial and social dimensions. Spatially, it has progressively worked to provide universal access to all users. Currently, the restaurant and cultural center are accessible to people with all abilities, while the gardens and the park are still a work in progress in this area. Socially, the project facilitates activities to promote the participation and engagement of all its users, and it is considered a safe space

→ 2. OPERATION

Governance Structure. The Tandana project is the result of an alliance between Guápulo community members, Libera NGO and the municipality of Quito. Prior to the project, the park was an abandoned space in which alcohol consumption and delinquency activities were common. Community members and Libera NGO, a non-profit founded in 2011, had a shared vision to rehabilitate the park and transform it into an inclusionary urban space. For this, a comprehensive proposal to restore the park was developed, presented to the city and later approved by the municipality. Tandana and Guápulo Scenic Overlook Park obtained legal status in 2015.

The project's main stakeholders include one coordinator, eight staff members and 15-16 frequent volunteers. Pedro Berméo Guarderas, the project's founder and manager, leads and oversees the different project operations and its four divisions (the restaurant, the cultural center, the gardens and the inclusive park). Each area has staff members and volunteers supporting the tasks and responsibilities of the area. The volunteers are members of Guápulo and other communities within the city, and the number of volunteers varies according to people's availability. Although there is a clear hierarchy and division of tasks, the project has a horizontal governance structure and there is constant communication between all stakeholders.

Finally, to hire new staff members, the group uses an innovative approach called "release an activist" or "liberation of activism." This approach consists of prioritizing new hires for volunteers who have stood out for their work and passion for activist topics such as inclusivity, animal protection, environmental law, among others. This innovative approach allows those newly hired volunteers to continue dedicating themselves and promoting their cause, but now with a salary.

"Awareness, art, reflection, gastronomy and recreation, all in one emblematic and touristic site in Quito: Guápulo's scenic overlook."

Tandana

The project works toward its mission by running its four different urban components simultaneously, including the non-profit restaurant, the cultural center, urban gardens, and the park. The four elements are a constant work in progress and are designed to work as an inclusionary urban space, in both the spatial and social dimensions.

→ TANDANA, A NON-PROFIT RESTAURANT

Tandana restaurant is the component that makes all the other components of the project possible. All restaurant profits are reinvested in activities that support the project's purpose, therefore, providing funding for most project interventions. Regarding the restaurant's spatial design features, it was designed and built with accessible facilities.

“My family and I visited the restaurant because we were told it has universal access, and we loved it. It is not every day that I can access a restaurant with such a view in a wheelchair.”

Fernanda, user

Socially, Tandana proposes a vegan gastronomic offering that includes no products of animal origin. The restaurant, which has an open kitchen, has positioned itself as a competitive culinary concept by offering an innovative menu along with many cooking workshops, talks and other learning opportunities to community members. Tandana is a growing success of mainstreaming vegan food in the city. Additionally, in efforts to break away from industrial food and farming systems, Tandana promotes ecological and socially responsible practices such as the use of clean energy, local production, organic agriculture, fair trade, among others.

“I was told about a Venezuelan cuisine workshop in this Tandana... honestly, I was surprised. Due to Venezuela's current situation, I was forced to emigrate from my country. My family situation is not easy; it's been a struggle..., but I am grateful for the support we have received. Isolation is tough though, we face it every day, and although it is the least of our concerns, it is always a nice surprise when people are willing not only to welcome us, but also to celebrate our culture.”

Luis, user

“We try to break the paradigm that vegan gastronomy is pretty much a salad. We try to be inclusive and to innovate as much as possible, and our clients love our food. We have offered thematic workshops of Syrian cuisine, among others.”

Renato Paredes, Tandana's chef

→ CULTURAL CENTER

Similarly, the cultural center is the space where documentaries are shown and talks, forums and debates are held. Spatially, it was designed and built with accessible facilities. Socially, all organized activities focus on topics of social inclusion and animal and environmental rights. Some of the most popular topics include nature, animals, responsible use of plastic, oceans, ecology, activism, photography, among others.

Although a lot of the activities held at the cultural center are organized by Tandana and Libera NGO, the cultural center is open to the public, and it has currently become a platform that serves as an “open microphone” for all community members.

“I discovered Tandana because a friend invited me to a workshop regarding women’s rights. As a woman, I feel uncomfortable when I realize I am being unnecessarily stared at, or when I get unnecessary comments about my appearance in my everyday life... Being able to meet other women that have been victims of sexual harassment made me finally feel understood. I felt comfortable, it was so refreshing... I even learned about support channels that I was not aware of before.”

Laura, user

“The cultural center has become a point where citizens’ views, opinions and concerns converge. One of our latest workshops focused on the importance of taking care of our oceans. We projected a documentary, and we followed up with a discussion to reflect on lessons learned and future steps. We had a great audience.”

Sofía Torres, staff member

→ URBAN GARDENS

Another component of the project is five urban gardens located in Guápulo Scenic Overlook Park. Spatially, the urban gardens' facilities are not entirely accessible to users with disabilities yet, but it is a work in progress. Socially, this component creates the possibility of using this city public space for more than just open green areas for leisure. These gardens serve as a platform where different groups of society, including citizens and immigrants of different ages, cultural backgrounds, disabilities, gender identities and sexual orientations, can work together in an environment of mutual respect. The project holds different workshops and training programs so community members can get involved. Through guided activities, the urban gardens promote interaction, and therefore inclusion, beyond conventional models.

→ COMMUNITY ENGAGEMENT AT TANDANA'S URBAN GARDENS



“I have limited vision, so I have limited entertainment opportunities in the city... I particularly enjoy hands-on activities... So, I attended a workshop on permaculture... I wanted to learn how to build my own garden at home. I enjoyed the work a lot, I couldn't go back as often as I wanted due to personal issues, but I would love to participate in similar activities again.

Sergio, user

In addition, the urban gardens aim to address the disconnect in today's society between people that are not dedicated to food production and the commonly normalized devaluation of farmers. To that end, the urban gardens, which are for public use and open to all citizens, promote a space for citizens to experience and venture into agricultural practices through the sowing and harvesting of different crops. Moreover, ConQuito, a municipal governance body, supports this initiative by providing training and advising for the project's activities. Although the urban gardens do not attempt to completely fulfill the restaurant's needs, they contribute as a platform to reflect on eco-agricultural practices and the value of food autonomy.

“The gardens... I like them. The guys there are respectful and attentive, they are interested in learning about agriculture. I teach them our practices, we laugh, just like that, it is nice.”

María (indigenous women), user

“Interacting with the urban gardens helped me find a balance between my life and the environment. Being able to put my hands in the ground, learn more about the plants, their different properties, the different types of seeds... it has all contributed to me a lot. Although my career and work has been related to computing and technology, I have always liked to find a balance by keeping in touch with nature. And Guápulo scenic overlook's park has provided me the space to pursue that.”

Daniel, user

➔ TANDANA'S CULTURAL CENTER (LEFT) AND URBAN GARDENS (RIGHT)



IMG: Tandana



IMG: Tandana

→ GUÁPULO SCENIC OVERLOOK PARK

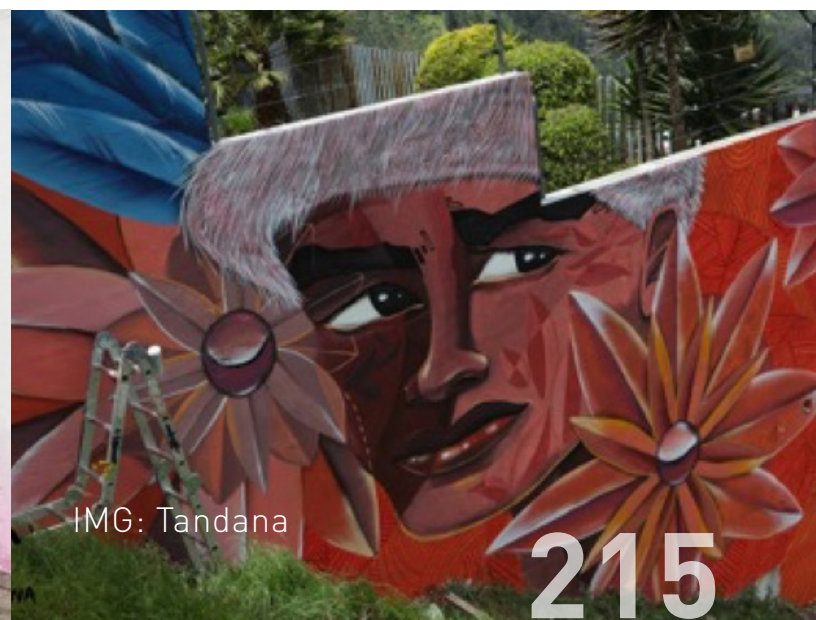
Socially, one of the park's primary interventions includes the rehabilitation of the formerly abandoned park through the exploration of urban art and the communal appropriation of public space. The project started by transforming neglected and graffitied walls into artful murals with cultural and environmental topics. All murals were painted by local and international artists that promote animal protection and environmental conservation through different art expressions. According to community members, the artful murals have made the park a platform for interaction, and therefore, mediation, between artists, activists and residents.

“Although I consider myself an activist, as a representative of a racial minority group, I struggle to find spaces where I don't feel the need for explaining the discrimination my family and I experience. Seeing the park's murals while I walk by in the neighborhood has the opposite effect on me, it reminds me that this is my city too, I feel represented, I feel that I belong here.”

Victor, user

In spatial terms, the park includes a playground built with recycled materials, and there are projections to build an accessible playground (which depends on the municipality's financial support). It also includes a dog park to promote pets' rights to exercise and socialize. In addition, both community members and Libera NGO have promoted the municipality's involvement to install a bike-share station at the park, along with a kiosk for a municipal public library.

→ ARTIST MONA CARÓN AT TANDANA'S FEST 2019 (LEFT), AND URBAN ART AT GUÁPULO SCENIC OVERLOOK PARK (RIGHT)



→ **COMMUNITY INTERACTION AT GUÁPULO SCENIC OVERLOOK PARK (LEFT),
AND GUÁPULO SCENIC OVERLOOK PARK (RIGHT)**



These four ongoing projects have demonstrated how these interventions revitalized the space by making it an inclusive alternative for different types of social interaction, leisure, recreation, artistic expression, sense of belonging, empowerment, among others. Consequently, according to Agencia Pública de Noticias (2017), crime and alcoholism in the park have gradually and significantly decreased.

“Regarding the park, I like it that the community completely took over the space, the dog park, the murals, the playgrounds... It seems like that park finally belongs to someone. It used to be empty; people used to go there to drink at night... It is interesting to see how the community interaction managed to do all this. I also like their public libraries with donated books. The project contributes to the city from many areas, there is culture, inclusion, nature, gastronomy...”

Sandra, user

“I realized that we stopped attending cultural events since my mom was put in a wheelchair... She misses it so much, but accessing venues is difficult... I was so happy when my sister told me that we can go to Tandana... We loved it, and it is not too far away from our house.”

Isabel, user

→ THE ROLE OF LOCAL GOVERNMENT

Tandana and Guápulo's Scenic Overlook Park emerged as a self-promoted and self-managed project. Guápulo community members, along with Libera NGO, developed a project and submitted it to the Quito municipality. After the analysis of several alternatives, and due to the massive community support the project had, the municipality of Quito decided to grant the space to the Tandana project. Although the municipality approved the project and its execution in 2015, it does not fund project activities. The signed arrangement consists of two agreements:

The first agreement included a lease contract where Tandana would pay a monthly rent for the right to use a small building by the side of the park as a restaurant.

Prior to the project, this small building was abandoned for four years. The restaurant space had leaks, holes and trash. The lease agreement stated that Tandana would be solely responsible for rehabilitating the area. It is worth noting that the space for the building had been traditionally assigned as *comodato*, a legal term used to loan public spaces to a private entity. However, in this case, the city used a lease agreement instead. Currently, the former abandoned building has become Tandana, and not only is the restaurant fully functioning, but it is also an icon for the Guápulo area.

The second contract consisted of a cooperation agreement in which Tandana agreed to rehabilitate and maintain the areas of the park, while the municipality decided to grant permits to allow the interventions and activities that the project had planned. The park, similar to the building where the restaurant was set up, was a place for alcohol consumption and delinquency activities. Presently, the park is rehabilitated and community members make frequent use of the space. According to Agencia Pública de Noticias (2017), after four years of Tandana's cultural, social and recreational activities, delinquency has been gradually mitigated, and the park currently receives about 400-500 users on a daily basis.

→ FINANCIAL SUSTAINABILITY

The Project began with seed capital that helped cover the project's initial expenses. This seed capital included funds from a bank loan and from a crowdfunding campaign. The crowdfunding campaign was carried out at the beginning of 2016 in Quito. Donations from community members were requested with the commitment to use the raised funds toward the development of the project. The bank loan and the crowdfunding campaign managed to gather enough seed capital to start the project.

At present, the project can support its own expenses and is financially sustainable.

All the income from the restaurant is reinvested in actions to support the purposes of the project, such as rehabilitating the park, developing the activities of the community center, planting urban gardens, among others. For additional support, the foundation has two other sources of income. It is continuously applying for seed capital programs and grants with international organizations, such as LUSH. It also receives donations from international institutions that share similar values and goals to those of the Guápulo Scenic Overlook Park project.

→ TANDANA'S FAIR TRADE AND INCLUSIVE BAZAARS



→ STRATEGIC PARTNERS

An important line of action of the project is to seek collaborations, or serve as a collaborative platform, to work with entities that have related or shared objectives. The project collaborates with and relies on the support of different groups of society. Main actors include community members, local producers and farmers, local recyclers, local and national governmental entities such as ConQuito (a municipal body that promotes urban gardens), and Ecuador's Ministry of Environment. Other collaborators include academic institutions, such as the School of Visual Anthropology of the Free University of Berlin in Germany (who provided academic and financial support to the latest Tandana Fest). Non-profits and civil society groups such as Huertomanías and HIAS (non-profits that work on the inclusion of people with mental disabilities/disorders and refugees, respectively) are important collaborators as well.

I was so happy to attend Tandana's fest. They had bazaars with products made by people with schizophrenia, sweets made by refugees from the Middle East, and crafts made by migrants from Venezuela. It was amazing.

Renata, user

Some other collaborators include ReciVeci, a project that focuses on increasing and enhancing the work of grassroots recyclers in Ecuador; Foodsharing, a project that focuses on reducing food waste in Quito; the National Animal Movement, a group that includes several animal groups, who collaborated in the development of the Animal Welfare Law (LOBA, for its acronym in Spanish); La Incre, an advertising agency that has a social responsibility approach, with an advertising focus along the lines of environmental and animal protection, and of the rights of the most vulnerable; Surkuna, who specializes in the defense of human rights, especially for women, and fights for a society free from discrimination and violence; and many other entities and institutions.

It is important to highlight that the philosophy, mission and vision of Tandana and Guápulo Scenic Overlook Park project do not always align completely with those of its allied organizations. However, alliances focus on potential collaboration for issues where objectives intersect.

→ 3. THE ROLE OF TANDANA AND GUÁPULO SCENIC OVERLOOK PARK TOWARD A MORE INCLUSIVE CITY

→ SOCIAL INCLUSION OF HISTORICALLY SEGREGATED GROUPS

Tandana and Guápulo's Scenic Overlook Park interventions have significantly contributed to a more sustainable and inclusive city. The following section includes some of the areas that the project has promoted with its different interventions.

→ INCLUSION OF PEOPLE WITH MOBILITY DISABILITIES

To address exclusion from infrastructure, the design of the project includes principles of universal design. This consists of ensuring access to users of all ages and abilities without the need for adaptation or specialized design. Currently, the restaurant and the community center are accessible facilities. Community members and Libera NGO have ongoing efforts to partner with the municipality of Quito and extend this concept throughout the urban gardens and the park (including its playground).

