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DISABILITY-INCLUSIVE PUBLIC PROCUREMENT: PROMOTING UNIVERSAL DESIGN AND ACCESSIBILITY

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Disability-Inclusive Public Procurement: Promoting Universal Design and Accessibility

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'Societies will never achieve the SDGs without the full participation of everyone, including people with disabilities. We cannot afford to ignore or marginalize the contributions of 1.5 billion people.

Upholding the rights of people with disabilities is a moral imperative. But it is not an act of charity. It is a recognition of rights and a practical necessity, if we are to build healthy, sustainable societies to the benefit of everyone – those with disabilities, and those without'.

Remark by António Guterres, United Nations Secretary-General, to the 11th session of the Conference of State Parties to the Convention on the Rights of Persons with Disabilities, 12 June 2018.

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Acronyms and abbreviations

CRPD	Convention on the Rights of Persons with Disabilities
EAA	European Accessibility Act
EIT	Electronic and Information Technology
ESCAP	Economic and Social Commission for Asia and Pacific
ESOs	European Standards Organizations
ETSI	European Telecommunications Standards Institute
EU	European Union
FPS	Functional performance statements
ICF	International Classification of Functioning, Disability and Health
ICT	Information and Communication Technology
ITU	International Telecommunication Union
JEITA	Japan Electronics and Information Technology Industries Association
OECD	Organisation for Economic Co-operation and Development
PFRPD	Pacific Framework for the Rights of Persons with Disabilities
PPD	Public Procurement Directive
PPPFA	Preferential Procurement Policy Framework Act
UN	United Nations
VPATs	Voluntary Product Accessibility Templates
WCAG	Web Content Accessibility Guidelines

I. Introduction

Without disability-inclusion, inclusive development could not be achieved, as disability-inclusion can serve as a benchmark for inclusive development. Without accessibility, disability-inclusion is nearly a jargon. Disability-inclusive public procurement can guarantee successful implementation of accessibility.

Remark by Mr. Monthian Buntan, Member of the Senate, Royal Thai Parliament, Member of the United Nations Committee on the Rights of Persons with Disabilities[1]

Persons with disabilities, who comprise an estimated 15 per cent of the global population, are one of the largest minority groups in the world.[2,3] In Asia and the Pacific, this translates to an estimated 690 million people, including those with physical disabilities, those who are blind or experience low vision, deaf, hard of hearing, and those with learning disabilities, cognitive/developmental disabilities, psychosocial disabilities, deafblind, and those with multiple disabilities. This figure is expected to increase over the coming decades, owing to population aging, longer life expectancy, and an increasing number of injuries resulting from natural disasters, among other factors.[4]

Persons with disabilities face numerous barriers that restrict their full and effective participation in society on an equal basis with others and are among those at highest risk of being left behind in the development process. This risk is particularly pertinent given rising inequality across the world, which has a disproportionate impact on persons with disabilities. For instance, the increase of income inequality puts persons with disabilities – who already are less likely to be employed compared with their peers without disabilities – in a particularly vulnerable position.[5] Furthermore, the rising inequality with regard to access to basic services such as education opportunities often results in persons with disabilities falling behind, as evidenced by their relatively low rates of completing secondary education, gaining full time employment and securing a decent income compared to those without disabilities.[6]

The inadequacy and lack of accessible built environments, accessible information and communication, including information and communications technology (ICT), and accessible services are fundamental barriers that widen this inequality. 'Accessibility', in simple terms, is the breaking down of the barriers across these sectors that prevent persons with disabilities – and the broader population – from participating in society on an equal basis with others.

To illustrate the fundamental importance of accessibility for reducing inequality for persons with disabilities, it is necessary only to look at daily life. With recognition of the diversity that exists among persons with disabilities and the various barriers they face, activities often taken

[1] Based on an interview with Mr. Monthian Buntan, Bangkok, 5 July 2018.
[2] World Health Organization (WHO), 2011.
[3] United Nations Development Programme (UNDP), 2018.
[4] WHO, 2011.
[5] International Labour Organization (ILO) and Organization for Economic Co-operation and Development (OECD), 2018.
[6] United Nations Economic and Social Commission for Asia and Pacific (ESCAP), 2019.

for granted such as entering or exiting a residential building, crossing a street, a school, or an office building, are common barriers to access of employment and education opportunities. Uneven pavements, steps and unclear signage between a residence and transportation hubs have the same detrimental impact on participation, and this is assuming that public transportation itself is equipped to support persons with diverse disabilities and requirements. Considering public toilet facilities, shops, banks and automated teller machines, voting booths, recreational venues and other typical places for societal gathering and participation, the potential for persons with disabilities and those with specific accessibility requirements to conduct daily life on an equal basis with others can be a challenge, let alone achieving educational and career goals.

To break down these barriers, a number of global, regional and national efforts have been taken. The UN Convention on the Rights of Persons with Disabilities (CRPD), which was adopted in 2006 and entered into force in 2008, is a landmark document for ensuring the rights of persons with disabilities are upheld, and one of the most prominent and catalyzing means of promoting accessibility at the global level.[7] The CRPD recognizes in its preamble "the importance of accessibility to the physical, social, economic and cultural environment, to health and education and to information and communication, in enabling persons with disabilities to fully enjoy all human rights and fundamental freedom".[8] The Conference of States Parties to the CRPD said that "accessibility is a precondition for persons with disabilities to live independently and achieve full and equal participation in society".[9] Article 9 of the CRPD specifically focuses on accessibility, noting that "States Parties shall take appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and to other facilities and services open or provided to the public, both in urban and in rural areas".[10]

In addition, the Incheon Strategy to 'Make the Right Real' for Persons with Disabilities in Asia and the Pacific, 2013-2022, together with the accompanying Beijing Declaration and Action Plan to Accelerate the Implementation of the Incheon Strategy, provide a robust regional framework for advancing cross-sectoral disability-inclusive development.[11] The ten Incheon Strategy goals and accompanying targets and indicators set benchmarks for progress for governments, civil society actors and international organizations alike. Rooted in the CRPD, accessibility is both an underpinning principle of the frameworks, as well as a specific area of focus through Goal 3 of the Incheon Strategy and specific reference in five of the action points set out in the Beijing Declaration and Action Plan.

Regional progress also requires support in national and global fora, and as such the success in the Incheon Strategy and Beijing Declaration and Action Plan are closely intertwined with national and global development efforts. The Incheon Strategy has spurred governments

[7] Convention on the Rights of Persons with Disabilities, New York, 13 December 2006.
[8] United Nations General Assembly, 2006. A/RES/61/106, Preamble v.
[9] United Nations Convention on the Rights of Persons with Disabilities (CRPD), 2017. CRPD/CSP/2017/4, para 4.
[10] United Nations General Assembly, 2006. A/RES/61/106, Article 9, para 1.
[11] United Nations ESCAP, 2018.

across Asia and the Pacific to take steps to invest in accessibility and promote disability-inclusive development, as demonstrated through the findings of the ESCAP midpoint review of the third and current Asian and Pacific Decade of Persons with Disabilities, 2013-2022, conducted in 2017.[12] Furthermore, global agreements such as the Sendai Framework for Disaster Risk Reduction 2015–2030, and the Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired or Otherwise Print Disabled, similarly provide a mandate and guidance for investing in accessibility.

Most prominently, all stakeholders have been actively involved in recent years with sustainable development at the global level through the 2030 Agenda for Sustainable Development. The 2030 Agenda and its 17 inter-related Sustainable Development Goals (SDGs) adopted in 2015 by 193 United Nations Member States, pledge to leave no one behind. This pledge asserts and commits that the "dignity of the individual is fundamental and that the Agenda's Goals and targets should be met for all nations and people and for all segments of society", including persons with disabilities.[13] Five of the Sustainable Development Goals contain targets that make direct reference to persons with disabilities, and seek to make educational facilities accessible, to improve accessibility of built cities, public spaces and public transportation, and to enhance access to ICT. Furthermore, another six of the goals make implicit reference to disability and accessibility.[14]

1.1 Challenges and opportunities to invest in accessibility

Although national, regional and global frameworks are in place to promote disability inclusion, there remain numerous challenges and opportunities to investing in accessibility in Asia and the Pacific. A strength of the region is that governments, representative organizations of persons with disabilities, private sector and other civil society organizations are aware of the importance of accessibility, generally through knowledge of the CRPD. However, an ESCAP survey conducted for the midpoint review of the Asian and Pacific Decade of Persons with Disabilities, 2013-2022, and recent accessibility expert discussions indicate that common understandings of accessibility are too often limited to envisioning physical interventions, such as installation of a ramp to facilitate access for wheelchair users. While this is an important dimension of accessibility, it is only a small part of the wider scope of barriers that need to be broken down.

By extension, approaches to promote accessibility are often falsely assigned and confined to select actors and service providers – namely those focused on disability matters – which severely hampers achieving objectives of building accessible environments. Another underlying reason for the lack of inclusion of accessibility in development efforts is that outside of the disability community there remains an insufficient level of awareness and

[12] United Nations ESCAP, 2017b, E/ESCAP/APDDP(4)/1
[13] United Nations Department of Economic and Social Affairs (UN DESA), 2016.
[14] United Nations ESCAP, 2017a. E/ESCAP/APDDP(4)/INF/1.

understanding of the broader and more comprehensive conceptualizations of accessibility vis-à-vis its value for all of society.

The need for multi-stakeholder approaches to investing in accessibility mirror the same requirements for cross-pillar approaches to sustainable development in the context of the 2030 Agenda. In addition to the references that the 2030 Agenda makes to disability and accessibility,[15] achieving the SDGs and ensuring that no one is left behind requires increased investment in accessibility. There is an inextricable link between investing in accessibility and achieving sustainable development that is inclusive of both persons with disabilities and the broader population, yet too often accessibility is inadequately included in sustainable development efforts.

To translate these elements from theory into practice, an accessibility perspective needs to be mainstreamed across both disability-specific laws and policies as well as other sectoral laws and policies which are not necessarily targeted to persons with disabilities.

Against this background, this report focuses on disability-inclusive procurement as a yet explored effective policy measure to create more accessible environment, information and services in societies.

Disability-inclusive public procurement can be categorized into two types: preferential contracting and procurement to promote accessibility. This paper focuses on the latter aspect. Through analysing two existing disability-inclusive public procurement policies in the world, the paper at the end provides policy recommendations for member States and other stakeholders in Asia and the Pacific. The analysis is preceded by discussion on disability and accessibility to provide a foundation for understanding the various dimensions of accessibility necessary to effectively invest in disability-inclusive public procurement.

II. What are disability and accessibility?

"The best shoes are the ones that you don't even know you are wearing".

Jim Harrison, Lecturer, Cork Centre for Architectural Education, Ireland

The concept of accessibility addresses the fact that everyone, in particular, persons with disabilities, require certain features in their living environment to prevent or remove barriers. These could be barriers to mobility, such as steps, or barriers to communication, if sight, hearing or comprehension is a challenge, to name just a few examples. In this regard, the 'accessibility' of something describes the level of access enjoyed by a broad range of people with differing characteristics.

'Access' differs from 'availability' and 'affordability' and focuses on ability of something to be experienced. Moreover, its scope is not confined to entering and exiting a physical environment or being able to retrieve information. Rather, access refers to the complete and

[15] United Nations ESCAP, 2017a. E/ESCAP/APDDP(4)/INF/1.

seamless interaction with an environment, good or service, on an equal basis with others. For example, accessible toilets facilities must allow for all users, including those with disabilities to use amenities without difficulties – door, lock, toilet, sink, hand dryer included. With regard, to online information, webpages and other media that are accessible, they must not only be easily retrieved, but also provide all users, including those with disabilities, with the option to edit, communicate and fully interact with the resources.

Making something accessible requires breaking down the barriers that can prevent certain people from experiencing it on an equal basis with others. This covers various dimensions, including access to the built environment, or physical surroundings such as buildings, parks and transportation; to information and communication, including informational and communication technologies, including media, literature, and entertainment, among others; and to services, which refers to the interaction with various types of support on a daily basis.

