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Disability inclusion: The basics

Tags: Inclusion, Disability, Infrastructure, Evidence

One billion people, or 15% of the world's population, experience some form of disability, and disability prevalence is higher in developing countries. Infrastructure and cities are vehicles for increasing DI through the design and delivery of inclusive public services. But in order to design and deliver inclusive services it is necessary to first understand how disability manifests in these contexts.

This short paper sets out all you need to know of universal design principles as a starting point for inclusive design, and provides an understanding of the non-physical barriers key to unlocking disability inclusion. For further information, case studies and technical guidance on how to 'build in' disability inclusion, consult ICED's [Disability Inclusive Infrastructure and Cities Briefing Note](#), contact the ICED team or visit the ICED website www.icedfacility.org

Universal Design Principles as a Starting Point

A disability inclusive approach is driven by the seven principles of Universal Design (UD) which support the 'design of products, environments, programmes and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design'¹. The principles are:

1. **Equitable use:** design that is useful and marketable to persons with diverse abilities.
2. **Flexibility in use:** design that accommodates a wide range of individual preferences and abilities.
3. **Simple and intuitive use:** design that is easy to understand, regardless of the user's experience, knowledge, language skills or concentration level.
4. **Perceptible information:** design that communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.
5. **Tolerance for error:** design that minimises hazards and the adverse consequences of accidental or unintended actions.
6. **Low physical effort:** design that can be used efficiently and comfortably and with a minimum of fatigue.
7. **Size and space for approach and use:** design that provides appropriate size and space – for approach, reach, manipulation, and use, regardless of the user's body size, posture or mobility.

Impairments and Barriers

Effective infrastructure can reduce or remove the barriers which lead to disability. Impairments - physical, mental, sensory and intellectual - become disabling when individuals are prevented from participating fully in society because of the aforementioned barriers. For example, individuals denied access to employment because of discriminatory attitudes or inaccessible transport and workplaces.



In accessing urban services and infrastructure people with impairments experience three major barriers which affect them disproportionately.

Behavioural and Attitudinal barriers

¹ Article 2, UNCRPD

Perhaps most significant are the culturally accepted attitudinal barriers that those with disabilities face. Whilst many countries have adopted policies or legislation that protects or promotes the rights of PwDs, often such legislation does not translate into practice. Ministries, agencies and the public do not always understand how existing spaces and services exclude PwDs, and the potential to improve inclusion. Persons with psychosocial or cognitive impairments can be excluded from financial services, housing and land ownership excluding them from benefiting from existing infrastructure. Persons with physical disabilities can face discrimination and stigma from service providers or other service users.

DFID can play a significant role in promoting the translation of international commitments and national policies into practical building and design codes, and agency level service standards; and can support the training of staff at all levels on the translation of such codes into everyday service delivery. DFID can also play a significant role in supporting behaviour change more widely, using its strong track record of behaviour-led intervention to support innovative programme design.

Informational barriers

Impairments make services more difficult for users to engage with on a 'trial and error' basis. In turn, a lack of access to information on services can prevent users engaging with or trialling a service – it's unlikely for instance that a visually or mobility impaired person or someone with learning difficulties will try using public transport unassisted if there is no accessible information on routes, timetables or service access facilities. By providing route planning apps and/or simple printed materials on accessible routes and services, users are able to make informed decisions and plan their use of services.

Informational barriers also exist for users attempting to access services such as waste disposal or private utilities. People with hearing or sight impairments often have no or limited access to information on service schedules, tariffs or bills. People with learning difficulties can be unable to interpret information provided by bill collectors. Improving information accessibility can have huge impacts, enabling users to make informed decisions when choosing services, advocating for better service provision, managing household budgeting, and avoiding fraudulent overbilling seen routinely in vulnerable households.

Reducing informational barriers is an area where DFID can play a particularly strong role, through its wide variety of programmes in governance, public services (health, education, WASH and local service delivery) and voice and accountability.

Physical barriers

When thinking about physical disability it is common to think of those with the most visible impairments such as wheelchair users. However old age, chronic illness and visual impairments all significantly impact users' ability to physically access services. An older person with deteriorating sight and mobility may only be able to walk short distances, may be unable to easily walk up and down stairs or pavements, and may only be able to see short distances and or interpret spatial depth. Urban environment and infrastructure services therefore need to provide aids such as dropped curbs, grab rails, ramps, allocated seating, large format signage, high visibility markings and regular seating to accommodate such users. It is imperative when considering accessibility that the specific needs of PwDs are considered.

Reducing physical barriers is an area where DFID can play a strong role both via its infrastructure programming and through its investments with Multilateral Development Banks, PIDG and CDC. By advocating for disability-inclusive design in investments and safeguarding the rights of PwDs via mandated safeguard processes for large scale projects DFID can ensure none of its investments needlessly exclude this group.

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