→ INCLUSION OF REFUGEES AND PEOPLE WITH COGNITIVE DISABILITIES

The project actively promotes activities to encourage the involvement of refugees and people with cognitive disabilities. One example is the promotion of fair-trade bazaars in the park that include vendors that are refugees and people with cognitive disabilities. People invited to participate in the fairs are those heads of households that have struggled to enter the workforce, and therefore achieve economic development, due to societal discriminatory hiring. Participants are contacted through Huertomanías, HIAS and other non-profits with similar objectives. In these fairs, participants have an opportunity to advertise and sell their products and even create alliances with Tandana's kitchen. Another initiative to promote inclusion consists of Tandana's promotion of Syrian and Venezuelan recipes, the nationalities of most refugees in the country. In addition, Libera's NGO staff members always include employees in situation of human mobility.

“Having a mental disorder is difficult not only for the medical aspect but also for the isolation you are forced to face in the city. We have very few opportunities to access employment and to engage with other people besides our families. Tandana welcomed us with enthusiasm and provided us a space to sell our products safely. I love the experience, and it is beneficial for me, the money I earn allows me to access things I was not able to access before.”

Jorge, user

“Meeting people that are willing to work with people with psychosocial disabilities, such as schizophrenia, is always a pleasant surprise. Our work focuses on the inclusion of all members of society, but mainly in recognizing pre-established stereotypes that promote discrimination among society. Since our first interaction with Tandana, it was evident that they were interested in embracing the differences and including all people. Our interaction with Tandana has always been easy, friendly, and organic.”

Aimeé Dubois, CEO, Huertomanías NGO

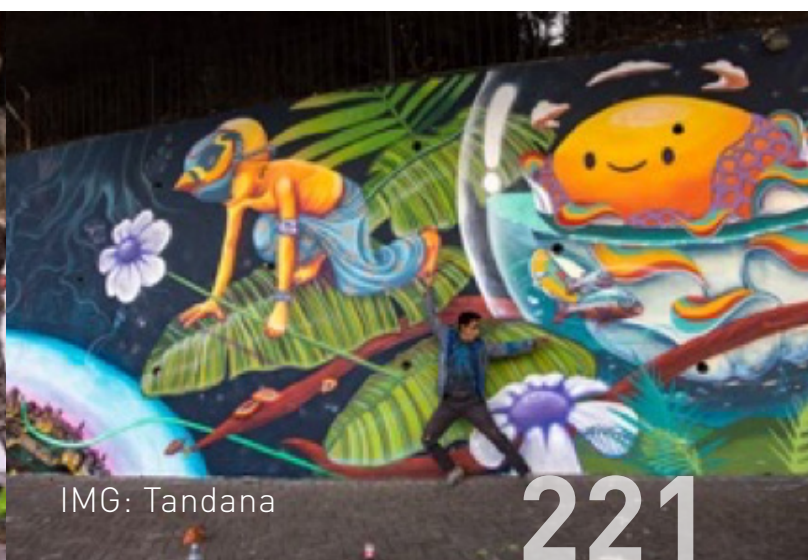
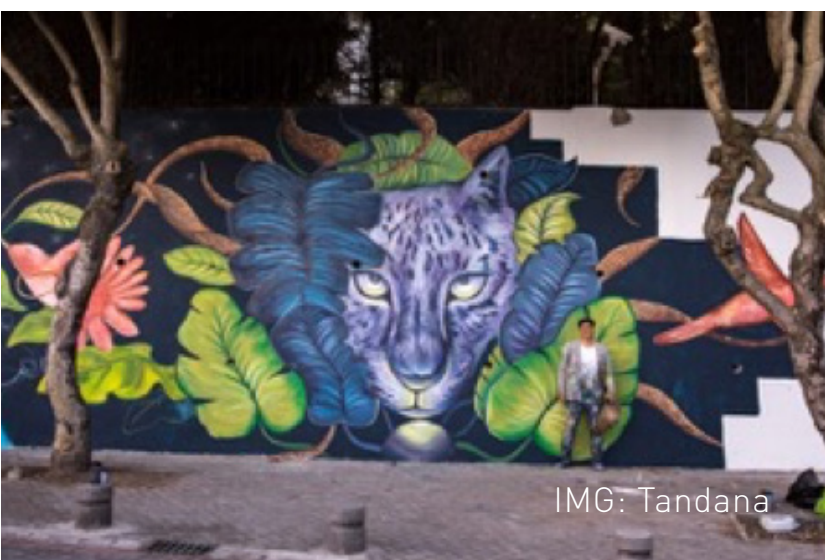
→ INCLUSION OF ETHNIC MINORITIES, GENDER MINORITIES AND SEXUAL AND GENDER MINORITY IDENTITIES

The project uses art and culture as a way of disseminating different types of rights and diverse forms of inclusion. To promote the integration of Ecuador's ethnic minorities, some of the artistic murals in Guápulo Scenic Overlook Park celebrate the existence of Indigenous and Shuar ethnicities in the country, as a symbol of a social assertion. These initiatives have encouraged targeted minorities to make use of the space. In addition, the cultural center regularly promotes talks, forums and events where different groups of society converge to discuss topics such as gender equality, women-friendly cities, among others. Finally, Tandana's infrastructure includes non-binary restrooms to avoid discrimination toward sexual and gender minority identities.

“Personally... The first time I checked this place out was out of curiosity, but once I stepped in, I felt included..., encouraged to participate. It is a place where I can be myself without getting judged, which is not too common in my reality, so it is relieving.”

Juan (LGBT group), user

→ ARTISTS MUTANTE (LEFT) AND KST (RIGHT) AT TANDANA'S FEST 2019



→ ANIMAL AND ENVIRONMENTAL PROTECTION

Although all activities of the project are aligned to promote animal and environmental protection, there are some specific initiatives that continuously reinforce the project's ongoing mission. One of those initiatives is Tandana Fest.

Tandana Fest aims to provide a space for environmental dialog and to reduce the gap between society, environmental causes, knowledge production and action. The festival aims to rehabilitate public spaces through the promotion of art and social interaction between *artivists*, civil society, scientists and others. The two editions of this festival have been held in Quito's Guápulo Scenic Overlook Park, as well as in communities in the Ecuadorian Amazon (in a village located in Puyo, and in a Kichwa community of Pompeya (Parque Nacional Yasuni)).

The festival consists of workshops, conversations, artistic interventions and fair trade bazaars. The workshops and discussions promote dialogue and cultural exchange between the different participants. Artistic interventions, on the other hand, consist of creating murals that reflect the collective memory in public space. Muralists and painters include both local and international artists, including Kst, Mutante, Sowith, Fai, Mona Caron and Louis Masai, an artist committed to representing the loss of global biodiversity. Some of the themes usually emphasized throughout the festivals include animal conservation, environmental rights, issues of extractivism and displacement in Ecuador.

“In a time of great environmental pressure, political negligence and urgency of human action, Tandana Fest is an innovative proposal to promote citizens' dialog, free expression and most importantly, sense of belonging. Current practices of public space have elitists structures. One of the objectives of these festivals is to raise awareness and alleviate current cultural elitism and repression.”

Diana Troya, volunteer

→ FACILITIES BUILT OUT OF RECYCLABLE MATERIALS



IMG: Tandana

→ PROMOTION OF ENVIRONMENTALLY SUSTAINABLE PRACTICES

Besides all the different activities that the project promotes, the project itself is an example of environmental sustainability. Some of their leading practices include Tandana's kitchen philosophy of not making use of hydrocarbons and its commitment to electric artifacts only. Similarly, once the project reaches its financial goal, Tandana plans to install solar panels in all their facilities to fully produce their own energy. In addition to clean energy, Tandana's infrastructure is built out of recycled materials: the roof of the cultural center is made with tetra pack garbage and pallets; the restaurant's chairs are made with shear, a metal that is considered waste; the plants' pots are made out of recycled rubber; the glasses and lamps are made out of recycled bottles; and the list goes on. Likewise, the project separates and classifies its waste. Organic waste is composted and delivered to a supplier in the area, plastics are recycled and reusable plastics are given to a local waste picker.

“Tandana is fully committed to reducing its ecological footprint as much as possible... Here, you can really see how the project practices what it preaches.”

Cristina Carrera, staff

→ AGRO-ECOLOGICAL PRACTICES AND FAIR TRADE

In order to break away from industrial food and farming systems, the projects promote agro-ecological practices and fair trade. Tandana is supplied with local, ecological, organic and socially responsible products. For the most part, the project is supplied by small farmers or by other suppliers that share the project's philosophy, such as Camari, an NGO that promotes fair trade and organic agriculture. Tandana works with small farmers that offer products of outstanding quality.

“We are not part of the food industry that tries to maintain a production chain for economic incentives only. We believe in the responsible production of products for proper and healthy food. We also try to promote the responsible consumption of our ancestral products that have been forgotten over time. For example, the Chaqui Misqui has many benefits and has always been typical in America, but its consumption has completely decreased over time.”

Ximena Porras, provider

→ 4. REPLICABILITY FOR LATIN AMERICAN AND CARIBBEAN CITIES?

There are many challenges, successes, and therefore lessons, that the project has faced and gained during these years. The following section summarizes the lessons learned during the project implementation and management, and the potential to replicate similar initiatives in different contexts in LAC.

The first lesson is that as a first step, the consolidation of a committed community organization with a clear project is essential. A consolidated community organization will facilitate the creation of a project with a defined structure, a clear vision, clear guidelines, and all other required characteristics such as feasibility, financial support for the initial stages, and sustainability in the long term. Having a comprehensive proposal in a written document is a valuable tool when seeking funding, sponsors and/or collaborators. As a second step, it is essential to form partnerships with institutions that have the resources and management capacity to develop infrastructure projects in the city.

Third, it is essential to collaborate and to both support and be supported by sister organizations with similar objectives. It is also important to constantly seek intersectionality, to be open to others' struggles and to work as a team. It is collaboration among different partners that will allow the various projects to join forces and optimize efforts toward similar causes. However, when choosing strategic allies, it is essential to ensure that the project philosophy will not get compromised. Fourth, it is crucial to collect user feedback regarding their experience with the project. The success of the project should be periodically evaluated by incorporating the perspectives of the different users regarding their level of involvement, diversity and inclusion.

Furthermore, it is important to remain committed, patient, and flexible. The consolidation of these types of initiatives takes a lot of time, work, research, consistency, and flexibility. It is essential to maintain the vision of the project but adapt to the different contextual conditions. It is also imperative to have humility and always be open to listen to suggestions, criticisms, and to learn from people's feedback. Finally, it is key to systematize these types of projects, make a record of lessons and expand visions. Although this type of project is learned by doing, it is not necessary to start from scratch.

“There are many lessons from the work we have done, and it is important to create a database to promote, distribute and use this knowledge.”

Diana Troya, volunteer

→ CONCLUSION

This research has used the Tandana project as a case study to describe the role of a successful example of inclusionary urban space in Quito's transformation toward a more sustainable and inclusive city.

The case study presented in this chapter is a project that has proven to be inclusionary in both its spatial and social features. The growth of these types of initiatives is likely to boost social cohesion, and therefore, reduce violence toward those minority groups that have been historically discriminated against and segregated.

In addition, this research identifies the alignment of Tandana, a self-promoted initiative, with principles of social inclusion, animal and environmental protection, and with the principles fostered in Ecuador's regulatory frameworks: Buen Vivir ("Good Living"), Right to the City, and Rights to Nature.

Finally, this research concludes by highlighting the project's role in breaking historically pre-established paradigms, and in socializing issues and concerns of civil society.

On the one hand, the project breaks with the common tendency that public spaces consist of open spaces with green areas and soccer fields exclusively. Tandana and the Guápulo park have shown that many other urban components effectively promote the recreation, interaction, inclusion, and engagement of the different members of society. On the other hand, the project is an innovative proposal for city infrastructure development and management since the project emerged as an initiative from community members that managed to gain support from non-profits and local and national governments. Finally, the project is a successful example of the potential contribution that different urban elements, and therefore, the city's structure, represent to make visible and to socialize issues and concerns from civil society.

"Being part of the project and meeting all the people there has positively influenced my life. It has helped me to learn a lot about many things, especially about those topics in which I have always been interested, but little involved, including the protection of animal rights, the rights of nature, social inclusion, environmental awareness. I could say that my interaction with the project has helped me to become more consistent with my beliefs."

Daniel, user

→ ACKNOWLEDGMENTS

Special gratitude is extended to Carolina Monar, member of Tandana project, for her support in providing information and coordinating interviews. The team is also thankful to Tandana's staff, volunteers, collaborators, and citizens, for the time and information provided during the interviews.

Innovation for Inclusive Cities

1 Cities need sound governance structures and well-defined financing mechanisms to proactively promote urban innovations.

2 Inclusive urban spaces can create opportunities for innovative urban designs and artistic expressions.

3 Urban gardens can help to integrate and educate society on the value and the joy of living in inclusive cities.



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TECHNOLOGIES AND MOBILE APPS THAT PROMOTE INCLUSION

■ Mariana Pinzon-Caicedo

■ Suzanne Duryea

Both technology and Internet access have become more affordable as the prices of technological components have dropped thanks to advances in manufacturing and regulation. Both Internet usage and mobile phone penetration have drastically increased in recent years. While in 2000 an average of just over 4 percent of the population in LAC used the Internet by 2017 that number had jumped to 58 percent.⁵⁸ Smartphone penetration has had a similar upward trend. In 2012, less than 15 percent of the population in the region had a Smartphone; by 2017 that number had grown to over 60 percent (GSMA Intelligence 2018). Since the largest increases have occurred in the most recent years, it is reasonable to expect that penetration will further increase in the near future.

This technological phenomenon has enabled social programs to innovate in ways to reach their targeted population. For instance, short message services (SMS) are now a common way to share information and promote desirable behaviors—as measured through everything from educational outcomes to patients' adherence to treatment, child immunization, and voting likelihood. In LAC, as in other parts of the world, these simple information-based interventions have turned the mobile phone into a cost-effective instrument of behavioral change.⁵⁹

58. The average for LAC is calculated as the unweighted mean of country-level, according to International Telecommunications Union statistics obtained from <https://www.itu.int> (accessed in August 2019).

59. See Beuermann et al. (2019), Berlinski et al. (2016), and Cunha et al. (2018) for examples in Peru, Chile and Brazil, respectively.