2.1 The evolving concept of disability

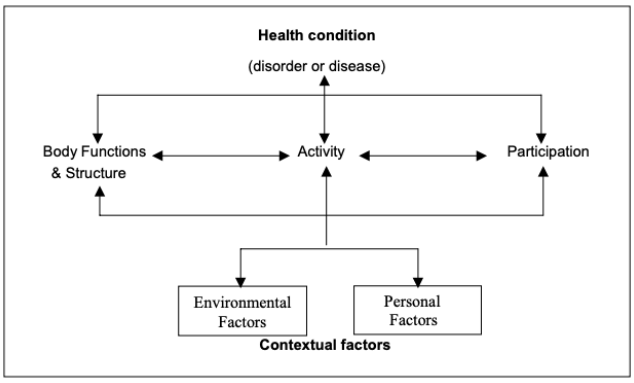
Historically, the common understanding of disability was that of a medical approach, focusing on medical diagnosis and attributes of an individual that affect a person, such as the inability to walk or breathe independently, and regarding treatment of these medical conditions as the ultimate objective. However, the social model of disability, which emerged as an antithesis of the medical model, is based on a distinction between the term's *impairment* and *disability*. In this model, the term *impairment* refers to the attributes of an individual, while the term *disability* refers to the restrictions on participation posed by society when inadequate and unequal attention and accommodation to the needs of individuals with impairments.[16]

The 2001 International Classification of Functioning, Disability and Health (ICF) recognized disability as "moving beyond simply understanding disability as a direct consequence of a health condition or impairment". According to the ICF, an impairment is defined as "problems in body function or structure such as a significant deviation or loss".[17] When the surrounding environment does not meet the needs of the individual given their impairment, a barrier is formed that limits the capacity of the individual in that situation.[18]

It is important to note that while the social model of disability accentuated the urgent need to break down institutional, legal, physical, informational and attitudinal barriers to participation, its binary juxtaposition between impairment and societal barriers to participation has more recently prompted more complex conceptualizations of disability. Currently, the bio-psycho-social model of disability builds upon the social model while asserting that disabilities are often due to illness or injury, the importance of the impact of biological, emotional and environmental issues on health, well-being, and function in society as well as personal experiences must not be neglected.[19]

[16] Scope Organization.
[17] WHO, 2001.
[18] United Nations ESCAP, 2016.
[19] WHO, 2002.

Figure 1. ICF diagram on disability



Source: WHO, 2001.

The CRPD provides definition-like description in Article 1 on persons with disabilities being "those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others."[20] This highlights a key aspect of understanding the social model of disability, which focuses on effective and meaningful participation of persons with disabilities. In recognizing disability restrictions on participation, the effective and meaningful participation of persons with disabilities is the intended outcome of any disability-focused activity or intervention. Moreover, as conveyed by the UN Human Rights Council, effective and meaningful participation is a fundamental component of representation and a precursor for individuals to act as agents of change.[21]

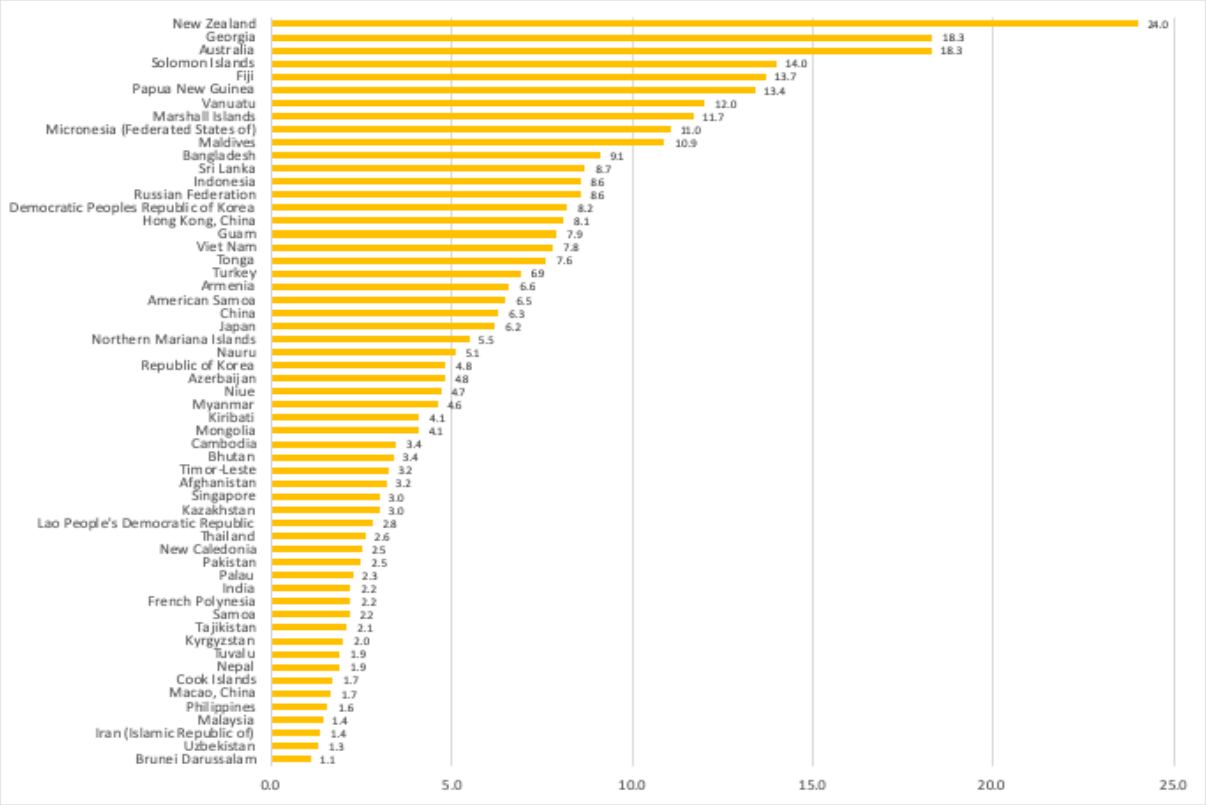
2.2 Beneficiaries of investing in accessibility

The evolving conceptual approaches to understanding disability are reflected in the varying definitions used in different contexts, and subsequently the varying implications when it comes to counting and supporting persons with disabilities. Figure 2 demonstrates the variance of prevalence of disability, caused by a combination of differing definitions and means of data collection. In Asia and the Pacific, the prevalence ranges from 1.1 per cent in Brunei Darussalam to 24 per cent in New Zealand.

The statistical variance regarding disability prevalence in the region raises a question: who benefits from investments in accessibility? Firstly, persons with disabilities are the obvious beneficiaries, as they continue to face barriers to participation in all aspects of society compared to their peers without disabilities. However, as demonstrated through the varying prevalence rates of disabilities from countries across the region, it is likely that many persons with disabilities are not being counted, and by extension their needs for accessible environments may not be met. In this regard, the returns on investing in accessibility for persons with disabilities likely go far beyond the number of persons with disabilities officially counted in national surveys and census data.

[20] United Nations General Assembly, 2006. A/RES/61/106, Article 1.
[21] United Nations Human Rights Council, 2016. A/HRC/31/62, para 13.

Figure 2. Disability prevalence in Asia and the Pacific, by country or area



Source: United Nations ESCAP data.

Examples of this are evident in the varying definitions of disability used by countries when calculating prevalence. For instance, in a 2013 survey conducted by the government of New Zealand disability was defined as any self-perceived limitation in activity resulting from a long-term condition or health problem lasting or expected to last six months or more and not completely eliminated by an assistive device. The resulting disability prevalence was 24 per cent.[22] In India, the 2011 census identified those with disabilities in terms of their experience of different levels of sight; hearing; speech; mobility; and mental illness; among other areas. The prevalence presented in this case was 2.21 per cent.[23]

Secondly, and with recognition of the underlying principles of accessibility, investing in accessible environments will benefit and support the needs of a much wider segment of population than conventionally considered – in fact, fully accessible environments benefit the entirety of the population by creating an equal basis for participation.

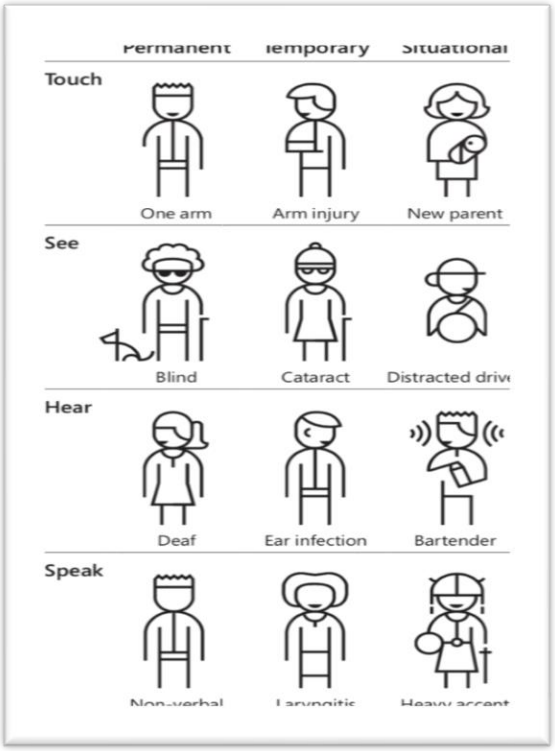
While differing legal definitions of disability between countries and cultures can pose challenges to measuring prevalence, taking a broader view of the barriers faced by persons with disabilities and the wider population on a daily basis can be helpful in building a more accessible world. As depicted in Figure 3 it is often persons with visible disabilities such as

[22] Government of New Zealand, Ministry of Health, 2013.

[23] Government of India, Ministry of Statistics and Programme Implementation, 2016.

amputation, blindness or deafness who tend to be the focus of the public consciousness when considering disability. As described above, these disabilities result from the interaction of their impairments with barriers in the environment. While these are long-term impairments, people who may face difficulties for a certain period of time, such as in touching, seeing, hearing, and speaking due to shorter-term impairments, for example, a broken bone, or an infection that limits sight or hearing, will often find similar barriers to access.

Figure 3. Understanding wider needs for accessibility



Source: Adapted from the Persona Spectrum within Microsoft's Inclusive Design Toolkit manual, Microsoft, 2016.

Going a step further, people experience needs for accessibility on a momentary basis in which one's surrounding environment limits their functionality. For instance, pregnant women and new parents with a baby in a stroller might have difficulties in moving up and down stairs, or in and out of settings in which a significant gap exists between two surfaces, such as buildings or transport. Other user groups, such as persons with heavy luggage, would also benefit from the integration of smooth and flat surfaces. Furthermore, a waiter and customer in an extremely noisy restaurant might face difficulty in understanding each other's spoken language. However, if visual representation of language, such as signage or captioning on a screen are available, the situational barriers disappear. Figure 4 shows a parking permit placard allowing persons with disabilities, older persons and pregnant women to use pre-designated parking space, exemplifying shared accessible service needs by those groups of people, alongside the more traditional symbol for accessibility that depicts a wheelchair user.

Figure 4. Parking placard in Japan and International Symbol of Access

Source: Saga Prefecture, Japan.[24] See also Manual on Uniform Traffic Control Devices, 2009.

It is clear that disability is not static, but rather a dynamic concept that is far reaching. Furthermore, need for accessibility can also depend on the situation. This broader view of multiple difficulties experienced both by persons with and without disabilities is helpful for looking at how accessibility measures can break down environmental barriers, as it demonstrates how investment in accessibility contributes to the common good for all of society. Nonetheless, it is important to also acknowledge the attitudinal barriers and discrimination experienced by persons with disabilities that are not faced by their peers without disabilities and undertake measures to ensure that persons with disabilities remain at the forefront of efforts to investment in accessibility.

2.3 Dimensions and principles of accessibility

Accessibility consists of multiple inter-connected dimensions that together contribute to building a fully accessible and inclusive world, all of which should be considered when looking to invest in accessibility. These dimensions are interconnected and inextricable, however for the purpose of understanding, it can be helpful to break these down to explore their specific characteristics and examples.