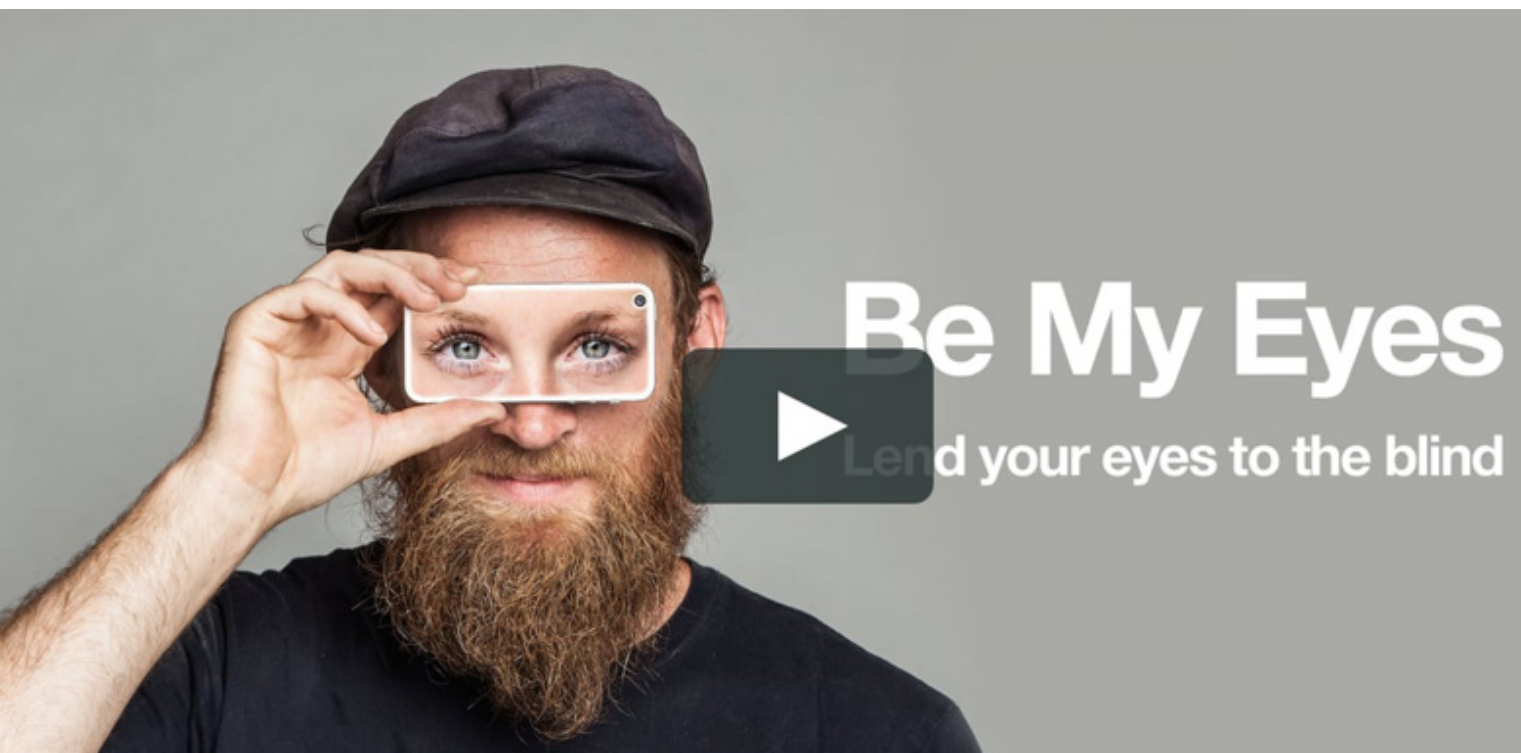
For PWD, who constitute 13 percent of the population in LAC, any technology contributing to communication and access to information also doubles as an instrument of autonomy.

As Ells (2001) puts it, “access to social spaces and services and empowering relationships makes autonomy possible.” Autonomy, in many cases, is strongly related to independence. Because PWD may encounter barriers or require assistance to perform everyday tasks and more complex activities, they work within a different range of dependence than people without disabilities. Technological innovations, like the ones discussed in this chapter, provide persons with disabilities with information about the accessibility of spaces and facilitate interpersonal communications, increasing the degree of control of persons with disabilities over their own decisions and their ability to freely act according to their own plan.

Several positive externalities can be expected from greater accessibility to places and more autonomy among PWD. Accessibility in cities also benefits elderly people and parents with strollers. Almost 7 percent of the population in LAC is 65 or older, 9 percent are children under the age of 5 (United Nations 2019), and, as mentioned earlier, 13 percent have a disability. Even though there are certainly overlaps between these groups, it is reasonable to say that the amount of people benefiting from access to this type of information is no small minority by any means. In addition, research in the United States suggests that higher levels of autonomy among PWD lead to better outcomes in terms of postsecondary education, employment, financial independence, social relationships, and independent living (Shogren and Shaw 2016). A recent study in LAC found that inclusion of PWD in the labor market could translate into GDP gains as high as 3 percent (Contreras, Riveros, and Vargas 2019).

→ **MAKING THE MOST OF THE SMARTPHONE ERA**

In the Smartphone era, a broad range of mobile technology innovations and mobile-enabled services has been developed that satisfies the needs of persons with disabilities. Many of these apps and platforms have been developed by and in collaboration with PWD, demonstrating the potential of technology to help meet their needs and reduce the barriers they face. The section that follows is a brief overview of the innovations and services available. These examples range from simple phone features to applications that rely on complex coding based on artificial intelligence, some of which leverage the collective power of crowdsourcing. This variety in the technological innovations and mobile-enabled services that have been developed mimics the diversity in the needs of PWD.



→ SMARTPHONE ACCESSIBILITY FEATURES

Smartphone penetration certainly explains the large increase in the number of mobile phone apps that have been developed recently to respond to the needs of persons with disabilities. However, the story is more complex. It is indeed a numbers game, but this game not only depends on the number of people who have a Smartphone in their pockets. If the phone itself cannot be easily used by PWD, the number of potential users is constrained. For instance, without reasonable adaptations, blind people cannot read screens, voice calling is impossible for deaf people, and tactile phones are difficult to use for people with upper body limitations. In response, developers of mobile phone operation systems have come up with innovations enabling phone use for all, regardless of whether they have impairments.

Some of these innovations are simple features that allow PWD to fully interact with their own phones. For instance, for people with visual impairments who have difficulties navigating phone screens, developers have come up with solutions such as screen readers, dark themes, color and font adjustments, and display accommodations such as built-in magnifiers. For the hard of hearing who find voice calls challenging, phones are now capable of transmitting sounds picked up by the microphone to paired devices like hearing aids or headphones. For those with intellectual disabilities, who may have difficulties concentrating amid a vast dimension of options, the de-cluttering option included in *Safari Reader* in iOS devices may be particularly useful.

Most of the Smartphone technology relies heavily on fine motor skills, for example, to navigate the screen, zoom in and out photos and maps, edit pictures, or even type. For people with upper body impairments, these tasks are considerably difficult. To facilitate phone use, phones can be taught to respond to an individual's touch ("touch accommodations") or can be adjusted to extend the length that time notifications appear on the screen. Also, a simple feature such as the *AssistiveTouch* technology allows users to trigger motions and gestures without requiring hand or multiple-finger movement.

Features such as converting words into text benefit people with visual impairments as well as those with upper body limitations. The dictation feature facilitates writing texts and documents when typing is difficult. Other features such as *VoiceControl* (iOS) and *VoiceAccess* (Android) grant people the ability to control the device using spoken commands only.

As more persons with disabilities across the world have gained access to smartphones—not only due to the upward trend in penetration, but also because the devices themselves have greater built-in features for accessibility—more apps have emerged that are tailored to address barriers faced by those with impairments.

→ APPS FOR INCLUSION

Several of the mobile phone apps designed for PWD have been developed by persons with impairments themselves. This section discusses a short list of apps that have been featured on blogs authored by persons with disabilities, and that can currently be downloaded for Android and iOS phones. While most of these apps are available in most countries, to a far greater extent they have been populated with information in cities in Europe, Japan, Canada, and the United States. This explains why most of the apps developed have English as the main language, although some efforts have been made to translate most apps to other languages, including Spanish.

For people in wheelchairs and who have other mobility impairments, there is a broad array of apps mapping the accessibility of buildings and places, as well as route-finding. For instance, *WheelMate* focuses on collecting information on the accessibility of restrooms and parking. *Wheelmap.org* provides information such as the accessibility of a building's entrance, ease of access to different rooms in the building, and accessibility of restrooms.

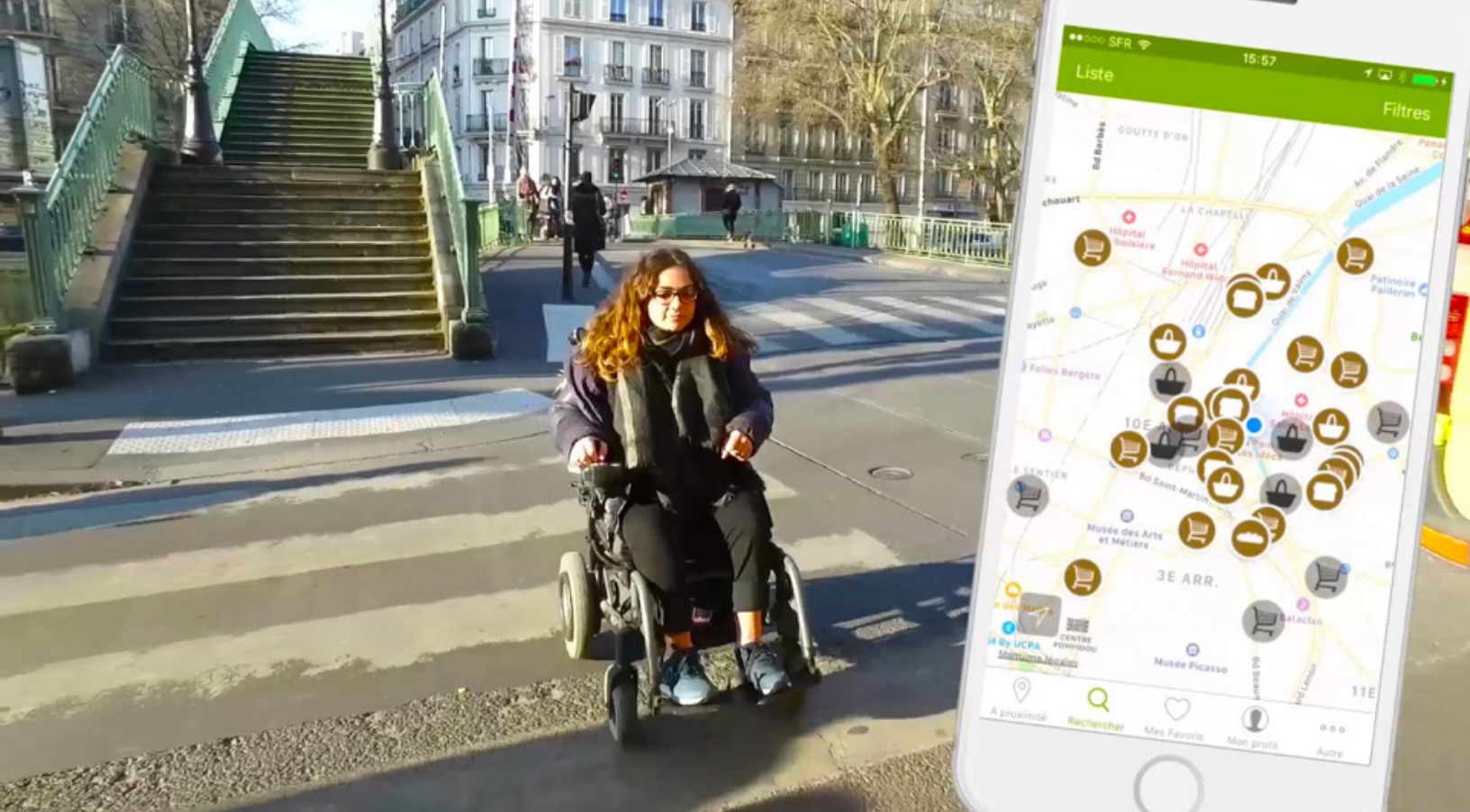
“Awesome App...I am wheelchair bound and have been searching for an app of this nature. I am a senior citizen and do travel about my city frequently.”

Robert O Weeks. WheelMate user

Similarly, *AccessNow* pinpoints the accessibility status of locations. Other apps, like *accessmap*, work as trip planners, offering information on the accessibility of a route from origin to destination, taking into consideration variables such as the surface of sidewalks, ramps, tactile strips tiles, uphill and downhill steepness, and other barriers.

“I love this app. It gives me the confidence to go out and meet my friends. I also love that I can rate places myself and help others. Very easy to use, and well designed. I'll use this app a few times a week.”

SaleSailor, AccessNow user



WheelLog!, an app designed by disability activist Yuriko Oda, goes one step further and provides information not only on the accessibility of buildings themselves, but also on the best routes for people with mobility impairments. The app serves this two-fold purpose by categorizing buildings into 10 groups of locations in order to collect information on each of these groups with a standard questionnaire and allowing recordings about the routes taken by users to assess route preferences. This methodology produces an objective measure of accessibility of infrastructure and provides information on whether an area is easy to travel for a wheelchair user. *Google Maps*, the major mapping service available, has started to join in on the trend of providing accessibility information. In recent years, this web-based service has added information on the wheelchair accessibility of certain buildings, restrooms, and parking lots. In some cities, users can choose to only be shown wheelchair-accessible options when using the routefinding capability.

→ THE SPOTLIGHT: HOW APPS CAN HELP PERSONS WITH DISABILITIES PLAN THEIR ACTIVITIES

In his book *Missing Pieces: A chronicle of living with a disability*, Irving Zola, an activist for PWD and himself with a disability, discussed some of the ways persons with disabilities must plan and arrange activities in advance:

Can my guide dog enter the supermarket around the corner?

Does the restaurant have a quiet space for my child with autism to retire when needed?

Is the library sufficiently well-lit for me to be able to read the book?

Will I be able to use the toilet if I go to a play at the local theater?

In a perfect world, this pre-planning would be reduced to a minimum, as places and environments would be designed to be inclusive from the start. PWD constantly face limitations derived from environmental barriers. Information on the accessibility of locations may not reduce the need to pre-plan, but it could certainly facilitate the advanced planning required.

This is just what Jaccede.com and AXSmap aim to do. Unlike other collaborative platforms intended to share information on accessibility for PWD, these two apps not only map information relevant to mobility impairments, they also collect information on a wide range of accessibility measures for people with physical, sensorial, and mental disabilities.

Jaccede.com and AXSmap go beyond the availability of parking spaces, bathroom accessibility, or the width of an entrance door. The two platforms also provide information on whether Braille signage is available, if the building has a quiet space available, if an induction loop is available, or if the main door is accessible (as opposed to a side or back door that people without disabilities would not normally use). Jaccede.com goes even further and collects information on a facility's staff training in accommodating visitors with disabilities, as well as information on the accessibility of curbs and streets surrounding the facility.

As users of these platforms simply put it:

“Plenty of useful information to go out and feel like everybody else.”

Valerie Le Quellec Gillot, Jaccede.com user

“I love the precision when you jump, you can place your feet exactly in the right place.”

Eric Sat, Jaccede.com user

The simplicity of the information collected by the two platforms is deceiving. As mentioned in the main text of this chapter, a wider audience than only PWD benefits from having access to such information, including the elderly and parents with strollers.

These apps rely on technology as much as they rely on people. The vast majority of the mapping apps depend on crowdsourcing, and some such as *accessmap* and *WheelLog!* use GPS functions in smartphones and/or wheelchairs to track and record real routes taken by users. *Accessmap* and other apps make the most of technological innovations by using an algorithm to calculate the best routes, taking into consideration time and distance as well as indicators of accessibility such as steepness and barriers. Developed by the University of Washington and Microsoft, *Accessmap* uses technology to fill in blanks in information where crowdsourcing is limited.

Various apps have also been developed that respond to the needs of the blind and visually impaired. Some, such as *Seeing AI*, *Amedia Live Reader*, and *TextGrabber*, are text readers that work by pointing the camera or taking photos of a text, which is later read out loud by the app. In a similar fashion, *TapTapSee* also uses the mobile camera and employs image recognition technology to describe photos (e.g., illustrating landscapes, explaining paintings, voicing the color of clothes, and much more). For those occasions when live interaction is needed to make decisions or get some help, the *Be My Eyes* app connects blind and low-vision people with sighted volunteers through a live video call, allowing a live conversation to solve day-to-day problems such as locating the TV volume button, selecting the right spices when cooking, or matching clothes.

“Amazing....I’ve only been blind just over a year and this app has made me so happy in the few days I’ve had it....[N]ow I’ve got my vision back through my phone. I don’t feel so lost and lonely and can do a little bit more for myself.”

TapTapSee user

“A brilliant, simple idea....I’m totally blind with friends and family but even so I feel an increased sense of independence with the app. It is potentially even more useful for a blind person on their own. I’ve had help to sort food packages, tins, get my tele started. I’m constantly pushing my sighted friends to sign in, and I’m winning. For any potential volunteer, you can’t overestimate the importance of the [help].”

Tom Reid, Be My Eyes user

Other apps focus mainly on facilitating orientation and mobility. *Lazarillo GPS for Blind*, developed in Chile by René Espinoza and Miguel González, is a GPS app that uses audio directions to help users with visual limitations explore surroundings, look for specific places, and reach a destination. After successfully arriving at a selected place, people with visual disabilities can use the *indoo.rs* app to navigate indoors. The app uses voice activation to communicate information collected through positioning algorithms like SLAM or Bluetooth low-energy beacons. Train stations and libraries in many European countries, the Underground in London, and both public and private locations in Toronto have successfully installed beacons to help blind and visually impaired people navigate these places.

“Very useful app. it is now my primary navigation app. I like its features and the interface of this app is perfect.”

Benjamin Brenya, Lazarillo GPS for Blind user

“I love the app. but we definitely need more ways to advertise this to visually impaired users”

Keith Toñacao, Be My Eyes user

Also developed in LAC, the app *Todos no Ônibus* (“Everybody on the Bus”) serves as a line of communication between bus drivers and people with visual impairments and in wheelchairs. Once a person with disability expresses his or her desire to use a particular bus line, the bus driver would have complete information on where this person is located, where he or she is going, and which impairment the person has in order to provide the most relevant assistance. This gives people with visual impairments the security of knowing the right bus will stop, and people with physical disabilities the security that an accessible bus is coming.

→ THE CHALLENGE

The only way these apps can successfully facilitate independence for persons with disabilities is if people with and without disabilities use them. People not only need to be aware that these apps exist, they also need access to both a Smartphone and data. However, LAC has very few entries on accessibility of places (see <https://accessnow.me/map/>)

As Smartphone and Internet penetration increase in the region at accelerated speeds, the addition of new information by users is certainly possible, although still a challenge. Apps in other regions have tried to overcome this challenge by calling for new contributions through intense communications campaigns that invite people to participate in Mapathons and other challenges. In Paris, for instance, the city government, other governmental organizations, and the *Jaccede.com* app combined forces to encourage new entries on the website. A communication campaign was launched throughout the city—including on the Metro—to promote the app and offering the chance to win prizes to people who provided information. *AXSMap* has used several rounds of Mapathons to increase the amount of information available, and through these campaigns the app's data have expanded to over 600,000 locations

→ CONCLUSION

Navigating the geography of a city or completing everyday tasks take on a different light when those activities can be tackled with spontaneity and independence.

The mobile technology innovations and mobile-enabled services described in this chapter provide PWD with information that allows for exploration and enjoyment of their living environment. By reducing barriers, innovative technologies can provide PWD an opportunity to regain or reconfigure their autonomy.

The continued increase in the penetration of mobile phones and Internet in LAC represents an opportunity to promote these mobile-enabled services. In just 24 months, there was a 20 percent increase in the number of people in the region with a Smartphone, suggesting that penetration will be close to 80 percent only five years from today (GSMA Intelligence 2018). This provides a valuable opportunity to reach people in new and innovative ways. By their very nature, apps are not static over time, so options can be expected to proliferate as technology continues to evolve. More importantly, rather than serving as stand-alone options for PWD, functionalities developed initially for PWD will eventually be included in mainstream apps.

Using technology to reduce barriers for PWD contributes to a more inclusive society and could translate into important gains for the economies of LAC. Greater autonomy and a larger scope of choice means that PWD will have more agency over their lives, giving them more potential to be not only more fulfilled personally but also more productive. The inclusion of a previously excluded group such as PWD in the economy could translate into GDP gains as high as 3 percent (Contreras, Riveros, and Vargas 2019).

These innovations also align with the UN Convention of the Rights of Persons with Disabilities, as they facilitate the undertaking of activities by PWD on an equal basis with others, along with their exercise of all human rights and fundamental freedoms.

Lifting barriers to inclusion means that public transport, restaurants, parks and other public and private places and spaces will be used more regularly by PWD—yet another benefit to society at large.

Ideally, the voice gained by PWD as a result of having more information on accessibility in their living environment would translate into a public sector response. Local-level dissemination of information, and the greater autonomy PWD can gain from this, would foster public discussion about accessibility, particularly in urban areas. Having said that, research has shown that information alone is not enough to ensure collective action and responsiveness by service providers (Fox 2015). The innovative apps discussed in this chapter certainly close information gaps and reduce barriers for PWD, but it is also critical to provide the material support that cities and other localities need to be able to respond to the new concerns that may be voiced.

Technology for Inclusive Cities

- 1 Digital technologies can provide people with disabilities with information that improves their ability to navigate the city.**
- 2 Virtual communities help people with disabilities to map and understand their physical environments.**
- 3 Access to digital technologies can be a fast way to improve the accessibility of urban spaces for people with disabilities.**



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CURITIBA AND UBERLANDIA: ACCESS TO TRANSPORT

┃ Lauramaría Pedraza,
┃ Manuel Rodríguez Porcel, and
┃ Diana Sandoval

A city that favors sustainable development, equity and accessibility in public transport must be planned from the perspective of universal design, taking into account the fact that public transport users have very different profiles including PWD.

PWD face enormous challenges regarding mobility in addition to other disadvantages, such as a very low rate of access to health and academic services, lower economic participation, and higher poverty rates than people without disabilities. (World Health Organization - World Bank 2011). There is also evidence of less access by PWD to services such as health, education, employment, information, and transportation. Among the barriers to access to transportation systems is the impossibility of affording transport and inaccessible physical infrastructure.

Quality public transport makes cities more inclusive by increasing opportunities; especially for PWD since they can cope with everyday needs such as going to school, work, the market, or the doctor, as well as access to leisure.

In Brazil, the most populous country in the region, over 45.6 million people have some form of disability. (IBGE 2017). Therefore, the federal government has promoted public policies in states and municipalities to plan cities for better accessibility.

A transport system (public or otherwise) must have conditions and characteristics that generate a good quality of service for the varied conditions of people and purposes of travel. This means having a broad vision that embraces the entire journey, including journey planning, travel to the transport system, travel by bus, crossing streets and arrival at destination. It should also include the person's own characteristics and the circumstances of the trip⁶⁰.

This article presents the case studies of the Brazilian cities of Curitiba and Uberlandia, two examples that demonstrate the benefits of public policies and implementation of accessibility projects. The analysis describes the approach to accessibility and inclusion of PWD in transport systems in three dimensions⁶¹.

- 1 Physical (accessible infrastructure)
- 2 Public and institutional policy (inclusive programs, capacity building, data collection and citizen participation)
- 3 Attitudinal (inclusion and empathy)

The analyses of these case studies will be used to present examples of how—through transport, public space, application of urban regulations, building codes and social and labor inclusion projects—it is possible to provide opportunities and services in urban life to all people in society, especially PWD or reduced mobility.

60. United States Department of Transportation. The Complete Trip. (Washington: Department of Transportation, https://www.its.dot.gov/research_areas/attri/complete_trip.htm).

61. Cities for All. The Global Compact on Inclusive & Accessible Cities. (Cities For All, <http://www.cities4all.org/compact>).

→ BOX 1 AREAS, PROGRAMS AND PROJECTS ON INCLUSION IN CURITIBA

INCLUSION MOBILITY AND TRANSPORTATION

- 96.5 percent of buses are accessible
- TOI: (Special transport for persons with disability PWD) integrated and collaborative management platform for specialized PWD transport to medical and therapy appointments
- ACCESS: door-to-door microbus service with elevator, wheelchair and accessories needed to guarantee mobility of PWD.
- SITES (Transport system for special education). Buses to carry children with disability to school.

CULTURAL INCLUSION

- Storytellers in libras (Brazilian sign language)
- Storytellers for autistic children
- Easter workshops for autistic children
- Sports and free time: inclusive toys in public spaces

EDUCATION AND HEALTH INCLUSION

- Accessibility in the public-school system:
- 221 municipal primary education centers are accessible
- Inclusive education:
- Policy of inclusion with assistance in regular schools and all units of the network. The school system has 185 schools, 221 CMEI (municipal infant education centers) and 9 municipal specialized education assistance centers
- Hospitalized students: the municipal education network attends hospitalized children. This is the Schooling Hospital with 4 hospitals, 16 teachers and about 800 students attending every month.
- Free course of libras
- Attitudinal accessibility campaign to treat PWD with respect.

INCLUSION IN EMPLOYMENT

- **Labor policy: develop actions and services for citizens seeking a job.**
- **SINE (National Employment System) support for finding work for PWDs. Training in job offers. Qualification for unemployment insurance. Issue of employment card.**
- **Workshops and talks for professional human development.**
- **Craft courses for people in vulnerable situations.**
- **Inclusion award, recognition of labor inclusion projects for PWDs.**
- **Employ PWD Program**

SOCIAL PROTECTION

- **Special social protection (SSP): Service for families and individuals whose rights have been violated by physical or psychological violence, sexual abuse, exploitation or abandonment.**

Source: Prepared by the authors based on information provided by Curitiba City Government, 2019.

The city of Curitiba is widely recognized for having created the BRT (Bus Rapid Transit) system, and for mixed and high-density urban development along the transport corridors. The increased accessibility of buses has been gradual, and 96.5 percent of the fleet is now accessible. This accessibility is not only in public transport but also in other areas such as health, education, and employment.

Curitiba, in Paraná state, has a population of 1,933,105, (IBGE 2019) with a metropolitan area with a population of 3,615,027. (IBGE 2017). The city has an area of 432 km² and a population density of 4,027.04 inhabitants/km². (IBGE 2019). Its gross domestic product is fourth among Brazil's economically productive cities after Sao Paulo, Rio de Janeiro, and Brasilia.

With the objective of creating a better quality of life, programs and projects have been implemented in the social, health, transportation, and environmental areas which, together with continuity in planning and long-term goals, have made Curitiba an inclusive city.

At level of mobility, Curitiba is planning to have 100 percent accessible transport by 2025. The municipality and the Inter-American Development Bank (IDB) are currently developing a sustainable mobility project for the Inter2 line of the BRT bus system. This line now transports 91,000 passengers per day. The planned interventions in the BRT system are expected to cut travel times by 30 percent and raise service quality. In addition, as part of the civil works, roads will be improved with new geometries and dimensions, along with traffic lights and vertical and horizontal signs. Improvements will be made to sidewalks, street lighting, landscaping, and universal accessibility (ramps, sidewalk signing, audible traffic lights, among others). In addition to these works, the IDB will carry out a walkability assessment in the public space near this line and implement the Customer Journey Mapping (CJM) methodology⁶².

62. The methodology has two parts: Accompaniment and observation of the journey of users with disabilities or reduced mobility when using public transport, and Analysis and visualization of the travel experience, by preparing a Customer Travel Map (CTM) for each profile observed. The main objectives of the methodology are: (i) understand the travel experience of persons with disabilities and persons with restricted physical mobility due to circumstances that occur naturally in people's life cycle, as well as trips associated with care; (ii) define indicators to evaluate the levels of universal accessibility to public transport; (iii) establish basic guidelines and recommendations for improving public transport systems. The methodology has been applied in Bogotá, Santiago de Chile and Medellín.

But inclusion goes much further, the municipality is also taking a crosscutting approach by working with programs and projects from different areas (physical, social, educational, and economic) which have made Curitiba a model for the region.

→ **SUCCESSFUL PROGRAMS AND PROJECTS**

The diagram “Areas, projects and programs of inclusion in Curitiba” shows the list of actions associated with inclusion of PWD in different areas such as transportation, education and health, culture, labor inclusion and social protection. This has allowed PWD to participate in the urban and social life of the city. Curitiba has 354,964 PWD, of these 268,196 have visual disabilities, 79,184 hearing disabilities, 95,335 physical or motor disabilities, 21,880 mental or intellectual disabilities and 443 are undeclared. (IBGE, cited in IPAREDES 2019). According to information from the municipality, 21,000 daily trips are made by PWD, of which 1,000 are in wheelchairs. (TheCityFix in UITP 2019). Also 2,400 students travel daily to school by the special transport system. (Moraes 2019). In the work environment, Curitiba has 7,154 PWD working formally, according to the Annual Report on Social Information (RAIS). (RAIS quoted in Curitiba City Government 2014). This number represents 4 percent of the total 968,000 people with a formal contract⁶³. In 2018, 431 PWD obtained employment thanks to the support of the SINE (National Employment System). (Curitiba City Government-FAS Social Action Foundation 2018). In addition to the labor inclusion programs, approximately 2,384 minors with disabilities have participated in cultural and educational programs. (Curitiba City Government 2019). These figures show that inclusion is a priority issue in Curitiba’s public policies and projects.

Since its inception, Curitiba’s renowned BRT transport system has taken affordability and efficiency into account. Former Mayor Jaime Lerner, during the three administrations, consolidated a transport system that integrated land use and transport. The strategy involved creation of high-density uses along public transport corridors, reducing urban sprawl, creating green areas, and preserving historic neighborhoods. The objective was to integrate mass transport, main roads, and land use. From the start the idea was that the system should be affordable, high capacity, but different from other high capacity metro systems due to high infrastructure costs. Since his time as mayor in 1971, the city has grown, creating an integrated transportation network that has also expanded into the metropolitan region. The vision of a sustainable and connected city embraces a high-capacity, sustainable transport system that provides an integrated, barrier-free connection to all city systems: housing, parks, public facilities, and workplaces⁶⁴.

63. “Estudo apresenta diagnóstico de mercado de trabalho para pessoas com deficiência” Curitiba City Government, August 5, 2014, <https://www.curitiba.pr.gov.br/noticias/estudo-apresenta-diagnostico-de-mercado-de-trabalho-para-pessoas-com-deficiencia/33725>

64. Dario Hidalgo, “A visão de Jaime Lerner para Curitiba”, The CityFix Brasil, <https://www.thecityfixbrasil.org/2014/05/27/a-visao-de-jaimelerner-para-curitiba/>

→ BOX 2 WHAT IS A BRT?

→ BRT Bus Rapid Transit

- **Bus system with physically segregated lanes**
- **Controlled operation of trunk-feeder buses**
- **Stations with platform to board the bus**
- **Prepaid fare, free transfer with feeder service**
- **High speed buses on segregated highways**

Source: World Bank, Comparison of technologies for mass transit corridors, 2005

→ BUS ACCESS, BRT SYSTEM, CURITIBA.



IMG: Diana Sandoval



➔ **TUBE STATION,
BRT SYSTEM, CURITIBA.**

IMG: Diana Sandoval

→ PHYSICAL DIMENSION:

→ HUMAN-SCALE ACCESSIBLE INFRASTRUCTURE

“Inaccessible environments create disability by forming barriers to participation and inclusion.”⁶⁵ The physical aspects of the environment determine how accessible a transport system can be for people. A study by the Catholic University of Chile found that PWD take 30 percent longer to travel on public transport because of physical barriers. (Universidad Católica de Chile in EMOL. Nacional 2017). This is an issue that has been extensively documented focusing on the characteristics of the infrastructure of the transportation system and its surroundings, such as design of stations and vehicles or availability of physical elements to guide users of the system. At operational level, other barriers are bus frequency, travel conditions in terms of crowding or availability of space for certain users. Another barrier is formed by the technological options available to guide users and the characteristics of the system’s business model; for example, if fares are integrated between services and if more than one trip is allowed per period.

→ BUS ACCESS, BRT SYSTEM, CURITIBA



IMG: Diana Sandoval

65. World Health Organization and World Bank. World Report on Disability. Washington, 2011.

Accessibility in Curitiba works from the bus fleet, feeder routes, interchange, and transfer terminals; according to the URBS (the company that manages the Curitiba transport system) 96.75 percent of the bus fleet is accessible. (URBS 2020). The system has 21 urban and 7 metropolitan terminals, an inter-hospital line that links medical centers and a tourist line. All stations are accessible by ramp and elevators and have access signs and most have ramp crossings to access the system's stops and stations. Inside the station a panel gives information on waiting and arrival times for buses which are equipped with GPS. The city traffic control center integrates the information and tracks each bus and the system in real time through various municipal entities including the police. As a result of these efforts, PWD make about 21,000 trips daily using public transportation in Curitiba, 1,000 by people in wheelchairs⁶⁶.