The most commonly considered dimensions of accessibility is that of the built environment. As the International Symbol of Access has been used around the world (see Figure 4), it gave an impression that accessibility is for wheelchair users only, however in reality it represents accessibility more broadly. The built environment includes areas in both public and private

[24] The sign states: Parking permit for persons with disabilities; Saga Prefecture; Those other than the one who obtained the permit are not allowed to use it.

spheres that facilitate physical access to different spaces and make everyday life easier and richer for all members of society. It encompasses elements such as ramps, lifts and tactile paths on pavements, floor materials, wayfinding tools in and around residences, offices, police stations; hospitals; courts; banks; shops; public toilets; parks; schools; polling stations; museums; and libraries, to name just a few examples.[25]

Related closely to accessibility of the built environment is accessibility of transportation, which facilitates mobility of people between different built environments. This dimension of accessibility includes vehicles such as cars, buses, trains and planes; transportation stops and hubs such as bus stops, taxi stands, train stations, parking areas and airports. Furthermore, it addresses passenger information and announcements on signs, screens, and over loudspeakers, which in particular has strong intersections with information, communication and technology accessibility.

Information and communication, including ICT, themselves have become an increasingly important and prominent dimension of accessibility as technologies develop. Film, television and radio are traditional media examples of these dimensions, while mobile phones, computers and tablets represent some newer iterations. The advent of the internet has spurred vast potential for harnessing technology for communications, which have likewise facilitated a number of new accessibility tools that go hand in hand, such as screen readers that facilitate text to speech for persons with hearing disabilities. In addition to these high-tech examples, it is, however, equally important to recognize low-tech forms of communication, including speech and written materials (books and newspapers), which can be made accessible through means such as producing Easy to Read or Braille versions.

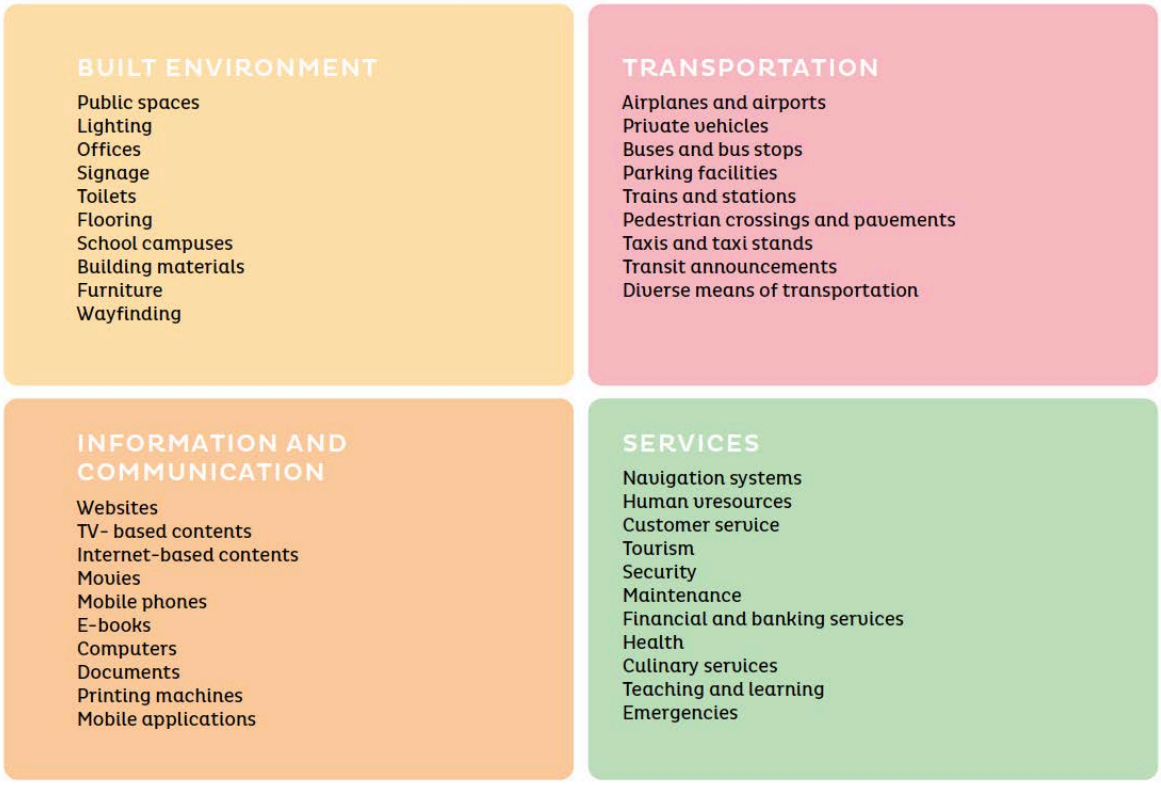
The fourth dimension of accessibility is services, which incorporate elements from each of the other dimensions, but is focused on human interaction and the ability to undertake daily tasks and errands and accessibility opportunities for personal growth and development. Figure 5 provides an overview of examples of different dimensions of accessibility.

One commonly held misperception is that accessibility of the built environment is for persons with physical disabilities, whereas accessibility of ICT and services are for persons with other disabilities. As outlined above, all dimensions of accessibility benefit persons with diverse disabilities. For instance, good lighting supports those who are partially sighted along with older persons. Easy to understand pictograms support persons with hearing impairments, persons who are deaf, and persons with intellectual disabilities. Communication services support wheelchair users checking in at the airport, and other communication assistance will assist persons with autism navigate moving around different places.

Parallel to the broad coverage of these dimensions of accessibility, an equally broad scope of society bears responsibility for making these parts of the world accessible. That is to say that it requires cross-sectoral and multi-stakeholder cooperation to build accessible environments that allow all persons to participate in political, social and cultural life on an equal basis.

[25] United Nations ESCAP, 2016.

Figure 5. Inter-connected dimensions of accessibility



Source: United Nations ESCAP design, adapted from diagram developed by Greg Alchin as part of the ESCAP Accessibility Assessment (internal document).

2.3.1 Universal Design

Ideally, *all* facilities, services, products and information available in society should be able to be accessed and used by the broadest range of users including persons with disabilities, older persons, and any other persons who have functional limitations in mobility, acquiring information, understanding people and communication. In a fully and truly inclusive and ideal society, all persons with disabilities should experience no barriers or sense any specialized "accessibility" features.

From a practical perspective, investment in breaking down barriers across the built environment, information and communication, and services can take place before, during or after an environment is constructed. However, given the collective responsibility for accessibility and the need for coordinated and cooperative approaches, planning is required from the outset of activities in order to leverage resources. It is for this reason that Universal Design is a key dimension of accessibility.

Universal Design is a design approach supporting this thinking and is often interchangeably used with terms such as design for all and inclusive design. This design approach distinguishes itself from a separatist approach illustrated in Figure 6, in which a ramp was set up with an intent only to help wheelchair users to get in and out of a building. This ramp

might be technically accessible for their movement, but quite demanding with winding slopes consuming more time and energy for wheelchair users. Possibly, designers were thinking that a ramp would be used only by wheelchair users infrequently. If a Universal Design approach were applied, a smoother way in and out of the building would be created allowing many other people in addition to wheelchair users to use it at ease.[26] The importance of Universal Design lies in the user experience, with an emphasis on access and use of facilities, goods, information and services with such ease that accessible features are not noticeable. Furthermore, dignity and safety of persons with disabilities should be always ensured in investing in accessibility.

Figure 6. Visualizing an accessible but not Universal Design-based environment

Source: Jim Harrison, Cork Centre for Architectural Education.

There are numerous examples of risks when not employing principles of Universal Design. For instance, late investment in accessibility – referred to as retrofitting – leads to a likelihood of increased cost compared to employing Universal Design principles in the planning stages.[27] Nonetheless, evidence demonstrates that in many instances the returns offset this cost.[28]

Furthermore, although accessibility upgrades are demonstrated to benefit the majority of society beyond only the estimated 15 per cent of the population classified as 'persons with disabilities', often in order to justify the additional expense of retrofitting, the need must be demonstrated through assessing the proportion of the population and how they will benefit from the provision of accessibility features – a challenging endeavour in which the case for universality of accessibility is left out.

Finally, retrofitting runs the risk of a 'pick and choose' approach, which can often result in important accessibility provisions easily being taken out in cases where budgets are tight. Box 1 illustrates an example of how accessibility without Universal Design principles can serve as a detriment to participation on an equal basis.

[26] Rossetti, R., 2006.
[27] Wentz, B., P.T. Jaeger and J. Lazar, 2012.
[28] United Nations DESA, 2015.

Box 1. Example of benefits of Universal Design

Consider a situation: *A crowd of people regularly attend an outdoor music festival event but only some of them have waterproof coats, most are unprotected against the rain.*

The organizers generously decide that they can make the unprotected people more comfortable by providing each of them an umbrella. The unprotected people are now dry and more comfortable however, the others are now less able to see the stage clearly because the umbrellas get in the way.

Then one intelligent member of management says "Why don't we build one big marquee over everyone? Then everyone will be kept out of the rain and sun and will also be able to see the event. It will be cheaper in the long run, too."

Source: Jim Harrison, Cork Centre for Architectural Education.

If society is designed based on Universal Design, fewer people will face barriers to participation. However, that does not deny that there will always remain specific accessibility requirements for certain groups and individuals. For example, Braille enables those who are blind and those with visual disabilities to understand written information alongside the printed text that those without disabilities would read. As technology and innovation improve, a means of communication other than Braille that allows persons with and without sight to understand on an equal basis would become an example of Universal Design. The prevalence of built-in screen readers in modern devices and software which facilitate text to speech conversion is an example of Universal Design in practice.

2.3.2 Reasonable accommodation

When accessibility through Universal Design still does not satisfy the requirements to break down barriers faced by persons with disabilities, on a case-by-case basis, reasonable accommodation serves as a solution. Reasonable accommodation is a legal term which refers to the provision of support, often through accessible goods or services, to individuals with disabilities to facilitate their access and to ensure their participation on an equal basis to persons without disabilities.

As a legal concept, reasonable accommodation involves two primary actors: duty bearers and rights holders. Provision of reasonable accommodation is requested by the rights holder (the

individual in need of support, often the person with disabilities) through a formal request to the relevant authority, and the duty bearer (often an employer, business owner, or institution responsible for the environment in question) are legally obliged to provide the requested accommodations unless doing so would impose a disproportionate or undue burden upon the provider. Reasonable accommodation is a right recognized by the CRPD, and failure to provide reasonable accommodation constitutes disability-based discrimination.

An example of a reasonable accommodation request in the workplace could be that of a deaf employee requesting his or her employer to provide a sign language interpreter to support communication while at work.

Reasonable accommodation is focused on an individual rather than a broader section of the population. In an ideal society, there would not be many requests for reasonable accommodations, as environments should already be Universal Design based, and accessible. However, maintaining a system for requesting and provision of reasonable accommodation is imperative in ensuring that all individuals have the support necessary for their effective and meaningful participation in society. In this regard, reasonable accommodation can be seen as a bridging measure to facilitate participation whilst accessibility through Universal Design investments are underway.

Take for instance a person with autism working in a company. She or he might request a mentor or support person who can support their effective communication and understanding with colleagues, create pictorial and visual timetables for work, and outline structured time use for working and breaks.[29]

2.3.3 Seamless connectivity

Seamless connectivity, which by definition allows persons with disabilities to move between environments, both physical and virtual, without barriers.[30] Seamless connectivity can be thought of as the combination of multiple accessible parts fitting into a singular accessible whole.[31] Without seamless connectivity, improvement of accessibility at one spot might not be impactful. For example, an accessible toilet facility on the third floor of a building might not be usable if persons with physical disabilities cannot reach there due to the lack of an elevator in the building.