➔ **CONTROL CENTER, BRT SYSTEM, CURITIBA**



IMG: Diana Sandoval

66. <https://thecityfix.com/blog/accessibility-for-all-un-enable-right-to-movement-disabled-elderly-curitiba-brazil-robin-king/>

Curitiba has also developed a Strategic Plan for sidewalks. *PlanCal* aims to build 115 km of new sidewalks and restore 119 km to improve pedestrian accessibility. The plan is important because in some Brazilian cities sidewalks are the responsibility of the building owner. However, in Curitiba, under Municipal Law 11.596 of 2005 regulated by Decree 1.066 of 2006, owners who do not maintain the sidewalk, or do so outside the standards required by law, are subject to warnings and even fines.

Despite this regulation only 12.6 percent of Curitiba's sidewalks are accessible, and the municipality is about to deal with this problem. *PlanCal* will implement accessibility standards, uniform sidewalks, with ramps, podotactile paving, lighting, drainage design and specific parameters for furniture and tree planting to make journeys more pleasant. All with the aim of building accessible sidewalks.

Multimodal transport has also been a successful strategy for improving accessibility. The 2016 Cycleway Master Plan will expand the network with 300 km of lanes, giving priority to creation of approximately 25 km of routes along BRT routes, as well as 50 km of lanes in eight of the city's main parks and public bike stations.

Zoning and densification have been very effective mechanisms for making Curitiba an accessible and diverse city. The BRT corridors require a minimum of 50 percent of commerce, restaurants, and services on ground floors to create a vibrant and safe urban context for pedestrians.

→ **BOX 3 SPECIAL EDUCATION TRANSPORTATION SYSTEM**

SPECIAL EDUCATION TRANSPORT SYSTEM (SITE)

- 56 lines
- 60 buses
- Transports 2,400 students with disability
- In 3 special municipal schools and state schools and 25 philanthropic schools

THE BUSES:

- Central door on both sides
- Wheelchair elevator with retracting step for normal use by passengers
- Seats have two safety belts

PERSONNEL:

- Receive and accommodate students on the bus
- Help them during the trip until arrival at school and on returning home.

In Curitiba transportation inclusion is also provided by the transport system for special education (SITE). This system works with 56 lines. In total, there are 60 special buses carrying 2,400 students with disabilities daily, divided into 3 municipal special schools, 4 state schools and 25 other philanthropic schools. Buses have a central door on both sides, wheelchair elevator with retractable step for normal passenger use. Seats have two safety belts. Program personnel receive and accommodate students on the bus, providing care throughout the trip until they arrive at school and when they return home. Since 1984, SITES has been transporting students diagnosed with different levels of disability.

➔ **SPECIAL EDUCATION TRANSPORTATION SYSTEM (SITE), CURITIBA**



IMG: Diana Sandoval

→ **PUBLIC POLICY DIMENSION AND INSTITUTIONS: COLLECTIVE PARTICIPATION**

→ **URBAN POLICIES, INSTITUTIONS, INCLUSIVE PROGRAMS, AND CAPACITY BUILDING**

Public transport must not only meet the criteria of efficiency of services in terms of their operational performance (travel times, frequency of access and so on), but must also be socially efficient in the service in order to allow equal access to existing facilities and services by all people.

Transport systems, in addition to being efficient and reducing travel times, connect people to employment opportunities, services and recreation. Hence the importance of ensuring inclusion and universal accessibility. In Curitiba, several programs have been established for inclusion and participation of PWD in the labor market. Therefore the program “Hire PWD and discover great talent” was created, which benefits companies, individuals and society as a whole by expanding the supply of talent to fill jobs. Also, companies are more likely than ever to attract PWD as consumers and as customers.

Curitiba has an inclusion policy with extensive assistance in schools. Approximately 750 minors and high priority students are accompanied by support professionals in the classroom. The municipality has 656 professionals who help students with locomotion, food, hygiene and some school activities under the planning and guidance of the director.

In addition, there are institutions with responsibility for working for the inclusion and participation of PWD. One of the most important is the Social Action Foundation, part of the Department for the Rights of Persons with Disabilities, which coordinates and implements the social assistance policy for protection of families and individuals at risk and socially vulnerable. In the education sector, programs for equal assistance and job placement for PWD are operated by the Municipal Early Childhood Education Centers (CMEI) and Municipal Specialized Education Assistance Centers (CMAEE), along with the Job Capture Center for persons with disabilities, and the National Employment System for Disability Advice (SINE).

Regarding employment, Quota Act 8,213 of 1991 reserves between 2 percent and 5 percent of employment places for persons with disabilities depending on the size of the company. However, many companies willing to employ PWD face obstacles; for example, lack of people trained in a specific trade, which often makes it almost impossible to offer a job to these people. For this reason, a fundamental role is played by entities such as the Job Capture Center and the National Employment System for Disability Guidance (SINE) which provide support to businesses, promote the offer of vacancies, professional searches and provide physical space for selection processes and interviews. In 2018, 431 PWD found work through SINE in positions such as administrative assistance, concierge, service assistance, call center operation, among others. (Curitiba City Government-FAS Social Action Foundation 2018).

Also, inclusion and skill development programs are implemented through the Department of Rights of PWD, part of the Secretariat of Government, especially the Award for Inclusion which recognizes projects related to labor market entry for PWD, disseminating services in the areas of health, education, culture, work, sports, accessibility, autonomous living and protection.

→ **CITIZEN PARTICIPATION FROM THE PLANNING STAGE**

The Government Secretariat, through the Disability Rights Department, guarantees the participation of persons with disabilities in all areas, including transport. Under the auspices of the Technical Chamber of Accessibility and the Municipal Council for the Rights of Persons with Disabilities, monthly meetings are held with representatives. The purpose of these meetings is to include observations and perceptions of PWD in the projects being planned and developed in the municipality. This participation starts at the conceptualization stage of projects, which means the infrastructure includes universal design parameters from the start, making a more efficient use of resources and avoiding future adaptations of infrastructure that could result in higher costs.

→ **DATA AND DEVELOPMENT: ENGINE OF DECISION MAKING**

The Department of Rights of Persons with Disability takes a census of persons with disabilities to identify and support through different programs the requirements for them to participate in civilian life. The transport support programs include the Transport System for Inclusion (TOI), which is an integrated and collaborative management platform for improvement of the transportation service.

Users contact a telephone server where personnel generate the itinerary to meet their daily demands for access to medical and physiotherapy services. With the support of this specialized transport service, PWD can attend their medical appointments efficiently and safely. The user receives the time and place of the medical appointment, as well as the pick-up and return address of the person with disability. This information is entered in the platform which has a numerical algorithm that determines the fastest and most convenient routes for programming the route of the specialized buses that carry the people with disability who request the service. In 2019, 1,800 trips were made and 100,000 user cards for the Acesso system were issued (Moraes 2019).

The dynamic routing system has been very useful for María Elena Antunes Rodríguez and her daughter Gianni Rodríguez. Maria Elena comments: “It’s difficult for me to take her in her chair. I’m not strong enough so we didn’t leave the house. Everything changed with Acesso. It’s the best thing that’s happened to us.” (Paullier 2016).

In addition to this program, there are job exchange and labor inclusion programs, as well as cultural, training and socialization activities on the rights of persons with disabilities. (Curitiba City Government 2019).

→ **ATTITUDINAL DIMENSION: NO TO DISCRIMINATION, YES TO INCLUSION**

A recent study by Scope (Disability and Equality Organization of England and Wales) in 2018 found that one in four PWD do not use public transport because of negative attitudes from other users. (Coffey 2018). Despite the removal of many physical barriers in public transport systems, attitudinal barriers are still an obstacle that prevents PWD from equal access to opportunities. As a result, modifications are recommended not only to the physical environment but also to educational opportunities to reduce negative attitudes toward persons with disabilities⁶⁷.

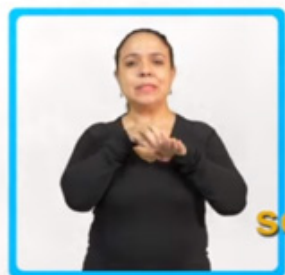
Attitudinal campaigns have also been developed to provide guidance on inclusive attitudes that emphasize the importance of behaving appropriately and respectfully to PWD. Conferences and training are offered to municipal employees with activities designed to promote inclusive assistance in the municipal public service. These activities recreate the limitations and difficulties faced by PWD in their daily life.

67. Public Transportation: An Investigation of Barriers for PWD. Show all authors Jill L. Bezyak, Scott A. Sabella and Robert H. Gattis (2010). Jill L. Bezyak.

→ ATTITUDINAL ACCESSIBILITY CAMPAIGN-AMANDA LYRA, CURITIBA

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IMG: Curitiba.pr.gov.br



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→ UBERLANDIA

→ POLICY DIMENSION: THE VISION OF THE CITY, INSTITUTIONS, AND LEADERSHIP

Uberlandia is a municipality in Brazil's Minas Gerais state with a population of 646,613, an area of 4,116 km² (IBGE 2018) and a population density of 146.78 inhabitants/km² (IBGE 2010). Its economy is based on agroindustry and services. In 1990, the Municipal Organic Law recognized the right to accessibility. In the years since then, the first accessible bus routes were established. Later transport concession holders were required to make 100 percent of their bus fleets accessible and in 2012 Uberlandia became the first city in Brazil to meet this target.

The policy, regulatory and institutional dimensions have a direct impact on the infrastructure and operation and service of the transport system. In Uberlandia, the city government has invested in ramps on sidewalks, the public transport system is free for PWD, bicycles are allowed on the system and there are agencies responsible for management and control of the system. All these regulations have had a positive impact on travel conditions and quality of life. This work has been going on now for almost 30 years. One of the results is that 16 percent of people aged under 29 with disabilities have been able to study. Another achievement of the urban policies adopted has been creation of the Municipal Superintendency of Urban Mobility and Persons with Disabilities. This government body, together with the Department of Accessibility and the Municipal Council for Persons with Disabilities, ensures that these rights are protected and taken into consideration in all actions of the Municipality. (SEPLAN Uberlandia 2010).

With the enactment of laws and setting up of supervisory bodies, Uberlandia became an example in accessibility: in 2010, the UN declared it one of the 100 model cities in the world in terms of accessibility. After the creation of the Accessibility Unit in the Urban Planning Department in 2000, all civil works for collective and private use are accessible, guaranteeing the right to mobility to the entire population including PWD.

The city's approach is to include PWD as a fundamental part of productivity and urban development. It is about providing the conditions for an adequate quality of life for this population, and about creating the opportunities for them to participate on equal conditions and contribute equally to progress. For example, public transport is free for PWD who are undergoing rehabilitation programs, therapy, studying or working. According to Idarí Alves da Silva, director of the Accessibility Unit of the Urban Planning Department: *"It's important for PWD to demonstrate that they're doing something for themselves."*

In Uberlandia, the Urban Planning Department has not limited its work to making the city's infrastructure more accessible. For more than 30 years it has been prioritizing aspects associated with the economy and social benefits of PWD. In collaboration with other departments such as Mobility, Social, Health and Labor, this effort is coordinated through the Accessibility Unit administrative entity.

Implementing a policy of integrated accessibility requires leadership. Idarí Alves da Silva not only promotes projects with high quality standards, but his work goes further with his fight for compliance and defense of the rights and autonomy of PWD. As a member of various civil movements and founder of the Council of Persons with Disabilities, Idari is recognized as an icon by this group.

→ 100 PERCENT ACCESSIBLE TRANSPORTATION

As mentioned above, Uberlandia was the first city in Brazil to have a 100 percent accessible bus fleet in 2012. Since then, the city has continued its work with robust accessibility regulations which have achieved great results at urban, architectural and transport levels. All these measures are aimed at creating an inclusive city, benefiting the 22,000 PWD⁶⁸ in the municipality, as well as older adults, people with reduced mobility, pregnant women, children, and all of society in general.

The Uberlandia Bus Rapid Transit BRT System consists of 450 buses, 134 routes, 24 boarding stations and six integration terminals. A total of 5,129 daily trips are made. The buses have an elevator with a ramp for easy and safe access by people in wheelchairs. At street corners on the BRT system, access crossings to the station are at road level, which forces vehicles to slow down. Transport terminals are designed to be accessible and have universal design standards: ramps, podotactile paving, signage, elevators and support staff to assist passengers. The terminals also have shops and other uses to attract more people and create civic and service centers which reduces travel to the city center and congestion.

The city also offers the service of 50 adapted vans with ramps and elevators for door-to-door transport in areas of difficult access (700 visits per day), 1,500 access ramps on sidewalks and 300 parking spaces for older adults and PWD people. It is estimated that around 10,000 PWD were able to enter the labor market because of facilitation of mobility by the city and adaptation of institutions to receive these workers⁶⁹.

68. Of these people 46% have a physical disability, followed by 32% with cognitive disability. To a lesser extent, there are people with hearing and visual disability (15 and 10%) respectively, and 5% have multiple disabilities. (PS Marketing 2015).

69. <http://thecityfixbrasil.com/2013/08/29/uberlandia-cidade-modelo-em-acessibilidade/>

→ BRT TRANSPORT SYSTEM STATION, GREEN LINE, UBERLANDIA



IMG: Diana Sandoval

→ TRANSPORT INTEGRATION TERMINAL



IMG: Diana Sandoval



IMG: Diana Sandoval

➔ BRT TRANSPORT SYSTEM STATION, GREEN LINE, UBERLANDIA



IMG: Diana Sandoval

→ PHYSICAL DIMENSION; UBERLANDIA WITHOUT BARRIERS

Uberlandia is one of the epicenters of Paralympic sport. It is one of the favorite destinations of national and international athletes looking for accessible sports facilities of the highest standard where they can train for competitions such as the Paralympic Games. Accessibility in Uberlandia is a cross-cutting aspect of public policy. The result is a city where public spaces and architecture are built with universal design parameters, which has produced a real inclusion and integration of the population with disabilities through social integration on a large scale. The city still has challenges, such as standardization of sidewalks, universal implementation of ramps, and sound signaling at traffic lights, but the changes so far are formidable.

→ ACCESSIBLE BUILDING CODE

Municipal Law 235 of 2000 regulates the criteria of accessibility to public and private buildings. Under this law, all civil constructions are now required to comply with these criteria. For this purpose, the Accessibility Unit has professionals who advise construction companies and review and approve projects that satisfactorily comply with accessibility standards before issuing the building license. This regulation only applies to recent projects so, as in many cities, there are still accessibility problems in buildings built previously. It is better to include accessibility elements at the design and construction phase when the cost can be 3 percent to 5 percent (depending on the type of project) whereas later adaptations can be much more costly⁷⁰.

The Accessibility Primer, produced by Idari Alves da Silva (accessibility director for the Uberlandia Prefecture) and his technical team, is a tool that, since publication in 2008, has been used by architecture professionals and students to ensure the accessibility of any future project (Uberlandia Prefecture 8s.f.). Da Silva comments that *“the intention of the primer is to disseminate fundamental accessibility details for architectural design, such as height of the support bar, parking spaces and circulation space, among others.”* (Silva 2019).

The primer is an educational document explaining the main points of the Brazilian law of inclusion of persons with disabilities (Law No. 13.146), enacted in July 2015, and the technical standard for accessibility to buildings, furniture, spaces and urban amenities (NBR 9050), issued by the Brazilian Technical Standards Association (ABNT). (Uberlandia Prefecture.).

70. Study of Transmilenio Bogotá corridor Carrera 7^a, according to budgets for inclusion of accessibility elements in the works, 2019.

→ CONCLUSION

Based on the case studies analyzed, it is evident that development and implementation of improved public transport services is fundamental for inclusion of PWD. In these examples, accessibility policy has been a cross-cutting and integrated element in areas such as transport, health, education, access to work and culture, among others. Intersectoral and coherent integration is essential for building the capacity needed to implement projects and programs that really benefit PWD and guarantee compliance with their rights, as well as access to the opportunities offered by urban life.

In both cities, Curitiba and Uberlandia, accessibility and inclusion were key elements from conception and start of the planning and transport systems. In Curitiba, with Jaime Lerner's vision, planning for a city with integrated land use and transport began in the 1970s. In Uberlandia, long before promulgation of Brazilian Law 10.098 of 2000 "Transport Accessibility Law," a Municipal Organic Law had already been decreed in 1990 which recognized the right to accessibility. In both Curitiba and Uberlandia, accessibility was part of the transport model from the start. In the words of Lerner, its principle was to facilitate integration into the collective effort, *"to try to solve a collective dream we have to find a shared cause. If the city does not become a shared cause, it will not change."* In Curitiba there was a clear policy definition to place citizens and their daily lives at the center of concerns. (Gaete Feres 2003).

The recipe for Curitiba's success stems from this base and has been followed by more than 30 years of work on an intersectoral strategy, resulting in implementation of the projects and programs set out in their development plans. Accessibility to transport, citizen participation, technology development and an inclusive citizen culture have become an essential part of public entities and the work of officials, who have integrated accessibility policies into the basis of the projects and programs being developed.

In the case of Uberlandia, the laws on accessibility to the transport system and urban construction were adopted swiftly and conclusively. Inclusion has been a priority for the municipality for 30 years. Additionally, Uberlandia has had a leader, an activist for the rights of PWD. This leader, Idarí Alves, has been working for the cause for 45 years, initially as a citizen and since 2001 with the government. In 2002 he supported the creation of the Municipal Council of Persons with Disabilities and was a member of CONADE (National Council for the Rights of Persons with Disabilities) from 2004 to 2006. He is currently Accessibility Director in the Urban Planning Department. Idarí's work, as a civil servant and master historian in the struggle of the movement of PWD in Brazil, has played a key role in the city's inclusion and accessibility policies.

In the future, both cities plan to implement new technologies in their mission to make their cities more accessible. In Curitiba, the bus fleet will be 100 percent accessible by 2025. Work will also be done to expand the control center and develop mobile geolocation applications which could help visually impaired people, among others, to identify their location in the city more accurately. (Curitiba City Government 2019).

Uberlandia will continue to act as a Paralympic sports center with the opening of the 9,420 sqm Sports Initiation Center (CIE) to be used by high performance athletes for goalball, athletics, table tennis, para-badminton, weightlifting, seated volleyball, boccia and judo. Classes will also be offered in Olympic athletics, judo and table tennis for children and teenagers. (Uberlandia City Government 2019).

Integral Transportation Systems

- 1** Each one of the components of the transportation systems -fleet, stops, terminals- needs to comply with universal design principles.
- 2** Inclusiveness depends on the integrality of the whole network, including a multimodal transportation system without architectural barriers.
- 3** Training personnel and educating transit riders on how to reduce barriers for people with disabilities is critical for achieving inclusive transport systems.



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THE CITIZEN AS ENGINE OF ACCESSIBILITY AND INCLUSION: LA PAZ PUBLIC TRANSPORT SYSTEM

■ Manuel Rodríguez Porcel,
■ Lauramaría Pedraza, and
■ Diana Sandoval

The vision of the city of La Paz for the year 2040 has the citizen as focal point⁷¹, with equitable and inclusive services for empowerment and autonomy of its citizens.

71. La Paz, autonomous municipality, sustainable with full human development, interculturality, security and social co-responsibility; eco-productive, promoter of the metropolitan region which provides high quality services with knowledge management and technology, with territorial development that is compact, polycentric, orderly and harmonious with nature.

This Andean metropolis, 3,659 meters above sea level in the canyon formed by the Choqueyapu River, has taken giant steps in the last decade to meet this objective. The catalyst for this urban and social transformation has been transportation in the form of the largest cable car network in the world, Mi Teleférico, and the integrated *Pumakatari* Bus system, which have together succeeded in meeting the demand for mobility of all La Paz citizens with efficiency, quality and respect.

La Paz and its metropolitan area, which includes El Alto and Viacha municipalities, has a population of 2.3 million making it the most populated urban center and the administrative epicenter of the Pluri-National State of Bolivia. La Paz or *Chuqi Yapu* in Aymara has a rich history of territorial processes of change from ancestral spaces to the formation of today's modern city, largely the result of informal urban development. The exponential growth of the population due to mass migration from the countryside to the city and its complex topography have made accessibility difficult and have accentuated the problems of mobility creating physical barriers that prevent access to the opportunities offered by the city, especially for PWD.

“When we make a place accessible it’s a benefit for PWD, but at the same time it’s an advantage for the entire population.” This is a comment by the President of the City Council, Andrea Cornejo, who from his leadership position fights for the rights and dignity of PWD. The Plan for Elimination of Architectural and Urban Barriers (EBAU) will benefit 16,000 PWD and more than 90,000 older adults living in the municipality. The objective of the EBAU is elimination of architectural barriers, inclusion of universal design in both existing and new buildings, and accessibility to public services, such as transport.

Implementation of conventional urban public transport systems—such as metro, buses, trams, and subways—was very limited or unviable in a city with the characteristics of La Paz. To respond to these urban characteristics and the need for mobility required the creativity of politicians, technicians and citizens to provide a solution in the sky, Mi Teleférico (My Cable Car), and on land, *Pumakatari* Bus, to the phenomenon of the “miniaturization⁷²” of public transport and simultaneously lay the foundations for building an inclusive, accessible city with a citizen culture. This is why the La Paz case study is emblematic and shows very well how a transport system can transcend functionality to transform and improve the quality of life of millions of people through infrastructure interventions and specific actions.

72. There are currently 540 public transport routes in the La Paz municipality, most of which are operated by small units (15,000 vehicles), with low capacity and poor maintenance, operated under limited coordination and control schemes, leading to congestion and situations of risk for road safety due to competition for passengers, with a negative impact on mobility of citizens.

→ **MI TELEFÉRICO: CELEBRATING INCLUSION**

The Mi Teleférico overhead cable system was conceived in 2011 to provide a public transport solution for the cities of La Paz and El Alto. Both cities, which are conurbations and socially and economically interdependent, required an innovative solution to overcome the challenges posed by the rugged topography. La Paz is 3,640 meters asl while El Alto is 4,150 meters asl. For a bus system this topographical difference is a major obstacle because the steep slopes and informal urban development of El Alto have led to narrow streets which some buses cannot use. The cable car system was designed to cut travel times and costs, improve urban accessibility, transport reliability and safety and reduce CO₂ emissions. This was the first mass transit trunk system by cable in LAC⁷³.

73. Reformulation of the La Ceja Urban Restructuring Multi-phase Program, IDB, 2017.

→ **MI TELEFÉRICO EXALTS THE VALUES OF BOLIVIA'S INDIGENOUS CULTURE.**



The system currently consists of a ring of 10 lines (red, yellow, green, blue, orange, white, light blue, purple, brown and silver), 37 stations with a total of 30.5 km built. Every day Mi Teleférico carries 4,000 passengers per hour/direction on its trunk lines and 3,000 passengers per hour/direction on its feeder lines. From May 2014 to March 2018, 120,859,207 journeys were made, of which 41,817 were by PWD. The cable car operates on a regular basis with a cabin frequency of every 12 seconds and a capacity of approximately 10 passengers comfortably seated. The system operates 17 hours per day with a maximum capacity of 18,000 passengers per hour in both directions.

Mi Teleférico from its beginnings has incorporated transformative and very socially powerful ideas, making it an innovative system with capacity to bring about profound transformations and changes in society's perception of a public transport system. The Mi Teleférico mobility policy is based on 4 pillars:

- 1 Human beings as the center of the project
- 2 Environmentally sustainable
- 3 Improve the city
- 4 Governance and institutions

→ A HUMANIZED POLICY

From the start the project was based on the idea that “human beings are at the center of the project,” so the fundamental intention was to improve people's quality of life. Before Mi Teleférico, there was no acceptable transport system; what existed was dirty, messy and overcrowded. The La Paz overhead cable system, in addition to its operational aspect, encompasses the users' travel experience from the moment they enter the station to the end of their journey.

→ THE HUMAN BEING IS THE CENTER OF THE SYSTEM, THIS GRAPHIC CHANGES THE WORD PASSENGERS FOR LIVES. SOURCE: EETC- CM, 2018.



With Mi Teleférico, a system was proposed to transform the places where it was implemented on the urban and social level to guarantee multimodal physical and tariff integration with other means of transport, such as the *Pumakatari* and *Waina* Bus and bicycles. The infrastructure not only facilitated connection to existing services but also transformed the stations into service nodes (health, commerce, education and recreation) and meeting places for citizens. The brightly colored station buildings, given names that extol Aymara culture, and the cable towers stand as urban landmarks that can be seen from a distance, enlivening the landscape.

Another very important element in this concept of having human beings as the center of the project is universal accessibility, as well as respect for user diversity. Mi Teleférico is an inclusive and accessible system, designed from infrastructure to operating staff for PWD.

From the station entrance, passengers requiring any type of assistance are monitored. Several of the stations are equipped with ticket machines adapted to the height required for wheelchair users. The speed of the cabin decreases and boarding of wheelchairs is accompanied by an operator who accommodates the chair to give more space to PWD and then asks the destination station. Once the passenger is on board, the operator communicates by radio with staff at the final station to receive the passenger. Cabins are also equipped with speakers, cameras and panic button.

El Prado Station in the city center is a very good example of accessibility. The station, located in a highly populated built area, has several accesses equipped with ramps, elevators and escalators that facilitate horizontal and vertical access to spaces such as ticket offices, restrooms, services inside the station and boarding areas. The surrounding areas and the station interior have podotactile paving and textures to indicate changes of level. Appropriate signage and lighting to effectively guide users with disabilities is an essential component in all spaces.

➔ **EL PRADO SHOPPING CENTER, LA PAZ**



The physical elements that make up the station also facilitate connection with the outside. El Prado is adjacent to a well-established shopping center, which is very well signed and demarcated differentiating the areas of use and access. Two footbridges connect the station with the urban environment, since a nearby roundabout interrupts continuity and makes the pedestrian crossing unsafe.

The benefits of accessibility have resulted in savings of \$290,000 bolivianos in tickets for PWD, \$45.8 million for senior citizens and \$8.6 million for students. All have access to the preferential card which gives a 50 percent discount on the fare.

→ ENVIRONMENTALLY SUSTAINABLE

The congestion of La Paz due to a very high level of motorization has dramatically increased greenhouse gas emissions. Since implementation of Mi Teleférico, for example, operation of the Silver Line has led to reduction of some 2,500 metric tons of CO₂ per year. For its daily operation, Mi Teleférico uses electrical energy and even contributes to reducing noise pollution since its mechanical system is silent.

In collaboration with the Ministry of the Environment and Water, Mi Teleférico is working to make La Paz and El Alto into green, ecological, healthy and clean cities. This alliance coordinates joint actions in education, training, campaigns, workshops, fairs, awareness, socialization and dissemination of policies related to conservation, protection and defense of the environment. In several of the stations, the system has delivered 51,800 square meters of green spaces. By 2019, Mi Teleférico aimed to have planted 20,000 native species trees.

According to the indicators report of the Mi Teleférico Company, reduction of polluting gas emissions between 2104 and 2016 avoided consumption of 26,726 liters of gasoline per day and emission of 59.3 metric tons of CO₂ thus reducing respiratory diseases in the population.

→ MI TELEFÉRICO CULTURE AND ITS BENEFITS

Phase I of the Cable Car cut travel time by more than 50 percent, improving user productivity, and 96 percent of users rate the cable car as excellent and very good, according to the 2016 satisfaction survey. Society sees the system as its own and loves and values the service. The urban centers that grow up around the stations are in areas which in many cases were dangerous in the past.

Apart from the infrastructure which has had a positive impact on the quality of life of users, Mi Teleférico operates 47 social responsibility programs whose main objective is to educate, inform and disseminate correct use of the system and promote Cable Car Culture, which has been internalized by citizens who replicate these good behaviors and values in other spaces.

Mi Teleférico culture is for all population groups. Children have 11 programs focusing on reading, arts, drawing and education including: storytelling competition, Adventure-T and *Lectura al vuelo* (Reading on the Fly), which is a magazine with only positive content that circulates weekly in the system. PWD and older adults are also included in these programs; for example, the Centros Vida health posts located at Mi Teleférico stations treat patients living in the vicinity, saving them travel time. The benefits of Mi Teleférico have been so impressive that it is proposed as an alternative therapy for children with autism who love to travel in the cabin and relax, overcoming the effects of their variable moods.

→ GOVERNMENT AND INSTITUTIONS

It is very important to have an integrated approach to disability and to coordinate the work of different bodies and levels of the State to promote inclusion for PWD. The Autonomous Municipal Law for Persons with Disabilities, City of La Paz 209/2016, promotes inclusion of persons with disabilities and specifically addresses the issue of access to transportation, establishing the arrangement of seats on buses, adapting public spaces and setting a special fare. Although this Municipal Law came after implementation of Mi Teleférico, the system was conceived as a 100 percent accessible and inclusive, and the managing company has accepted responsibility for incorporating this principle, from infrastructure to employees.

In addition to coordination, another issue identified is the financing of the policy of inclusion for PWD in transport, especially investment in the necessary infrastructure and facilities, operating exclusive services or implementing possible subsidies.

➔ PUMAKATARI BUS



→ **PUMAKATARI: THE PRIORITY IS TO IMPROVE PEOPLE'S QUALITY OF LIFE**

“The city tells you every day, you can't; people tell you, you can't; it's a constant NO; from when you leave your home and can't take a ride, the moment when the chain of accessibility is broken,” says Andrea Cornejo, president of La Paz City Council and promoter of Law 209 of 2016, adding that “this regulatory instrument solves the day-to-day life of people with a disability,” including mobility.

Accessibility means an uninterrupted and continuous journey. However, cities have a number of elements that turn into obstacles and barriers for PWD; for example: street vendors, trees, narrow sidewalks, badly parked vehicles, among others. But there are also other types of barriers which have to do with attitude and education, and which are part of the bus operation and service: when a driver does not stop to pick up a passenger with a disability because it may take longer to board, or when he does not know that service animals, such as guide dogs, can travel inside the bus.

→ **PUMAKATARI BUS: FIRST LINK IN THE CHAIN OF ACCESSIBILITY**

Pumakatari bus made its debut on January 5, 2014 as the first modality of the La Paz Bus system, managed by the Municipal Transport Service (SETRAM). *Pumakatari* was planned as feeder buses for the BRT system to meet demand from citizens living on the more remote hillsides of La Paz. The 61 buses of the first phase of the La Paz Bus system were inaugurated at a symbolic and festive act, the *Ch'alla*, an Aymara practice of pouring a ritual drink over an object to protect and bless it.

Since start of operations, the principles that govern the infrastructure and service of *Pumakatari* Bus have included accessibility and universality. Edward Sanchez, director general of the La Paz Bus Integrated Transport System, emphasizes that all citizens without restriction can use the service under conditions of equality, quality, and safety, guaranteeing the right to free mobility. Consequently, LaPaz Bus is deeply committed to living up to these premises at infrastructure level and in the operational components.

Pumakatari Bus currently operates continuously 24 hours a day with six lines and a fleet of 179 buses. The vehicles were specifically designed to overcome the complex orography of La Paz, and were developed from a prototype with the best technology and universal accessibility parameters:

- Higher bus body to adapt to the difference in height and slopes of sidewalks and streets.
- Exclusive entrance or exit door.
- Capacity for 61 people: 29 seated and 32 standing. Seats for exclusive use of pregnant women, children, older adults and PWD. Compared to conventional buses, Pumakatari buses have twice as many blue seats.
- Space for people in wheelchairs.
- Vertical and horizontal handrails and individual handles.
- Hydraulic elevator at rear door for wheelchair access.
- Host assists passengers with fare payment, access, information, and safety.
- Speaker system for improved listening to the host and telephone for communication with the control center.
- Screens with information of interest.
- LED signs with information on stops and routes.
- First aid kit.
- Security cameras.
- Speaker system.
- Dedicated space for guide dogs.
- A Citizen Service Unit (SAC) to deal with requirements and complaints of bus users.