Whilst in the virtual world, seamless connectivity could refer to an accessible mobile phone used to visit a website that was accessibly designed, through which someone can access real-time text to speech interpretation. Without seamless connectivity, individual pieces are not accessible by design, as the barriers between them inhibit the user from completing a task.[32]

[29] National Disability Authority, 2015.
[30] United Nations ESCAP, 2016.
[31] Ibid.
[32] Ibid.

2.3.4 Effective and meaningful participation

The concept of effective and meaningful participation comprises the two terms established in international agreements: full and effective participation; and meaningful participation. Full and effective participation can be broadly understood as participation in all aspects of society on an equal basis with others.[33] The concept of 'full and effective participation of persons with disabilities' sits alongside 'accessibility' as one of the Core Principles of the CRPD. It is a cross-cutting issue that is "present in the article on children with disabilities (art. 7), and in the articles that prescribe prerequisites for enabling participation such as those on accessibility (art. 9)."[34] In line with this, 'meaningful participation' refers to the direct involvement of individuals in decisions that affect them.[35]

Effective and meaningful participation of persons with disabilities can be understood as the outcome of successful implementation of accessibility, Universal Design and seamless connectivity, in which participation in all areas of society is on an equal basis with others. In addition to being an outcome, effective and meaningful participation is also a process-oriented term, which refers to the involvement of persons with disabilities in the design, implementation and monitoring of investing in accessibility. As noted by the Human Rights Council, participation "allows individuals to play a central role in their own development, as well as in the development of their communities."[36] In practice, this means going beyond tokenistic engagement such as inviting persons with disabilities for one consultation for abstract discussion. Whether in development of legal frameworks, drafting of blueprints for a building, or designing accessibility service provision mechanisms, persons with disabilities need to be effectively and meaningfully participating throughout the entire process to ensure impactful results that empower the participation of others.

III. How can disability-inclusive procurement policies achieve accessibility?

'It is unacceptable to use public funds to create or perpetuate the inequality that inevitably results from inaccessible services and facilities.

Committee on the Rights of Persons with Disabilities, Convention of the Rights of Persons with Disabilities General Comment No. 2 (2014) [37]

Public procurement refers to the process by which public authorities (procurers) purchase work, goods or services from an external contractor (supplier) which they have selected for this purpose'. Procured goods and services can include equipment (i.e., computers and

[33] United Nations General Assembly, 2006. A/RES/61/106, Preamble para e.
[34] United Nations Human Rights Council, 2016. A/HRC/31/62, para 15..
[35] WHO.
[36] United Nations Human Rights Council, 2016. A/HRC/31/62, para 13.
[37] United Nations Convention on the Rights of Persons with Disabilities (CRPD), 2014. CRPD/C/GC/2.

furniture), services (i.e., in schools, hospitals, ministries), public transport, built environment, infrastructure public works, urban planning, water supplies and waste treatment.

Public procurement is a considerable economic activity. For developing countries, public procurement amounts to an average of 15 to 20 per cent of Gross Domestic Product (GDP) and up to 50 per cent or more of government expenditure[38]. OECD countries are estimated to spend 12 per cent of GDP on public procurement.[39] In the EU, this percentage amounts to 17 per cent of the EU GDP, equivalent of more than EUR 1.9 trillion annually.[40]

If public procured goods and services are universal design-based or accessible, the purchasing power of governments can serve as an effective leverage to promote universal design-based society with the involvement of both public and private sectors.

As the Committee on the Rights of Persons with Disabilities states, it is unacceptable to use public funds to create or perpetuate the inequality that inevitably results from inaccessible services and facilities.[41] This supports a procurement incorporating accessibility perspective.

However, policymakers have largely overlooked public procurement to implement affirmative action and to mainstream and enhance accessibility.

Disability-inclusive public procurement can generally be categorized into two types: **preferential contracting** and **procurement to promote accessibility** (Figure 7). Preferential contracting aims to enhance the economic and social empowerment of persons with disabilities by awarding contracts to business entities or civil entities that hire persons with disabilities or are run by them or NGOs for person with disabilities, that meet certain criteria. On the other hand, procurement to promote accessibility incorporates accessibility and/or universal design standards into the bidding criteria when selecting the most appropriate supplier. This paper is focused on the latter.

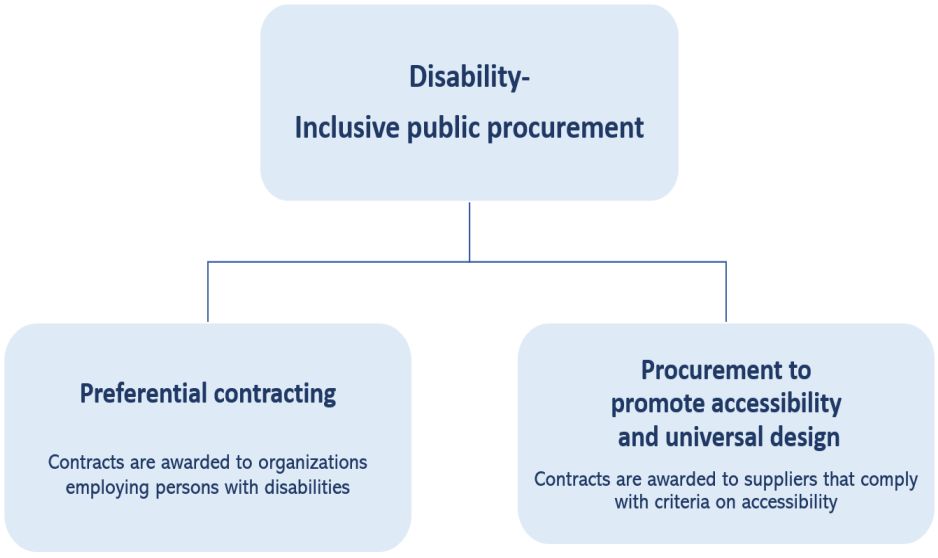
Countries like South Africa have maintained effective governance by enforcing laws which requires government entities implementing procurement policies to preference categories of people disadvantaged by unfair discrimination.[42] The Preferential Procurement Policy Framework Act (2000, amended in 2011) (PPPFA) provided a framework for implementing Constitutional section 217 (2,3). The Act provides a system to evaluate the tender process with a goal to contract persons, or categories of persons historically disadvantaged by unfair discrimination on the basis of race, gender or disability. Following amendment, the Act now applies to public entities in the schedules of the Public Finance Management Act and harmonizes with the 2003 Broad-Based Black Economic Empowerment (BBBEE) Act to favour persons covered by the BBBEE Act in the scoring system.[43]

[38] World Bank, 2015.
[39] Organisation for Economic Co-operation and Development, 2019.
[40] Public procurement is conducted by all levels of government in a country. Calculation of public spending on public procurement in a country should constitute a sum of all spending by all levels of a government. However, sources cited here did not indicate how they calculated the ratio of public spending on procurement.
[41] United Nations CRPD, 2014. CRPD/C/GC/2.
[42] Constitution of Republic of South Africa, 1996.
[43] Barcley C., 2012.

Speaking of effective governance, United Kingdom Public procurement complies with relevant principles of EU treaties. The 2006 Public Contracts Regulations[44] (regulation 7) and 2006 utilities Contract Regulation (regulation 10)[45] implement the EU procurement and utilities directives and have a provision for reserving contracts for supported businesses, factories or employment programs. Public authorities may reserve the right to participate in public contract award procedures. Supported employment programs, factory or businesses are establishments or services "where more than 50% of the workers are disabled persons who because of the nature or severity of their disability are unable to take up work in the open labour market." Supported employment programs are the same as 'sheltered employment programs' under the EU Directives.

Contracting authorities are required to indicate in the Official Journal of the European Union (OJEU) Contract Notice when a contract is "reserved for sheltered workshops under Article 19 of the Directive": Before taking the decision to reserve a contract, contracting authorities should consult with the market to establish whether or not supported factories and businesses will be able to meet their requirements and provide value for money.

Figure 7. Two types of public procurement relevant to disability-inclusion



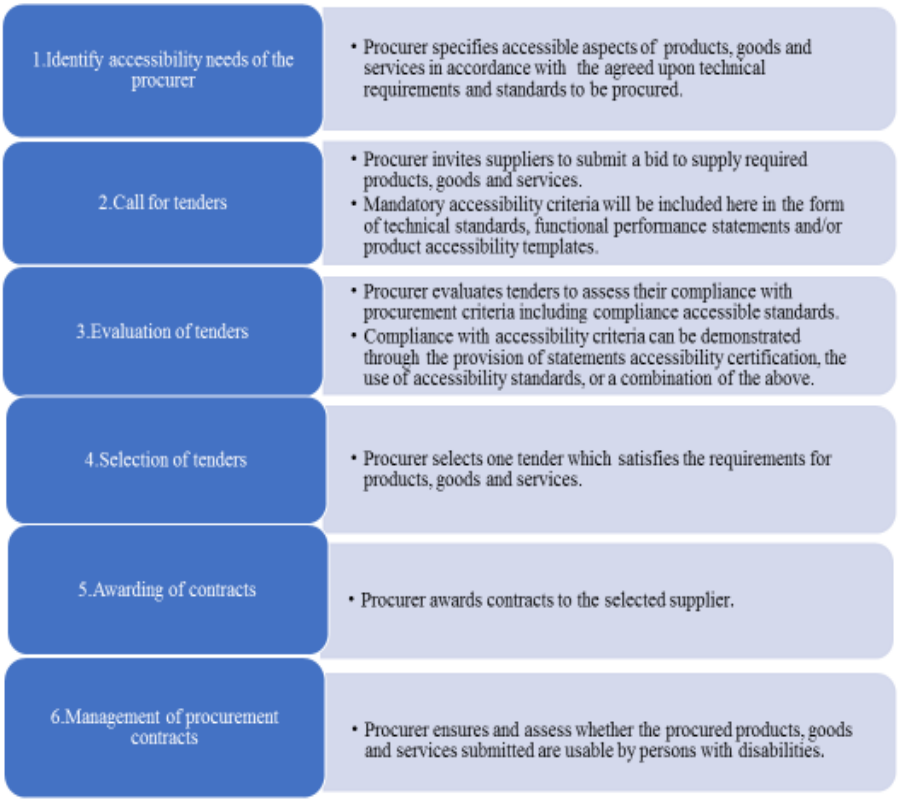
Source: ESCAP design.

[44] Public Procurement England and Wales, 2006a.
[45] Public Procurement England and Wales, 2006b.

3.1 How and why disability-inclusive procurement policy works to promote accessibility

The public procurement process generally consists of six key phases: firstly, to identify accessibility needs of the procurer; secondly, call for tenders; thirdly, the evaluation of tenders; fourthly, the selection of contracts, followed by the awarding of contracts and lastly, the management of procurement contracts (Figure 8).

Figure 8. Summary of a procurement process to promote accessibility



Source: ESCAP design.

A Disability-inclusive public procurement policy would include compliance with a technical accessibility standard as part of criteria for suppliers to be considered in bidding. Therefore, when soliciting suppliers to apply for bidding for a certain product, a government, first and foremost has to have technical standards in compliance with international standards such as (ISOs), then a government entity conducting procurement will have to inform that requirement to potential suppliers. Then, typically, suppliers wanting to participate in bidding are required to submit the written evidence that their product or service is accessible. The government entity which solicited tenders is required to check the product or service accessibility compliance through review. Technical standards used as criterion should be nationally recognized and compatible with international standards. A contract will generally be awarded to the most competitive supplier in accordance with their compliance with relevant procurement criteria, including fulfilment of accessibility standards. Generally, a disability-inclusive public procurement policy defines a scope of products and services this accessibility criterion is applied to.

Implementation of disability-inclusive public procurement policies could create an upward spiral of market-driven spread of accessible goods and services. First, incorporating universal design-based accessibility within public procurement, creates an incentive for suppliers to increase the production of accessible goods and services.