The La Paz Bus system has a passenger transfer station with modal interchange points shared with the red, yellow, and green lines of the Mi Teleférico system, transporting 22,951 passengers per day. There are also 30 *Chiki Titi* buses, smaller vehicles that serve areas of difficult access.

Bus stops are equidistant at 350 meters, a distance that is very convenient for pedestrians and adapted to universal design parameters. Several stations are in the area of influence of urban facilities such as schools, sports centers and institutes for PWD.

An example of this is the High School Education Unit which has a special program for people with cognitive disabilities with 27 students aged from 6 to 34. The teacher and project leader, María Luisa Aguilar, comments that *Pumakatari* buses have enabled “many of the students to travel from great distances autonomously and safely to attend classes.” In this situation the children have been able to improve their communication and socialization skills.

In the immediate surroundings, sidewalks have podo-tactile paving with ramps at corners, making access easier for people with visual and motor disabilities.

In addition to the driver, buses have a host who collects bus fares and informs the driver of the service required. The host is the key element in assisting with access and guidance in the bus and at stops for PWD, women, children and older adults. *Pumakatari* staff receives regular training in assistance and emergency protocols. There is also a 50 percent discount on the bus fare available to people who have a disability registration card; children and older adults are also eligible for this benefit.

→ PUMAKATARI CELEBRATES AYMARA CULTURE AND DIVERSITY

The name *Pumakatari* refers to the union of the Andean puma and the *katari* (snake), two animals of great significance in the *Tiahuanacota* culture. The name chosen for this integrated bus system represents a deep sense of belonging and identity with ancestral culture, along with its image which was the result of a competition opened to the creative community in the city.

One of the characters of *Pumakatari* Bus is Sara Quispe, a typical La Paz “chola” who drives one of the system’s buses. “Sarita,” as her colleagues call her, is 35 years old and has driven trucks, minibuses, taxis and currently a *Pumakatari*. Sara was one of the first drivers in the system and her example will encourage many others to join. Sara says, “It hasn’t been easy. They told me they couldn’t give licenses to women and that I had to go home and cook. I left crying but I didn’t give up.”

Thanks to women like Sara, the traditional dress of Bolivia's indigenous women is no longer a stigma but a symbol of racial and female empowerment. These types of characters and stories are of great importance in Bolivia, a country that leads the ranking with the highest rate of violence against women in the LAC region: 7 out of 10 women suffer violence of all kinds. Between 10 and 12 complaints are filed daily due to abuse, prohibitions, and limitations in the family.

La Paz Bus encourages recruitment and entry of women into the transport sector; however, few women are trained for these jobs; the next step will be to open a driving school with a gender focus.

→ THE PUMAKATARI CITIZEN: VALUES AND EDUCATION

Intervention in any area of public management requires all programs or projects be accompanied by awareness campaigns, education, and involvement. In the case of inclusion for PWD, it is essential that the other users of the system, as well as those providing services (including drivers and ticket sellers), have a friendly attitude and are above all available to respond to requests for assistance. A study by the MENCAP organization in the United Kingdom found that one of the most common problems in public transport reported by people with cognitive disability is lack of understanding and knowledge about the difficulties they face in their journeys by other users and by drivers, and insecurity.

La Paz Bus is working continuously to create civic awareness by having vehicles that are in perfect condition every day, trained staff and a reliable service. *Pumakatari* users are changing their mentality and regaining values such as respect, sympathy and solidarity, behaviors that are then replicated in other areas of the city. To achieve this, the service has also included an education and training component on inclusion of users with disabilities which is given to all La Paz Bus employees:

- Education campaigns on the difficulties faced by users with disabilities in the system.
- Campaigns to promote involvement of other users, raising awareness about the social responsibility of disability inclusion.
- Campaigns to educate how to collaborate with and assist PWD while using the public transportation system.

La Paz Bus also promotes a program of labor inclusion for people with cognitive disabilities to work as bus hosts. The program gives this population access to

decent employment, and they become ambassadors of tolerance and respect for diversity and inclusion. In the case of drivers and other service providers, disability training is a requirement in the system's operating contract.

→ CONCLUSION

Mi Teleférico and *Puma Katari* are great examples of positive transformation of society through a transport service centered on human beings. Through education, service and inclusion of the whole of society (PWD, older adults and children) these two systems demonstrate how urban mobility can contribute to the quality of life of a city's inhabitants. When public transport is understood in a holistic way, not only by the number of passengers transported but also by the service, attention and humanization of the journey, the results go deeper and transform a journey into a positive experience that changes each citizen's life. This transformation is very powerful because it educates citizens and creates a sense of ownership of the system, two fundamental elements for sustainability, coexistence and citizen inclusion.

Humane Transportation Systems

- 1 The human experience should be guiding the design and operation of urban transportation systems.**
- 2 Transportation systems are a fundamental component of sustainable, healthy, and clean cities.**
- 3 Humane transport systems combine advanced technologies with a culture of inclusion of diverse identities and mobility needs.**



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AN ACCESSIBLE URBAN LANDSCAPE: THE PORTLAND TRANSIT MALL

| Lance Freeman

Cities are mankind's greatest invention.

Edward Glaeser, Triumph of the City, 2011

Cities have been at the center of human progress and the seat of the world's great civilizations. Full participation in human progress requires access to the city. This chapter describes a transit infrastructure project in Portland, Oregon in the United States designed to be accessible to as many people as possible—thus facilitating inclusivity to that “great invention” cited above that is perhaps equal kernels of hyperbole and truth. After briefly describing how cities historically have been inaccessible to certain groups of people, the chapter lists some attempts to foster accessibility through regulation and more inclusive designs for the built environment. It then turns to a description of the Portland Transit Mall, an example of an accessible urban landscape.

→ INACCESSIBLE CITIES

Since the late 19th century, cities have been the center of commerce, politics, and intellectual life. Today, although cities house 50 percent of the world's population they account for 80 percent of worldwide GDP (Dobbs et al. 2011). Cities are where much of mankind's creative ferment lies. The Renaissance came to flower in the city of Florence in what is now Italy. Modern finance traces its roots to 18th century London and New York City. Therefore, today, full participation in all aspects of life—as mandated in the United Nations Convention on the Rights of Persons with Disabilities—surely demands access to all aspects of a city.

Historically, many marginalized populations have found their access to the city to be blocked or limited.

For example, the spatial organization of many North American cities often does not meet the needs of women. The modern city is oriented towards the needs and activities of wage workers. Reflecting this, public transit is typically designed to meet the needs of workers commuting to and from business districts, with temporal frequency highest during hours when commuters travel to and from work. Women, who do a disproportionate share of unpaid household work at off-peak hours, find their transit needs playing second fiddle to those of men who are more likely to be engaged in paid labor (Markusen 1980). More recently, as women have joined the paid labor force in increasing numbers, their use of the city still differs from that of men. Women continue to undertake more unpaid household labor, some of which involves transportation outside the home, and women use public space differently than men and have more concern about their physical safety (Foran 2013).

In the United States context, African Americans have faced severe restrictions on their access to the city. In the early 20th century, African Americans often faced legal restrictions (e.g., racial zoning, restrictive covenants) as well as extralegal restrictions (e.g., terrorist bombings) that constrained where they could live (Rothstein 2017). Many smaller towns went as far as to declare themselves “sundown towns,” which referred to places where African Americans were well-advised to leave before sundown or face the risk of bodily harm or imprisonment (Loewen 2005).

Persons with disabilities have also often been excluded from or had limited access to the city. They have often found themselves either unable to fully participate fully in urban landscapes, or able to do so only through Herculean effort. Retail facilities open to the public have often excluded those with disabilities. For example, prior to the Americans with Disabilities Act, blind persons who used guide dogs were denied service in establishments that did not typically allow dogs. Michael Pachovas, a student with a disability at the University of California at Berkeley in the 1960s, recalled how he “...had to plan my classes so that each was downhill from the former one...[A]t the end of the day, I’d hitch rides with people or ask them to push me back uphill” (Greve 2007).

Among the most important determinants of a city’s accessibility is its public transit.

The design and planning of public transit and resultant spatial configurations have often overlooked the needs of persons with disabilities (Hine and Grieco 2003). Prior to the late 20th century, public transportation generally had little or no accommodations for those with a disability. Even today, public transit in many older cities is not fully inclusive of the PWD. New York City has one of the most extensive subway systems in the world, but only a quarter of its subway stations have elevators, rendering them inaccessible to those with mobility impairments, who are wheelchair-bound, or who are even simply using a stroller to transport a child—a circumstance underscored by the recent death of a woman who fell down stairs while carrying a stroller (Barron 2019). Only 71 out of 270 tube stations in the London Underground, the world’s oldest subway, are accessible by wheelchair or mobility scooter. The Paris Metro fares even worse by comparison, with only 15 of 303 Metro stops fully wheelchair-accessible (Mead, Symons, and Adzkie 2017).

New York City’s transit authority does provide a paratransit service for those with qualifying disabilities. Paratransit services for persons with disabilities typically operate minivans or buses with wheelchair lifts and other adaptations for increased accessibility. These vehicles operate without fixed timetables and often on flexible routes. Users typically have to schedule service in advance. While this is certainly an improvement over a complete lack accessible service, as was the case in most UNITED STATES transit systems in the early 20th century, paratransit services are typically nowhere near as efficient as conventional mass transit systems. For example, paratransit buses travel more slowly than subway trains. Moreover, since the user must schedule service sometimes 24 hours in advance, options for spontaneous travel are limited.

Workers who rely on New York City’s paratransit service and find a need to stay at work an extra hour are simply out of luck if they did not anticipate this need 24 hours ahead of time.

Robert Imrie, a disabilities scholar at the University of London, poignantly captured the frustrations of paratransit users in a series of interviews conducted in the 1990s. Two users of such a service in the United Kingdom characterized their experiences as follows:

“We’ve done some work on the ring-and-ride service. Social services have to pay for it and in theory it’s a good service. [But] you have to know two days in advance what you want to do and only use it at specific times” (Imrie 2000, 1647).

“The trouble with the service is that it is inadequate...[Y]ou can sit with your finger on the phone all day and never get through, so it’s difficult to access the service. Even if you get through, there’s no guarantee of there being a bus and you often have to go at inconvenient times. It’s a very inflexible system and if you change your mind about going and they turn up they’ll still charge you....[If] you book it to go to the town center and then change your mind that you want to go to the library it’s up to the driver’s discretion and often they won’t. It’s just generally not a satisfactory service” (Imrie 2000, 1647–648).

Overall, paratransit systems, while improving access for PWD, also serve to segregate them from the transit services that the non-impaired use (Patel 2019). Imagine a family with people with and without disabilities planning a trip using mass transit. If the trip requires routes inaccessible to someone who has a disability, the family will have to travel separately from the persons with disabilities who have to use paratransit services. Such an experience serves to remind persons with a disability of their disadvantaged status, inconvenience the entire party, and fall far short of the goal of inclusivity.

The inaccessibility associated with transit frequently starts with planning itself.

Transportation planning is often based on observed demand—that is, current patterns of traffic and transit use. But these overlook “suppressed demand”—that is, demand for transit that would exist if facilities were more accessible (Hine and Grieco 2003). When subways lack elevators, or bus stops are too distant, persons with a disability may be forced to stay home more frequently and plan their life to take transit infrequently (Dwyer 2017). Their lack of travel on inaccessible transit is interpreted by planners as a lack of demand for transit. Were transit facilities more accessible, however, persons with disabilities might indeed use such transit more frequently, whether for work, health care, or other reasons.

Mobility in contemporary Western societies prioritizes the needs of the able-bodied and, among this group, those traveling for paid labor during conventional 9-to-5 work hours.

Marginalized groups working outside that time frame, such as women and the PWD, are effectively accorded second-class status in terms of transit access.

The alienation, inconvenience, and danger for these marginalized groups posed by cities constructed with the able-bodied in mind are captured by the interviews conducted by Imrie referenced above:

“The problem is that the infrastructure really isn’t geared for access to the buses because if you go around the city at all the bus stances, in a lot of cases you can’t

get there because in a lot of cases cars park in the bus stances, so if I was at a pavement and the bus was there, the bus couldn't get close enough into the pavement for me to get on and I would then have to try and get off the pavement....I can't do this so I just have to look on as the bus goes past" (Imrie 2000, 1647).

"I went up to visit this so-called state-of-the-art accessible building, and when I got out of the taxi I found I could hardly move my chair. Every inch of the pavement was uneven and full of pot holes, so even though they had all those facilities inside, it's no good if we can't get to the building. They don't think of this do they?" (Imrie 2000, 1648).

"Everywhere I go attention is drawn to my body and what I can't do" (Imrie 2000, 1651).

A key aspiration for persons with disabilities is to not be segregated from the larger society, whether in employment, residential institutions, or special transport.

The opening lines of the Union of the Physically Impaired Against Segregation (UPIAS) declaration, which is considered the manifesto for the "social model" of disability (see the chapter by Freeman and Libertun in this volume), calls for "...arrangements for us (the PWD) to participate fully in society" and a desire to "...gain the maximum possible independence in daily living activities, to achieve mobility, to undertake productive work, and to live where and how we choose with full control over our lives" (Union of the Physically Impaired Against Segregation 1970).

➔ **MAKING CITIES ACCESSIBLE**

The activism of persons with disabilities resulted over time in several policy changes that gradually increased accessibility in the urban landscape for anyone with a disability. These policies were at first voluntary, such as the American National Standards Institute Rule 117.1 entitled "Making Buildings Accessible to and Usable by the Physically Handicapped" in 1961.. They later became mandatory, as in the case of Section 504 of the 1973 Rehabilitation Act, which forbade discrimination in federally funded projects, and the 1990 Americans with Disabilities Act (ADA), which mandated "reasonable accommodation" for persons with disabilities and slowly increased access by requiring the built environment to be modified to accommodate their needs.



IMG: Portland.gov



IMG: Portland.gov



IMG: Portland.gov

However, it slowly became apparent to architects, developers, and the community of PWD that meeting the minimum requirements of regulations such as the ADA was far from optimal for several reasons (Story, Mueller, and Mace 1998). First, creating separate, accessible features for persons with disabilities is often costly. Second, so-called accessible features often appealed to a much wider constituency than what was originally conceived by such policies. For example, the elderly often benefitted from adaptations made for the mobility impaired. Finally, as suggested by the discussion above, policies aiming to meet the minimal standards of regulations such as the ADA often segregate and stigmatize persons with disabilities (Story, Mueller, and Mace 1998). As a consequence of these perhaps unintended consequences, the concept of “universal design” discussed below emerged as a school of thought, a sense of awareness, and even what some might call a social movement among designers, builders and planners (Story, Mueller, and Mace 1998).

For their part, ADA regulations can nevertheless be seen as a “floor” for acceptable accessibility standards. As the American Society of Landscape of Architects clearly articulates, the requirements of the ADA and similar regulations “...are a minimum standard for accessibility. Because of their focus on technical aspects of accessibility over experiential quality, ADA standards often result in spaces that are still very challenging for PWD to access, leaving them physically and mentally disconnected from public life” (Dillon and Green 2019).

Conventional adaptations, such as those for persons with disabilities, focus on practical solutions to the limited end of providing access.

The objective is to meet the ADA-specified requirement to make reasonable accommodations to enable PWD to have access. Consider entrance to a public facility: a building might have several steps to the main entrance, rendering the entryway unusable to the wheelchair-bound, parents with strollers, and others with limited mobility. One solution is to provide a ramp that allows entrance to the building through a side door. Such an accommodation would be consistent with ADA requirements. Thus, the ramp would meet the limited objective of enabling the wheelchair-bound access to the facility. The provision of the ramp would also be a vast improvement over the pre-ADA era when little or no accommodations were made for persons with disabilities.