Then, the increased supply can lead to a ripple-on effect, providing a broader range of accessible goods and services available to consumers with diverse needs in the domestic market first, and later international markets as importing and exporting of accessible goods and services become more prevalent. As the availability of accessible goods and services becomes more widespread, healthy competition in the market ensues, thus leading to products and services that are more affordable, and the potential for the quality of universal design-based accessibility to improve. If more universal design-based accessible products and services are available in the market, not only persons with disabilities who have long term difficulties in different functioning but also those who have accessibility needs temporarily or situationally can benefit from them (see Figure 3).

Furthermore, this approach might be more cost-efficient. As mentioned in the previous section, in general, incorporation of universal design and accessibility at the initial stage of product and service design can limit further costs which may arise from modifying inaccessible goods or services at a later date. Moreover, as governments are obliged under the CRPD to remove all barriers to goods and services wherever they exist, retrofitting accessible goods or services should not be avoided due to the possibility of additional costs. Enforcing disability inclusive public procurement policies can also lead to cost savings for governments.

Box 2 below summarizes key international, regional and sub regional documents promoting disability-inclusive procurement policies.

Box 2. Key mandates on disability-inclusive procurement

(a) Beijing Declaration and Action Plan to accelerate the implementation of the Incheon Strategy

The Beijing Declaration, including the Action Plan to Accelerate the Implementation of the Incheon Strategy (Beijing Declaration) supports the Incheon Strategy by providing recommended actions for governments, civil society and ESCAP. In accordance with Goal 3 of the Incheon Strategy, governments are to incorporate universal design principles into relevant laws and adopt accessibility standards in the public procurement of all goods, services, and software to ensure accessibility for persons with disabilities. To do so, the Action Plan recommends Member States to develop, adopt and implement technical standards based on universal design and in line with international standards, and adopt a procurement policy to ensure that all government devices, goods, services and software are in line with accessibility standards. The Action Plan also encourages Member States to promote the adoption of procurement policies in the private sector.

(b) CRPD Committee General Comment No. 2 on Accessibility

As a supplementary document to CRPD, General Comment No. 2 provides important details on how states can address the issue of accessibility. As a form of affirmative action, the Committee states that governments should incorporate accessibility requirements within public procurement and establish accessibility standards and legislations.

(c) ASEAN Enabling Masterplan 2025: Mainstreaming the Rights of Persons with Disabilities

In the Southeast Asian sub-region, the Association of Southeast Asian Nations (ASEAN) adopted the ASEAN Enabling Masterplan 2025: Mainstreaming the Rights of Persons with Disabilities at the 33rd ASEAN Summit. Detailing key action points for Member States to follow, the Masterplan seeks to push for regional reforms towards 'fully implementing the CRPD at the national level, to eliminate discrimination, remove barriers, and ensure accessibility'.

The Masterplan recommends ASEAN members to promote products made by persons with disabilities to wider markets to increase demands for these products, including through national procurement policies and regulations, and knowledge enhancement of persons with disabilities on legislation including procurement policies.

Source: ESCAP, 2018; United Nations CRPD, 2014; Association of Southeast Asian Nations (ASEAN), 2018.

3.2 Case studies on disability-inclusive procurement incorporating accessibility standards

The next two chapters provide case studies of two existing disability-inclusive procurement policies to analyse the contents and implementation: the European Public Procurement Directive and the United States of America's Section 508 of the Rehabilitation Act. The European Public Procurement Directive is a regional initiative targeting all EU Member States while the United States of America's Section 508 of the Rehabilitation Act targets Federal departments and agencies within the country. Historically, Section 508 of the Rehabilitation Act was the first disability-inclusive public procurement policy in the world adopted in 1998. Sixteen years later in 2014, the EU passed the Directive. As the EU Directive is a regional initiative and the US law is a national initiative, positioning of these two initiatives vary. Therefore, the purpose of this case study is not to compare and contrast these initiatives on an equal footing, but to identify elements from both initiatives which could be beneficial for respective governments and sub regional intergovernmental organizations in Asia and the Pacific to emulate.

It is also worthy of mention that Australian Public Procurement Rules were adopted in 2016 two years after the EU action, with a clear intent of adopting the EU standard into the Australian context. In addition, European countries are developing their own disability-inclusive public procurement policies to comply with the EU Directive. Furthermore, during the second quarter of 2019, the government of Japan has started to develop disability-inclusive

public procurement policy covering some ICT products. While recognizing the value of these recent initiatives, this study focuses on the EU Directive and Section 508 of the Rehabilitation Act as they are relatively older initiatives with more substantive information available on policy and implementation than others which are more recently developed.

A Brief overview of initiatives by the governments of Australia and Japan are shared in Boxes 3 and 4.

IV. Promoting accessibility through public procurement in the European Union

4.1 European Union (EU) Public Procurement Directive: Overview

The European Union (EU) passed the Public Procurement Directive (PPD) 2014/24/EU of the European Parliament and the Council of 26 February 2014, which requires its Member States to utilize procurement to enhance accessibility[46]. The Directive was established in the context of the European Disability Strategy, 2010-2020, the region's policy response to implement the Convention on the Rights of Persons with Disabilities (CRPD)[47]. The EU ratified the CRPD in 2010 as a regional organization.[48] The Disability Strategy prioritizes accessibility as one of the priority areas.

According to Article 42 of PPD, for tenders to be considered in the bidding, suppliers must incorporate accessibility for persons with disabilities and design for all users into their products or services, unless justifiable circumstances within the technical specifications of the goods or services are demonstrated. The technical specifications should detail the characteristics of the goods or services that the public authority intends to purchase.[49]

In the EU, all Member States were obliged to transpose the PPD into national law by April 2016. As PPD is an EU law, failure to implement the PPD into national legislation would constitute non-compliance. A month after the deadline, 21 Member States were issued with a formal letter from the EU Commission notifying of non-compliance. The EU Commission is the EU's politically independent executive arm. In accordance with the European Commission infringement procedures, the European Commission referred Austria, Luxembourg, Slovenia and Spain to the Court of Justice for non-compliance for their failure to implement the PPD into national legislation. If found to be in breach of their obligations, these countries are required to pay a daily penalty ranging from €42,377.60 for Austria and €123,928.64 for Spain, until the PPD has been transposed and put in force within national laws.[50,51] With the enforcement of penalties for non-compliant Member States, nearly all EU Member States have adopted the PPD. As of July 2018, twenty-four EU member countries have transposed the PPD into national laws. As the European Commission has the legal

[46] EUR-Lex, Access to European Union Law, 2014.
[47] European Commission, 2010.
[48] European Commission, 2011.
[49] European Union, 2018.
[50] European Commission, 2017a.
[51] Ibid.

authority to propose and oversee the implementation of laws, Member States are held accountable to the effective implementation of procurement policies.

4.2 Accessibility requirements suitable for public procurement of ICT products and services in Europe (EN 301 549)

Accessibility standards play a key role in ensuring the highest levels of accessibility provided through public procurement. While a government can say that ensuring accessibility is important, specific accessibility requirements would help increase the scope of accessibility, and technical specification would provide practical references for those who produce products and services.

To support the implementation of country application of the PPD, the European Standards Organizations (ESOs) developed the Accessibility requirements suitable for public procurement of ICT products and services in Europe (also known as EN 301 549) as the common standard.[52] EN 301 549 provides a wide range of accessibility requirements and specifications. The standard is the first European standard for the procurement of accessible ICT and applies to websites, digital devices and software to be used by public authorities including biometrics (Table 1). EN 301 549 was developed along with three technical reports which together provide public procurers with a framework for the development of accessible ICT for all users. For example, the ICT Procurement Standard stipulates that all web content must conform with the Web Content Accessibility Guidelines (WCAG).[53]

EN 301 549 requires that all ICT products and services do not privilege one method of access by providing at least one mode of alternative accessibility. For example, computers must be usable not only through use of audio-to-text software for persons with disabilities but also through making it usable for those with limited hearing (Table 2).[54] EN 301 549 provides clear and harmonized guidelines for Member States to comply with accessibility standards. Consequently, Member States are equipped to use EN 301 549 to support the implementation of disability-inclusive procurement policies without the need to develop new accessibility standards within their respective countries.

To ensure conformity with accessibility standards, EN 301 549 recommends the use of functional performance statements by the procurer. Functional performance statements (FPS) detail the functional requirements for goods and services to be supplied.[55] The functional performance statement can provide detailed framework to define ICT accessibility for procurement purposes. Suppliers, in turn, are advised to respond to the FPS when submitting tenders. The FPS describes functional needs of those with diverse functional difficulties related to vision, perception, hearing, physical strengths, vocal capacity, seizure and cognition. At the same time, the FPS recognizes privacy of users with diverse functional needs.

[52] European Commission, 2005.
[53] European Telecommunications Standards Institute, 2015.
[54] CEN European Commission of Standardization.
[55] International Telecommunication Union and G3ict, 2014.

Table 1. Scope of accessibility defined by EN 301 549

Examples of ICT products and services covered by EN 301 549

- Electronic content
- Telecommunications products
- Computers and ancillary equipment
- Software and hardware
- Information kiosks and transaction machines
- Videos
- IT services including biometrics, ATM physical set up Multifunction office machines

Source: CEN/CENELEC/ETSI

Table 2. The functional performance statement template (FPS) used by EU

Functional performance statements from EN 301 549: "Accessibility requirements for public procurement of ICT products and services in Europe".

1. Meeting functional performance statements

- The statements set out in this box are intended to describe the functional performance of ICT enabling people to locate, identify, and operate ICT functions, and to access the information provided, regardless of physical, cognitive or sensory abilities. Any ability impairments may be permanent, temporary or situational.
- ICT meeting the applicable requirements of clauses 5 to 13 is deemed to have met a level of accessibility conformant with the present document and consistent with the user accessibility needs identified in clause 4.2 (Functional performance statements).

NOTE: Several users' accessibility needs rely on ICT providing specific modes of operation. If a user is to activate, engage or switch to the mode that complies with his or her user accessibility needs, the method for activating, engaging or switching to that mode is also expected to comply with the same user accessibility needs

2. Functional performance statements

2.1 Usage without vision

- Where ICT provides visual modes of operation, some users need ICT to provide at least one mode of operation that does not require vision.

NOTE: Audio and tactile user interfaces may contribute towards meeting this clause.

2.2 Usage with limited vision

- Where ICT provides visual modes of operation, some users will need the ICT to provide features that enable users to make better use of their limited vision.

NOTE 1: Magnification, reduction of required field of vision and control of contrast, brightness and intensity can contribute towards meeting this clause.

NOTE 2: Where significant features of the user interface are dependent on depth perception, the provision of additional methods of distinguishing between the features may contribute towards meeting this clause.

NOTE 3: Users with limited vision may also benefit from non-visual access (see clause 2.1).

2.3 Usage without perception of colour

- Where ICT provides visual modes of operation, some users will need the ICT to provide a visual mode of operation that does not require user perception of colour.

NOTE: Where significant features of the user interface are colour-coded, the provision of additional methods of distinguishing between the features may contribute towards meeting this clause.

2.4 Usage without hearing

- Where ICT provides auditory modes of operation, some users need ICT to provide at least one mode of operation that does not require hearing.

NOTE: Visual and tactile user interfaces may contribute towards meeting this clause.

2.5 Usage with limited hearing

- Where ICT provides auditory modes of operation, some users will need the ICT to provide enhanced audio features.

NOTE 1: Enhancement of the audio clarity, reduction of background noise, increased range of volume and greater volume in the higher frequency range can contribute towards meeting this clause.

NOTE 2: Users with limited hearing may also benefit from non-hearing access (see clause 2.4). EN301 549 V1.1.1 (2014-02)

2.6 Usage without vocal capability

- Where ICT requires vocal input from users, some users will need the ICT to provide at least one mode of operation that does not require them to generate vocal output.

NOTE 1: This clause covers the alternatives to the use of orally-generated sounds, including speech, whistles, clicks, etc.

NOTE 2: Keyboard, pen or touch user interfaces may contribute towards meeting this clause.

2.7 Usage with limited manipulation or strength

- Where ICT requires manual actions, some users will need the ICT to provide features that enable users to make use of the ICT through alternative actions not requiring manipulation or hand strength.

NOTE 1: Examples of operations that users may not be able to perform include those that require fine motor control, path dependant gestures, pinching, twisting of the wrist, tight grasping, or simultaneous manual actions.

NOTE 2: One-handed operation, sequential key entry and speech user interfaces may contribute towards meeting this clause.

NOTE 3: Some users have limited hand strength and may not be able to achieve the level of strength to perform an operation. Alternative user interface solutions that do not require hand strength may contribute towards meeting this clause

2.8 Usage with limited reach

- Where ICT products are free-standing or installed, the operational elements will need to be within reach of all users.

NOTE: Considering the needs of wheelchair users and the range of user statures in the placing of operational elements of the user interface may contribute towards meeting this clause.

2.9 Minimize photosensitive seizure triggers

- Where ICT provides visual modes of operation, some users need ICT to provide at least one mode of operation that minimizes the potential for triggering photosensitive seizures.
- Where ICT provides visual modes of operation, some users need ICT to provide at least one mode of operation that minimizes the potential for triggering photosensitive seizures.

NOTE: Limiting the area and number of flashes per second may contribute towards meeting this clause.

2.10 Usage with limited cognition

- Some users will need the ICT to provide features that make it simpler and easier to use.

NOTE 1: This clause is intended to include the needs of persons with limited cognitive, language and learning abilities.

NOTE 2: Adjustable timings, error indication and suggestion, and a logical focus order are examples of design features that may contribute towards meeting this clause.

2.11 Privacy

- Where ICT provides features that are provided for accessibility, some users will need their privacy to be maintained when using those ICT features that are provided for accessibility.

NOTE: Enabling the connection of personal headsets for private listening, not providing a spoken version of characters being masked and enabling user control of legal, financial and personal data are examples of design features that may contribute towards meeting this clause

Source: International Telecommunication Union and G3ict, 2014.

4.3 Recent developments: European Accessibility Act and Design for All - Accessibility following a Design for All approach in products, goods and services - Extending the range of users

The recently adopted European Accessibility Act (EAA) in 2019 takes the EU's forgone disability-inclusive public procurement to another level. The Act mandates that products and services must employ a 'design for all' approach: equivalent to a universal design approach with a wider category of goods and services than what is stipulated in Article 42 of PPD. Member States and companies in the EU region are obliged to ensure that products and services meet accessibility requirements as seen in the Table 3.[56] The EAA is not a procurement policy per se, but the accessibility requirements stipulated in it will also apply in the areas of public procurement, thus, in effect, the public procurement of these goods and services specified in the Act would also have to comply with the specified accessibility requirements.[57],[58] Member States have three years to transpose the EAA into national law and 6 years to apply it.[59]

Alongside the EAA, Design for All - Accessibility following a Design for All approach in products, goods and services - Extending the range of users (also known as EN 17161:2019) was published,[60] serving as a guide for companies to adopt a universal design approach in designing goods and services. Framed by universal design principles, EAA and EN 17161:2019 can be perceived as an overarching legislation and standard that work towards ensuring accessibility in both public procurement and the larger private sector market. These new initiatives mark a significant step towards mainstreaming universal design-based accessibility in the EU.

[56] European Commission, 2019.
[57] European Commission, 2015a.
[58] International Telecommunication Union, 2019.
[59] EU Reporter, 2019.
[60] CEN European Commission of Standardization, 2019.

Table 3. Scope of accessibility defined by EN 17161:2019

Examples of ICT products and services covered by EN17161:2019

- Computer and operating systems
- Automated Teller Machines
- Ticketing and check-in machines
- Telephones and smartphones
- TV equipment related to digital television services
- Telephony services and related equipment
- Audio-visual media services such as television broadcast and related consumer equipment
- Services related to air, bus, rail and waterborne passenger transport

Box 3. Commonwealth Procurement Rules and the Australian Accessibility ICT Procurement Standard

The government of Australia adopted the EU standard within their national law. The 'Accessibility requirements suitable for public procurement of ICT products and services' (also known as the AS EN 301.549:2016) was incorporated as part of the 'Procurement Framework' within the Commonwealth Procurement Rules, which requires all tender responses and contracts for procurement by all non-corporate Commonwealth entities to comply with the standard.[61] A joint initiative by the national standards body, Standards Australia and the Federal Department of Finance, the Australian ICT Procurement Standard assists Federal departments and agencies in the development and procurement of accessible ICT goods and services.[62] The incorporation of the Australian ICT Procurement Standard within the mandatory Commonwealth Procurement Rules help ensure that suppliers for ICT goods and services are selected according to accessibility criteria. This has supported the public sector-wide procurement of accessible ICT.

For the Australian government, procurement is a centralized process overseen by the Department of Finance. All government departments and agencies are required to submit annual reports to the Finance minister and relevant departmental ministers. To monitor compliance, the Commonwealth Procurement Rules require all tender responses and contracts for the procurement of goods and services to comply with the Australian ICT procurement standard, where applicable.[63] The annual reports must detail the relevant department or agencies' compliance with the Commonwealth Procurement Rules. Any instances of non-compliance with the Rules must be reported.[64] In accordance with the Commonwealth Procurement Rules, non-compliance of the Commonwealth Procurement Rules may result in criminal, civil or administrative action against government officials.[65]

[61] Australian Government, Department of Finance, 2019, rule 2.2.
[62] Australian Government, Department of Finance, 2019.
[63] Australian Government, Department of Finance, 2019, rule 10.10.
[64] Ibid., rule 2.3.
[65] Media Access Australia, 2016.

4.4 Multiple contexts for the EU disability-inclusive public procurement

It is certainly true that the PPD and EAA initiatives are driven by the EU' collective realization that the region will have to promote accessibility rights of persons with disabilities. At the same time, these initiatives are the EU's response to its changing demography, a consequential need for region-wide accessibility and interoperability of products and services, as well as a prospect for business efficiency.

Regarding the demography, a report by the EU estimates that in 2020, approximately 120 million persons will have some form of disability, constituting approximately 16 per cent of its projected total population. Furthermore, the report states that the ratio of those older than 65 years of age was 17.4 per cent in 2010, however, these figures are expected to increase to 25.6 per cent in 2030. In addition, the report states that the population of older persons will almost double from 87.5 million in 2010 to 152.6 million in 2060.[66]

Against this background, the EU recognizes that there will be more people who have functional difficulties in the region whom will directly benefit from accessible goods and services. An EU survey compiled in 2012 amongst its citizens revealed that seven out of 10 Europeans believe better accessibility of products would significantly improve the lives of persons with disabilities, older persons and others with accessibility needs.[67]

Prior to the development of the PPD and EAA, EU Member States had independent and differing accessibility laws and standards, leading to regulatory fragmentation in an EU market. The establishment of the EN 301 549 and EN 17161:2019 enabled EU Member States to use a set of common accessibility standards and requirement, which will then enable easier cross border trade and interoperability of accessible goods and services throughout the EU region.

In monetary terms, the market costs for companies and Member States owing to fragmented accessibility requirements before the adoption of the united standards and requirements in the EU are estimated at 20 million Euro. Whereas the proposed action is estimated to reduce the private sector's adjustment cost by 45 to 50 per cent.[68] Furthermore, the survey indicated that 78 per cent of EU citizens feel that having common rules on accessibility in the EU will make it easier for companies to operate in another EU country.

[66] European Commission, 2017b.
[67] European Commission, 2012.
[68] Brussels Chamber of Commerce.

V. Promoting accessibility through public procurement in the United States of America

5.1 Section 508 of the Rehabilitation Act and Section 508 Standards

Ahead of the EU, the United States began to promote accessibility through public procurement in 1998, when Section 508 came into effect as an amendment of the Rehabilitation Act.[69,70] The revised Act prohibits discrimination on the basis of disability in employment practices, federal financial assistance and ICT developed, used and procured by the Federal government.[71] According to the Act, individuals with disabilities who are Federal employees should be able to access and use information and data on an equal basis with employees without disabilities. Furthermore, individuals with disabilities who are members of the public should be able to access and use information and data on an equal basis with their counterparts without disabilities.

The Rehabilitation Act itself was initially developed in 1973 to prohibit disability-based employment discrimination in the context of Federal agencies. The Americans with Disabilities Act enacted in 1990, this landmark comprehensive anti-discrimination law on disability introduced a concept of reasonable accommodations and underscored the critical importance of ensuring accessibility for persons with disabilities.

Against this background, Section 508 of the Act requires the Architectural and Transportation Barriers Compliance Board (commonly known as the Access Board) to develop accessibility standards. The accessibility standards, known as Section 508 Standards, must be applied by Federal departments and agencies when procuring electronic and information technology (EIT) products and services.[72] EIT includes, but is not limited to, telecommunication products such as telephones, information kiosks and transaction machine, worldwide websites, multimedia, and office equipment such as copiers and fax machines. In focusing on EIT instead of ICT, Section 508 Standards encompass a broader scope than ICT as it extends to all electronic and information technology products and services beyond the realm of ICT.

To ensure that accessibility standards are up-to-date and reflect technological advancements, Section 508 also requires the Access Board to update Section 508 Standards periodically.[73] For example, an update in 2017, known as 'ICT Refresh', further aligned Section 508 standards with the EU ICT accessibility standard and the Web Content Accessibility Guidelines (WCAG).[74] Federal agencies have one year after the publication of the final rule to comply with the updated Section 508 Standards.[75] The Standards have also been incorporated into the Federal Acquisition Regulation.[76]

[69] United States Access Board.
[70] Section 508 was originally added to the Rehabilitation Act in 1986. In 1998, the then voluntary guidelines were amended to become an enforceable obligation for all Federal agencies.
[71] United States Department of Labor, 2018.
[72] United States Access Board, 2001.
[73] United States Access Board, 2017.
[74] United States Access Board, 2019a.
[75] United States of America, Architectural and Transportation Barriers Compliance Board, 2017.
[76] United States Department of Justice, 2015.

5.2 Compliance and monitoring mechanisms

Implementation of section 508 applies a concept of reasonable accommodation in the compliance process. Agencies are obligated to comply with Section 508 unless such provision would cause an undue burden on the provider, and other exceptions are granted. Undue burden is defined by Congress as 'an action requiring significant difficulty or expense'. The meaning of significant difficulty or expense is to be determined by the specific circumstances of each case. If a Federal department or agency decides that compliance with Section 508 Standards results in an undue burden, the department or agency must detail the reasons and extent of the burden and provide alternative information, data, products or services to the Federal employee or member of public.

Each federal agency must revise accessibility policies in accordance with Section 508 Standards within 6 months of its update. Failure to revise accessibility policies may result in adversely affected individuals filing a complaint for non-compliance against a federal agency or department.

To ensure compliance with Section 508, the government employs a multitude of monitoring and support mechanisms, including: complaints process, appointment of Section 508 coordinators, establishment of United States Accessibility Committee as a coordinating body, use of Voluntary Product Accessibility Templates and a reporting system.

Firstly, individuals may lodge administrative complaints to the Federal department or agency which is alleged to be in breach of Section 508. Section 508 coordinators who oversee activities related to Section 508 in each agency will then assess the case. If the Federal agency is found to be in breach, injunctive relief may be ordered on behalf of the aggrieved individual. Injunctive relief, also known as an "injunction," is a "legal remedy that may be sought in a civil lawsuit, in addition to, or in place of, monetary damages. Rather than offering money as payment for a wrong in a civil action, injunctive relief is a court order for the defendant to stop a specified act or behaviour." [77] Therefore, in this case, agencies who are found to be in breach will need to cease incorrect procurement of accessible EIT goods and services.

Individuals may also file civil action against a Federal agency for failing to comply with Section 508.[78]

In addition to assessing complaints, Section 508 coordinators also work within agencies to disseminate information and technical assistance, coordinate training and information sessions, review requests for accommodation and/or exemptions, and support the Section 508 program team to help ensure coordination of efforts within the agency.

Supporting Section 508 coordinators to ensure compliance, the United States Accessibility Committee provides a forum for inter-agency dialogue and collaboration to support the implementation of Section 508 by agencies. Alongside the Access Board, General Services

[77] Further explanation: Legal Dictionary.
[78] United States Access Board, 2019b.