In contrast, universal design goes beyond the limited objective of providing access to persons with disabilities and instead seeks to provide access “...without the need for adaptation, modification, assistive devices or specialized solutions, by

any persons of any age or size or having any particular physical, sensory, mental health or intellectual ability or disability” (Centre for Excellence in Universal Design 2019). Among the salient distinctions is that universal design aims to allow for what is called “equitable use,” delineated by the Center for Universal Design (1997) through the following guidelines:

- Providing the same means of use for all users, identical whenever possible, equivalent when not.
- Avoiding the segregation or stigmatizing of any users.
- Making provisions for privacy, security, and safety equally available to all users.
- Making the design appealing to all users.

When design is viewed through the principle of “equitable use,” it becomes clear why narrow adaptations to meet the requirements of the ADA, such as a ramp to a side entrance, are different from a solution conceived using universal design principles. A ramp to a side door, while allowing access to the facility, necessarily segregates those who have a disability. While non-impaired individuals can enter through the main entrance, the PWD are forced to make use of an alternative accessible entrance—a clear example of segregation. Moreover, it is easy to imagine how an alternative side entrance, although increasing access, might nevertheless serve to stigmatize those who must use it. Consider a party with impaired and non-impaired individuals. While the non-impaired can enter using the main entrance, the impaired members of the party are forced to use the side entrance, likely taking more time and effort to enter the building. The non-impaired members might have to wait at some agreed-upon location within the facility, giving the impaired person(s) the burden of feeling that they are imposing on others in their party. This is an example of how a narrow solution to the problem of accessibility—in this case an ADA-compliant ramp to a side entrance—nevertheless serves to segregate and stigmatize persons with disabilities.

A solution to the problem of access for the mobility-impaired that is more consistent with universal design principles would be a wide entrance at grade.

With such an entrance, both the impaired and non-impaired could easily access the facility. There would be no need for persons with disabilities in a given party of people to use a separate entrance, no need to meet at a designated place within the facility, and consequently less likelihood that the persons with disabilities would feel stigmatized for having to impose on the non-impaired members of their party.

→ THE PORTLAND MALL REVITALIZATION PROJECT

The Portland Mall Revitalization Project in downtown Portland, Oregon offers an exemplary case of an accessible urban landscape.

As the ADA has now been enshrined in law for nearly three decades in the United States, it should come as no surprise that the project, which was in the planning stages in the early 2000s, is ADA-compliant and thus for the most part accessible to persons with disabilities. However, the design of the Portland project was also influenced by universal design guidelines, and thus the level of accessibility it affords goes beyond that required by the ADA.

Known as the “Rose City” for its hospitable climate and soil for growing roses, Portland sits at the confluence of Willamette and Columbia Rivers. Founded in 1843, Portland is the largest in Oregon, with a population in 2019 of 667,589, making it the 24th largest city in the United States. Portland has a reputation as one of the country’s “hipper” and more progressive cities—eco-friendly, on the vanguard of regional planning, and home to micro-breweries and a well-developed coffee culture.

The Portland Transit Mall was initially developed in the 1970s. Like many downtowns in North America in the late 20th century, downtown Portland was at the time in decline due to de-industrialization and suburbanization. The streets were car-dependent and the sidewalks often desolate and uninviting. To reverse that decline, the original plan for the Transit Mall sought to strengthen the downtown by making it a focal point for the region’s commercial, cultural, and government life. Towards that end, a Transit Mall was created that concentrated what were then decentralized transit services onto two corridors: 5th and 6th Avenues in downtown Portland.

The streetscape was modified with attractive street furniture, sidewalk materials, and other aesthetically appealing improvements to make the downtown a desirable destination.

The original plan also coordinated the highest allowable densities with high-quality transit services. This transformation created transit corridors, increasing regional access to the downtown, better integrating pedestrians, and reducing conflict between private vehicles and public transit. All of this served to cement the Transit Mall as the focal point for downtown Portland.

The original Transit Mall was viewed as highly successful, heralded as by “far and away one of the most impressive such projects in the nation” and the winner of numerous awards in architecture and planning (Goldberger 1979). But with the passage of time and changes in the surrounding economic and physical contexts, the need for improvements became evident. For example, many bank headquarters’ that occupied central locations in the original mall had closed. Sidewalk cafes, which were anticipated to become a popular attraction on the mall, never really caught on.

The goal of the revitalization effort was to improve accessibility to Portland’s downtown area by increasing transit capacity and service. Strengthening accessibility to the core of the central city was consistent with regional planning efforts in metropolitan Portland to maintain this area as “...the most dense concentration of housing, jobs and recreational opportunities” in the region (Portland Bureau of Planning 2004, 13). The goal to improve transit access was also consistent with the city of Portland’s Comprehensive Plan, which calls for both “reinforcing the downtown’s position as the principal commercial, service, and high density housing center in the city and region,” and making public transit the preferred mode of travel to major destinations throughout the region (Portland Bureau of Planning 2004, 13).

Towards these ends, the city introduced a light rail line in Portland. The addition of light rail was viewed as an opportunity to build on the successes of the original Transit Mall by greatly increasing transit ridership and access to the downtown area. The expanded and revitalized street mall would ultimately become one of the largest transit malls of its kind in North America.

The city of Portland, including the Bureau of Planning and the Planning Commission, undertook a careful planning effort to ensure that the opportunity presented by introducing light rail in Portland was fully exploited. This effort constituted the important institutional context that paved the way for the revitalization of the Portland Transit Mall to proceed in a manner that resulted in a project that is exemplary in terms of its accessibility for persons with disabilities. Several factors contributed to the successful redesign of the Transit Mall.

First, Portland adopted policies that facilitate the development of inclusive spaces. In 1990, the city issued its Central City Plan Fundamental Design Guidelines, which were subsequently updated in 2000 and 2003. These guidelines “...are intended to aid designers and developers in understanding the city’s urban design expectations” (Portland Bureau of Planning 2003, 2). Projects and developments that are deemed as “important to the city’s character” are required to undergo review by the Portland Design Commission and the Portland Historic Landmarks

Commission (Portland Bureau of Planning 2003, 2). The review processes include analysis of various elements of a given proposal (e.g., siting, exterior materials, parking, etc.) and a process to ensure that the proposed project is consistent with the tenets of the Central City Fundamental Design Guidelines. The Transit Mall Revitalization Project, in the heart of downtown Portland, falls within the Central City Plan District and hence was automatically subject to design review.

Included in Portland's Central City Fundamental Design Guidelines is the guideline to "Integrate Barrier-Free Design" (Portland Bureau of Planning 2003, 88).

This guideline suggests pedestrian systems can only be successful "...when all people are able to move to and from one place to another with ease," whereas in the past use of pedestrian spaces by everyone was not a consideration.

The guidelines go beyond merely meeting ADA requirements, calling instead for designs that "...ensure [that] different elements that facilitate movement for all people, such as elevators, lifts, and ramps, are *well-integrated* [emphasis by the author] into the overall design concept (Portland Bureau of Planning 2003, 88).

Beyond the institutional mechanisms in place to ensure that design and development in downtown Portland is carried out in an inclusive manner, the planning process for the Transit Mall was also inclusive. A design firm, ZGF architects was hired to coordinate the complex and multifaceted task of designing, developing, and constructing the revitalized Transit Mall. Community relations staff of the Portland Metropolitan Area Transit Authority (TriMet) and a Citizens Advisory Committee were involved in all stages of planning and implementing the project. Moreover, within Portland's municipal government is a Commission on Disability, a subunit of the Office of Equity and Human Rights. In the United States, Human Rights Commissions were established during the civil rights movement of the 20th century to investigate claims of racial discrimination and to foster better interracial relations. As civil rights protections in the United States have been won by other groups, including persons with disabilities, these commissions have come to also work to protect these groups' civil rights and to remove barriers to their full inclusion in the larger society. In Portland, the Commission on Disability is on the frontlines of ensuring that all relevant parties comply with the ADA. The commission also serves in an advisory capacity to various city agencies with the aim of ensuring accessibility and voicing the concerns of persons with disabilities.

Input from persons with disabilities incorporated into the planning process translated into a more inclusive revitalization project.

For example, the architects and urban designers of ZGF, when consulting with the community of persons with disabilities, learned of the importance of information being presented for those with sensory impairments (e.g., the blind and the deaf). The deaf also asked for a consistent acoustic sidewalk environment (such consistency aids in navigation for the deaf). Both concerns were addressed in the final project. Transit stops and vehicles were designed to convey information using multiple modes of communication. To maintain acoustic consistency, windscreens were placed at intersections (ZGF Architects 2010).

The resulting renovation was completed in 2009 at a total cost of \$209 million. The major components of the project included the light rail line, reconstruction of roadway pavement, and installation and renovation of transit shelters. Today, the Transit Mall spans 57 city blocks along two parallel one-way streets. Each street has three lanes, two of which are dedicated to transit, while the third is shared by automobiles and cyclists. In addition to serving as the transit hub for Portland, the Transit Mall also hosts events such as outdoor concerts, exhibitions, and food festivals.

Today, as the transit hub in Portland—along with being anchored by major institutions including Portland State University (the largest university in Oregon), City Hall, and the Union Station railroad station—the Portland Transit Mall truly serves as the city center. As such, accessibility to it sends a powerful message as to the importance and effectiveness of inclusive urban landscapes. Portland today is considered one of the most accessible cities for persons with disabilities in the United States. In 2018, *Business Insider* ranked Portland fifth nationwide for wheelchair accessible travel (Smith 2018); in 2015, *Trivago Magazine* ranked Portland third nationwide on its “Most Wheelchair Accessible” list (Lee 2015); and in 2018, the news website MSN listed Portland among the world’s 25 most disability-friendly cities (Thomaselli 2018). Portland stands out for its accessibility not only because its public transit system is very accessible to persons with disabilities, but also because even its hiking trails are fully accessible.

In other words, accessibility, and inclusivity for persons with disabilities are the norm in Portland.

This is not to say that Portland is a nirvana for persons with disabilities. There remains room for improvement in terms of increasing accessibility. Early in 2019, Portland settled a class action lawsuit that was brought because the city has been slow to provide sidewalk ramps. In the agreement the city agreed to upgrade more than 16,000 sidewalk ramps at a cost of \$113 million over the next 12 years (Friedman 2019).

→ UNIVERSAL DESIGN IN ACTION

The tradition of accessible development in Portland, informed by the universal design guidelines and a planning process that takes into account the interests of persons with disabilities, has resulted in a successful project considered by many to be an exemplary case of accessible universal design. In 2011, the Portland Transit Mall was awarded the Award of Excellence by the American Society of Landscape Architects (2019), and its accessibility was cited as one of its distinguishing features. It is worth noting that the Transit Mall is also hailed as a paragon of sustainable development, and in 2014 was designated a “Great Place in America” by the American Planning Association.

The Transit Mall has several accessible features designed to foster inclusivity:

- Along many stops on the light rail in the Transit Mall, the floor of the trains is even with the curb. This obviates the need for a ramp.
- Proximate to the entrances on the light rail trains and buses that transverse the Transit Mall are priority seating spaces for the elderly and persons with disabilities, including riders using mobility devices.
- The sidewalks that line the Transit Mall are very wide and thus are easily navigable by people with mobility impairments, including those in wheelchairs. The wider sidewalks allow for those in wheelchairs or using walkers, for example, to navigate the sidewalk without worrying about bumping into obstacles that are typically found on conventionally sized sidewalks. The wider sidewalks also make navigation easier for pushing baby strollers and contribute to a more pedestrian-friendly streetscape.
- All of the buses, light rail, and trolley cars that transverse the Transit Mall, as well as transit stops, are wheelchair accessible. Consistent with the tenets of universal design, the accessible vehicle openings are at the center of trains or at the front of buses—the main points of egress for these vehicles—and not a separate door. The light rail trains have ramps that extend from the train to facilitate boarding for those in wheelchairs.
- For blind Transit Mall users there are several accessible features:
- Machines that sell tickets to access the bus, light rail, or trolley include instructions that are in audio, raised lettering, and Braille.

- Platform edges of the light rail stations have textured tiles, which serve to warn users they are approaching the edge of the platform. The change in the texture can be felt with a foot or cane.
- Light rail stations have Braille and raised-letter signs that inform users which trains arrive at the station and the destinations of these trains.
- At light rail stations, users can learn of upcoming arriving trains by pushing a button to hear an announcement.
- On light rail trains, upcoming stations are announced over an audio system.
- The transit mall also has several accessible features for those with hearing impairments:
- Light rail stations and bus stops on the transit mall corridor have digital displays showing arrival times for upcoming vehicles.
- Reader boards inside trains have a digital display indicating the upcoming station.

One of the stops on the light rail is the Urban Center Plaza of Portland State University. Although the plaza was not part of the revitalization project, its proximity and accessibility features serve to amplify the accessibility of the rest of the transit mall. The location of the plaza on a slope includes aesthetically appealing ramps that run parallel to stairs in the center of the plaza. Their aesthetic design and central location adjacent to the stairs that able-bodied persons use to navigate the slope are consistent with the principles of universal design that call for refraining from solutions that segregate or stigmatize persons with disabilities. The natural grade change of the plaza also allows for the platform for entering and exiting the adjacent streetcar to be at the same level as the plaza. This design solution obviates the need for either stairs or a wheelchair-accessible ramp and is consistent with universal design principles in that persons with mobility impairments neither have to use a separate means of egress nor rely on specialized equipment to access the streetcar.

→ CONCLUSION

The significance of the accessibility of the Portland Transit Mall goes beyond its practical utility for the persons with disabilities. As described above, the mall was designed with the intention of being a focal point for the Portland metropolitan area, both literally and figuratively. The message sent to users of this space is that accessibility for all is important. Everyone has a right to access the heart of the city. Moreover, the message delivered by using universal design for the Portland Transit Mall is that access for persons with disabilities is just as important as that for the able-bodied. Persons with disabilities are not being accommodated by means of special entrances or inconvenient side doors. Instead, their access, to the extent feasible, is given just as much consideration as access for the able-bodied.

As a hub of public transit at the center of the metropolitan area, the Portland Transit Mall has accessibility features that are experienced by large numbers of people. Each user then becomes a potential disciple with first-hand experience of a truly accessible landscape and an appreciation for how the built environment can be designed to be inclusive in a tasteful and unobtrusive way.

Achieving the development of an accessible and attractive urban landscape in Portland was greatly facilitated by institutional mechanisms and practices centered around the importance of accessibility for persons with disabilities. As has been described in this chapter, the planning process in Portland includes advisory bodies that constitute an institutional mechanism to represent the interests of persons with disabilities, which ensures that their interests and needs are incorporated into projects during the design and planning stages.

The concept of universal design, although not a statutory requirement, provides designers and planners with a framework to think about the built environment in a manner that is truly inclusive. Moreover, universal design aims for accessibility for everyone, resulting in a more flexible urban landscape. As the population ages, accessibility features such as those outlined in this chapter will be in greater demand. Universal access also benefits individuals who may typically have no impairment, but who due to illness, injury, or other event find conventional, ADA-compliant spaces difficult or inconvenient to navigate.

The Portland Transit Mall illustrates that with forethought, with the proper institutional mechanisms in place (including a planning process that routinely includes input from persons with disabilities), and with technical know-how such as that encompassed by universal design principles, the urban landscape can be developed in a manner that is inclusive and welcoming for all.

Accessible Transport Systems

- 1** A fully accessible pedestrian network is fundamental for enabling all residents, including people with disabilities, enjoy public spaces
- 2** Consulting with the community of people with disabilities during the planning and design phases results in multisensorial and innovative urban projects.
- 3** Accessibility starts at the planning stage and results in a system that serves people with disabilities without segregating them.



IMG: Portland.gov



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