Administration and Department of Justice, the Committee helps to build the capacity of procurers and suppliers to meet Section 508 standards through the sharing of best practices, promoting research and providing training resources to key stakeholders.[79]

Additionally, Voluntary Product Accessibility Templates (VPATs) are used to support the development, procurement, maintenance and use of accessible EIT products and services in compliance with Section 508 and its standards.[80] The VPAT is a statement of conformity used by suppliers to demonstrate how their goods or services comply with accessibility standards. This practice is equivalent to the functional performance statements required by the EU. Such additional compliance mechanisms can serve as a key support to effective and transparent disability-inclusive procurement policies. The VPAT contains documentation on Section 508 (2017 Refresh), Web Content Accessibility Guidelines (WCAG) 2.0 Success Criteria & Conformance Requirements (Levels A, AA, AAA) as well as the European Accessibility standards EN 301.[81] The use of VPATs has been highly regarded by disability advocates, with accessibility advocates proposing to implement it in Japan (Box 4).

Finally, the United States also has an established reporting system, where the Attorney General and the Department of Justice are required to submit a biennial report detailing the Federal agency's compliance with Section 508 to the President and Congress. For the Attorney General to prepare the biennial report, Federal agencies are required to complete a self-evaluation survey provided by the Department of Justice with information on compliance with Section 508.[82] Upon receiving the findings, the Department of Justice is tasked with publishing the biennial reports from the submitted agency surveys.[83] The reporting system, along with an oversight body, thus holds departments and agencies accountable to the implementation of effective procurement policies and contracts.

5.3 Implementation gaps and challenges

Twenty years have passed since the adoption of Section 508, and to date, a report of the survey conducted in 2011 by the Department of Justice seems to be the only available document providing information and insight on the implementation gaps and challenges. The survey requested data in four categories: general processes for implementing Section 508; procurement; administrative complaints and civil actions; and website compliance. Federal agencies, including cabinet level agencies, independent agencies, and board, commissions and committees responded to the survey. The agencies further identified a total of 318 components whom each of the agencies identified as responsible units for each of the four categories referenced above. The breakdown of differing sizes of the responding agencies are shown in Table 5 below.

[79] Chief Information Officers Council, 2019
[80] K&L Gates, 2004.
[81] North Carolina State University.
[82] United States Department of Justice.
[83] Ibid.

Table 4. Breakdown of responses from federal agencies to the Department of Justice Survey on the implementation of Section 508 of the Rehabilitation Act

Size of agencies	Number of employees	Number of responses to the survey
Very large	25,001 or more employees	26
Large	10,001 to 25,000 employees	26
Mid-size	1,001 to 10,000 employees	18
Small	101 to 1,000 employees	6
Very small	100 or fewer employees	13

Source: United States Department of Justice.

Survey results indicate mixed levels of success. According to the summary report, 51 per cent of agency components had a general policy to implement and comply with Section 508. Around 50 per cent of agency components had established specific accessibility policy for software, websites, telecommunication products, video and multimedia and desktop and portable computers. Nearly 70 per cent of agency components had appointed a Section 508 coordinator, but only 35 per cent of agency components had established a Section 508 office or program. Among the agency components that had established a Section 508 programme, an average 2.5 full time equivalent staff persons are allocated with a median budget of 35,000 USD.

Regarding procurement, 70 per cent of the responding 318 agencies components used general language, stating compliance with Section 508 when soliciting EIT products' bidding while only 48 per cent of them use specific applicable technical requirements for a particular EIT product to be procured. Only 28 per cent of the responding agencies components used the VPAT for tenders to use. When a procuring agency reviews tender's application, 60 per cent of agency components reviewed only materials submitted, while 46 per cent tested products in-house.

Amongst exceptions granted for the accessibility requirement, undue burden was not the major reason. Ten per cent of the 318 responding claimed undue burden as a reason while 32 per cent claimed that products were to be located in space only by service personnel for maintenance, repair, or occasional monitoring. Whereas, 18.6 per cent of respondents claimed that fundamental alternation would be necessary if complying with Section 508.

When asked about challenges in implementing and complying with Section 508, the three most common challenges identified were a lack of resources, general awareness, and training. Details of the complaints were not available from the report. Nearly 60 per cent of the responding agencies components had not provided any Section 508 training, thus, supporting a claim that lack of training constituted a major challenge for implementation.

Box 4. Proposal for the use of VPATs in Japan

In Japan, the journey to promote accessibility through public procurement has just begun. The key driving force stems from the Committee Towards Realizing an Inclusive Society Utilizing Digital Technologies (*Dejitaru Katsuyou Kyousei Shakai Jitsugen Kaigi)*, under the auspices of the Ministry of Internal Affairs and Communications. Inspired by the European Standard EN 301 549 and Section 508 of the United States Rehabilitation Act, the Committee recommends an additional rule to existing procurement rules - the submission of a Japanese version of Voluntary Product Accessibility Templates (VPATs). This additional rule aims to include an accessibility criterion for the bidding of public procurement tenders and would apply to all ministries in Japan when procuring ICT products and services. With extensive lobbying by the Committee, the government has committed to adopting the proposed recommendation. A new committee will be established to oversee this development, comprising of representatives from the government and industrial organizations such as the Communications and Information Network Association of Japan and Japan Business Machine and Information System Industries Association. A key task of the new committee would be the formulation of a list of digital ICT goods and services to be covered by the new rule.

In Japan, JEITA (Japan Electronics and Information Technology Industries Association) has translated EN 301 549 to ascertain the discrepancies between the current Japanese standards on procurement against its legal and technical background (as well as for companies entering the EU market. The standardization body specializing in the technical areas related ICT is ASTAP of the Asia-Pacific Tele community, which has an expert group on Accessibility and Usability.

Source: Interview with Jun Ishikawa, Chair of Japan's Subcommittee on Ensuring Accessibility and Commission of Disability Policy, 19 April 2019.

Table 5. Summary of procurement initiatives to promote accessibility by the EU, and the United States

	European Public Procurement Directive	**United States of America's Section 508 of the Rehabilitation Act**
Year of adoption	2014	1998
Target	EU members	Federal departments and agencies
Scope of goods and services covered	ICT goods Computers, ATM, biometrics, two-way digital communications, website,	EIT includes, but is not limited to, telecommunication products such as telephones, information kiosks and transaction machine, worldwide websites, multimedia, and office equipment such as copiers and fax machines.
Disability covered	Vision, hearing, physical strength, vocal capacity, seizure, cognition,	
Applicable Technical standards	EN 301 549 (ICT products and services) in 2014 and EN 17161:2019 (universal design for all products and services)	United States of America's Section 508 Standards (EIT products and services)
Exemption	In justifiable circumstances within the technical specifications of the good or service	Fundamental alternations Undue burden on ministries
Supporting legislation	- Mandates 376 and 473 - European Accessibility Act	- Americans with Disabilities Act 1990
Monitoring and support mechanisms	- European Commission holds Member States accountable for the effective implementation of PPD in national contexts - Functional Performance Statements	- Section 508 coordinators to ensure compliance and assess complaints - Self-evaluation surveys and biennial reports submitted to the President and Congress by the Attorney General and the Department of Justice - Voluntary Product Accessibility Templates - Functional performance criteria - Accessibility Committee to facilitate inter-agency dialogue and collaboration
Oversight body	European Commission	Department of Justice

Grievance procedure	N/A	Individuals to make administrative complaints or take civil action against federal departments and agencies
Penalty	- Non-compliance will be referred to the Court of Justice - Daily penalty to be paid until PPD has been effectively transposed by each EU Member State	Failure to revise accessibility policies to match updated standards may result in adversely affected individuals filing a complaint for non-compliance against a federal agency or department

VI. Lessons learnt

Overview of these two initiatives on disability-inclusive public procurement provides a set of lessons which could be useful for Member States and other stakeholders in the region to plan on developing and implementing disability-inclusive public procurement policies.

6.1 Strengths of regional initiative and penalty-based enforcement

First, it is effective to have a regional initiative action to induce national level action on disability-inclusive procurement to create desired effects amongst many countries. As this paper examines the case of the EU Directives, wherein EU Member States are under obligation to implement PPD into national legislations, if found to be in breach of their obligation, they shall be charged with penalty, where they are required to pay a daily penalty ranging from €42,377.60 for Austria and €123,928.64, for Spain. In the Pacific, the Pacific Framework for the Rights of Persons with Disabilities: 2016-2025 (PFRPD) serves as the disability framework. However, it does not have any recommendations on disability-inclusive procurement. The ASEAN Enabling Masterplan 2025: Mainstreaming the Rights of Persons with Disabilities recommends disability-inclusive public procurement, but that does not have enforcement power.

6.2 Awareness raising and capacity building

In European countries and the U.S.A., the importance of accessibility was already recognized by laws and regulations and by relevant policy makers before the establishment of disability-inclusive procurement policy. The EU ratified the Convention on the Rights of Persons with Disabilities in 2010 and has been working on promoting accessibility in consultation with organizations of persons with disabilities in the region. The U.S.A adopted the world's first anti-discrimination law on disability in 1990, and a body of case laws on disability and accessibility has been accumulated. Hence, it is key for policy makers across different ministries to be aware of the importance before thinking about developing disability-inclusive procurement policy.

In Asia and the Pacific, understanding of accessibility varies from country to country, and in some developing countries, policy makers tend to think that improving accessibility is not affordable, hence, development assistance both in terms of finance and technical knowledge

are needed. At the same time, a portion of the private sector in the region might not be aware of business opportunities arising from producing accessible products, goods and services, and technical know-hows creating them. Furthermore, users with disabilities who reside in many developing countries might not be aware of how accessible products, goods and services are helping their mobility, access to information and services, simply because they did not exist before. All things considered, opportunities that support capacity building of all three of these groups of stakeholders would better support development and implementation of disability-inclusive procurement policy.

6.3 Enforcement

Having either stringent enforcement mechanisms or giving incentives to responsible parties seems to be an effective way to enhance implementation of any laws and regulations. The PPD Article 42 in the EU is effective as it is not merely encouraging its Member States to adopt the laws but also financially penalizing those who have not done so. Obviously, the PPD has "teeth" in its enforcement conducted by the European Commission.

On the other hand, an implementation report of section 508 of the Rehabilitation Act indicates multiple challenges. In theory, anti-discrimination legislations provide an effective legal mechanism to support the development of disability-inclusive procurement policies. By streamlining anti-discrimination legislation with accessibility standards, any denial of access to physical, information and communication environments and services available to the public would amount to disability-based discrimination and persons who have been denied should have access to comprehensive legal remedies. It is also note-worthy that the Ministry of Justice involved in the United States, under section 508 of the Rehabilitation Act, users with disabilities, who use ENIT procured products be it Federal agencies, employees or others, can lodge complaints against a Federal agency stating that the lack of accessibility of a certain product constitutes disability-based discrimination. This could be done administratively and/or through judicial action.

Often, complainants bear the full onus to prove the existence of discrimination. This demotivates persons with disabilities from pursuing grievances. In the case of section 508, 140 administrative complaints had been filed across all agencies since 2001, claiming breach of Section 508 with most complaints lodged against large and very large agencies. Only seven civil actions had been filed against them during the same period.

In terms of compliance by Federal agencies, even after 10 years of its enactment, nearly 50 per cent of relevant agencies components did not have institutional policies on accessibility, and only 35 per cent of agency components had established a Section 508 office or program.

In addition, in judging quality of accessibility of candidate supplier's products, agencies seem to rely more on documents without testing the proposed products. Experts point out that, often, procurement officers who receive a VPAT would not have the required skills to fully understand and make judgement about its content and tend to prefer simpler applications

from tenders. Furthermore, if a procuring officer is reviewing only submitted materials, they might run the risk of not being able to detect falsified claims on accessibility.

Common challenges identified by Federal agencies in implementing section 508 were a lack of general awareness, resources and training.[84] Training could enhance awareness of those who are at the forefront of dealing with bidding processes. The important logic and message underpinning training should be that effective implementation of disability-inclusive procurement will ultimately contribute to a more inclusive and accessible society for all, including persons with disabilities, as explained earlier in this paper.

6.4 Comprehensive and common accessibility standards

As the effectiveness of procurement policies hinges on the quality of accessibility standards used, it is crucial to ensure that the standards used are rooted in key principles of universal design, comply with international standards, and provide a holistic coverage of all aspects of accessibility. The EN 301 549 is a good example as it was produced by the European Committee for Standardization (CEN), the European Committee for Electrotechnical Standardization (CENELEC) and the European Telecommunications Standards Institute (ETSI) in response to a request from the European Commission (Mandate 376). It was developed by an international team of experts, with participation of the ICT industry and organizations representing consumers, persons with disabilities and older persons.

At the United Nations level, the International Telecommunication Union (ITU), the special agency of the United Nations for ICT, is collaborating closely with the European Commission to standardize the procurement of ICT products and services.[85] In 2018, ITU renewed its mandate in ICT accessibility that includes the establishment of the new Connect 2030 agenda, which sets out the vision, goals and targets that ITU and its Member States have committed to achieve by 2023. Connect 2030 includes an ambitious target directed at cultivating an ICT sector that is inclusive to persons with disabilities and specific needs.

Another important aspect of technical standard is interoperability across different countries. The EN 301 549 is a response to a challenge of fragmentated technical standards used in different EU countries. As mentioned above, the establishment of common standards made it easier for the private sector to conduct business in the EU single market by producing the same accessible goods and services. Going beyond the continent of the EU, section 508 in the United States also incorporated the EN 301 549. In Asia and the Pacific, Australia and Japan seem to be following suit of the EU and American actions. If more countries in Asia and the Pacific follow suit, it would increase ease for the private sector to distribute the same accessible products and services to be available in wider markets.

[84] United States Department of Justice.
[85] International Telecommunication Union, 2017.

6.5 Limited scope of accessibility

At this point, all disability-inclusive procurement policies tend to focus on ICT-related goods. In theory, built environment, public transportation, and other non-ICT products and services should be accessible. The recent EN 17161:2019 under the EEA expands the scope of accessibility, providing a model to the rest of the world.

6.6 Limited coverage of disability-inclusive procurement policy

If pursuing due diligence for implementing international and regional mandates on accessibility, disability-inclusive public procurement policies should cover governments at all levels. However, at this point, existing policies and initiatives seem to cover only national levels. Therefore, a further way forward would be that central government will also obligate local governments to follow the same disability-inclusive public procurement policies or that local governments would establish and implement their own disability-inclusive procurement policies. The choice will depend on the political system of a government and leadership of policy makers.

6.7 Going beyond a traditional realm of accessibility

Traditionally, disability issues focal points are ministries, often social development or social welfare ministries tended to address accessibility issues. However, disability-inclusive procurement policies governed by the EU and the United States do not fall under the responsibility of the traditional ministry. The European Commission is an oversight body for the EU directive and the Department of Justice is an oversight body for section 508 of the Rehabilitation Act. This is a structure change mindset of policy makers on accessibility governance.

6.8 Cost benefit analysis of accessibility and universal design

Supporting the push for increased political commitments to accessibility, researchers and businesses have paid growing attention on cost benefit analysis of accessibility and universal design.[86] [87] [88] Generally, the discourse supports value of disability-inclusive procurement policy.

The scope of cost-benefit analysis discussion centres around issues on production costs, maintenance and quality assurance costs, costs on human resources who need to be trained to understand universal design and accessibility both in conceptual and concrete terms, as well as benefits of having accessible and universal design-based products and services.

It is often said that the cost of providing accessibility is estimated to be as low as one half to one per cent of the total cost of a project, and investing at an early stage is more cost-efficient than modifying it at a later stage, counterarguing a publicly held idea that universal design is

[86] G3ict, 2012.
[87] Fuglerud, K.S., T. Halbach and I. Tjøstheim, 2015.
[88] Halbach, T. and K.S Fuglerud, 2016.

too expensive.[89] Other research studies attempt to compare and contrast costs of one-time investment in accessible devices with continuous upgrading, showing complexities of costs involved in maintaining accessible devices.

One of the challenges that is often evoked while discussing enhancing accessibility is the financial cost of retrofitting existing infrastructure and facilities. However, evidence shows that the returns often offset the cost.[90] Greater accessibility contributes to the higher participation of persons with disabilities in the workforce, enabling them to become equal and productive employees and business owners. Moreover, the application of universal design from the initial stages of development could help to make building accessible environments much less costly.

Good practice examples are often identified in the IT and telecommunication industries providing evidence of benefits of accessibility. Tesco, British multinational groceries and general merchandise, for example, invests in making their websites accessible. Consequently, shorter time to purchase among the end-users were reported. It was found that IT experts believe that improving accessibility can also contribute to an increased quality of the website in general, such as increased simplicity, clarity, usability, code quality, and download speed.

Furthermore, there is a growing trend that views persons with disabilities and the people around them as a potentially profitable market segment, further supporting a need for more accessible products and services that are commercially available.[91] Some consider the global estimated population of persons with disabilities (1.3 billion) and their associates and family members (2.4 billion) constituting a yet unexplored market of increased spending power.[92] The EU commissioned a study on economic impact and travel patterns of accessible tourism in Europe, which concluded that there was a need for further investment on accessible tourism to generate more profit for the EU.[9394]

6.9 Involvement of civil society organizations and the private sector

Involvement of civil society organizations and the private sector in developing and implementing disability-inclusive procurement policy is key to success. The European Disability Forum constituting organizations of and for persons with disabilities from European countries has been involved in the development of the Public Procurement Directive and European Accessibility Act, and now encourages its members to closely monitor the transposing process of these two regional initiatives at the national level.[95]

The G3ict, working on digital inclusion, constituting ICT and accessibility professionals and advocates, has been proactive in advocating disability-inclusive procurement policies on

[89] Metts, R.L., 2000.
[90] UN DESA, 2015.
[91] International Labor Organization, 2011.
[92] Return on Disability Group, 2016.
[93] European Commission, DG Enterprise and Industry.
[94] European Commission, 2015b.
[95] European Disability Forum.

ICT. Their model ICT procurement policy and functional performance statements are highly regarded by international organizations such as the ITU, in addition they also advocate nationally for national digital disability-inclusive procurement policy.

Involvement of organizations such as these are valuable so as policy makers are able to hear first-hand experiences by persons with disabilities to understand benefits of disability-inclusion in procurement and to gain insight in developing and implementing disability-inclusive procurement policy.[96]

Moreover, in order to build mass awareness and support for adopting ICT accessibility procurement, there is a need to include the private sector and persons with disabilities in the consultation process. Ongoing training and discussions with disability organizations and the private sector will lead to increased understanding of the key ICT accessibility options that are available on the market.

There is an utter need to bring onboard stakeholders and businesses that are registered for procurement platforms to indeed, make the right real and leave no one behind.

VII. Recommendations and conclusion

This paper has examined the value and details of disability inclusive procurement policy to promote universal design and accessibility in society.

Disability-inclusive procurement policies are underpinned by both human-rights based ideas of disability-inclusion, and a business approach of changing behaviour of the private sector through mandating production to comply with accessibility requirements and increasing the understanding of economic benefits that may be derived from such undertakings.

Asia and the Pacific, while being vast and diverse, constitutes a region of steady economic growth looking through the lens of GDP growth. We do not have an Asia and the Pacific average percentage of procurement budget against the total budget, but as mentioned previously in this paper, estimates show that in developing countries the percentage goes up 15 to 20 per cent of the GDP. The Asia-Pacific region has a larger market size than the EU with 60 per cent of the world's population (4.4 billion people) and is projected to be home to 59 per cent of the world's population over 80 years of age by 2050. Implementing public procured accessible goods and services in Asia and the Pacific would have an enormous economic impact.

With this hope, the following recommendations are made for governments, civil society organizations and the private sector in Asia and the Pacific.

Governments

[96] G3ict, 2015.

i. A ministry or unit within a ministry concerning disability or accessible goods and services should constitute a committee comprising of representatives from different governmental ministries and units, organizations of and for persons with disabilities, experts on accessibility and the private sector as well as development organizations to conduct preliminary studies on how disability-inclusive procurement policy could work in a given country or state/province/prefecture or city, and assess the situation of existing accessibility legislations, regulations and standards, and with a view to identify a possible scope of goods and services to be covered by the disability-inclusive procurement policy;

ii. As part of the study, the relevant ministry or unit, in consultation with the above-mentioned committee, might wish to conduct "accessibility impact assessments" [97] to identify accessibility issues of public goods, services and the economic projection of costs and benefits of making them accessible;

iii. Legislative, executive or legislative bodies or jointly, will take the lead to adopt a disability-inclusive public procurement policy which mandates tenders to comply with accessibility requirements and specifications in applying for bidding and which include effective monitoring and evaluation systems of implementation;

iv. The policy should be underpinned by an anti-discrimination approach, including stringent penalties for non-compliance;

v. When examining the possibility of developing disability-inclusive procurement policy, existing standards and templates such as the EN 301 549, EN 17161:2019, functional performance statements and Voluntary Product Accessibility Templates, and model legislations such as the one developed by the G3ict[98] should be utilized;

vi. An oversight body for the implementation of the policy will be identified;

vii. An accessibility specialist for supporting the implementation of disability-inclusive procurement should be in place or available to respond to specific queries from those who work in each procurement case;

viii. Develop and expand accessibility requirements and specifications of existing public procurement policies to encompass the procurement of all goods and services, including but not limited to ICT;

ix. Allocate enough budget for the implementation of the disability-inclusive procurement policies implementation, including a budget for capacity building training for procurement staff to learn about accessibility goods and services and evaluation reports;

x. Raise public awareness on the importance of disability-inclusive procurement policies including the economic and social impacts of accessible products and services;

xi. Undertake continuous capacity building of all stakeholders, including local authorities, for the application and monitoring of disability-inclusive procurement standards;

[97] Government of United Kingdom, Department for Transport, 2017.
[98] International Telecommunication Union and G3ict, 2014.

xii. Publicly recognise those industries proactively promoting and adopting accessibility standards;
xiii. Provide training and information to the private sector on technical know-hows on producing accessible goods, products and services.

Civil society organizations

xiv. Share good practices on disability inclusive procurement among key stakeholders, including through a global online knowledge platform on accessibility;
xv. Collect data and explore alternative sources of evidence such as crowd sourcing to increase the availability of reliable data on disability-inclusive procurement for effective policy development, implementation and monitoring;
xvi. Advocate for disability-inclusive public procurement policies mentioned above to either legislative or executive branch of government with examples of other countries;
xvii. Liaise with other international organizations and civil society organizations to have updated information on disability-inclusive public procurement policies;
xviii. Take the lead in adopting the internationally comparable accessibility standards in own procurement;
xix. Compile and publicize government products and services that do not comply with accessibility standards

Private sector

xx. Liaise with government and civil society organizations to learn about the value and benefit of disability-procurement policy implementation;
xxi. Network with companies which do procure accessible products, goods and services.

Through implementing these recommendations, undoubtedly, governments can efficiently reduce barriers faced by persons with disabilities and actively support the realization of the 2030 Agenda for Sustainable Development to ensure that no one is left behind.

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The Economic and Social Commission for Asia and the Pacific (ESCAP) serves as the United Nations' regional hub promoting cooperation among countries to achieve inclusive and sustainable development. The largest intergovernamental platform with 53 member States and 9 associate members, ESCAP has emerged as a strong regional think-tank offering countries sound analytical products that shed insight into the evolving economic, social and enviromental dynamics of the region. The Commission's strategic focus is to deliver on the 2030 Agenda for Sustainable Development, which it does by reinforcing and deepening regional cooperation and integration to advance connectivity, financial cooperation and market integration. ESCAP's research and analysis coupled with its policy advisory services, capacity building and technical assistance to governments aim to support countries' sustainable and inclusive development ambitions.

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