Practical guide

Conduct an accessibility audit
in low- and middle-income countries

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Practical guide

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"Great works are characterised by their accessibility, as they do not belong to the heritage of a few elected representatives but to all men blessed with common sense."

Quotation from *Pájinas Libres* (1915) by Manuel González Prada (1844–1918), Peruvian poet.

Prefaces

Building a sense of accessibility on a local level
This guide is a real treasure in that it succeeds in combining a wealth of theoretical and practical information in a structured and useful manner. It allows us to understand that the ultimate goal of all our interventions is to reduce the number of disabling situations, and to increase the possibility for social participation in a practical way by concentrating on improving accessibility to a defined local environment. Based on a participatory approach involving the stakeholders concerned, this accessibility audit is closely associated with the socio-cultural activities of the living environment that varies according to local conditions and the people with disabilities who have to live there. More than just a normative order, disabled people's organisations and those who are responsible for a variety of environments must work together to build something meaningful, with citizenship and the right to equality at the very heart. Through dialogue, a meaningful harmonisation of different points of view is to be achieved so that life habits, the activities of daily living and social roles as practised locally can carry on, whilst guaranteeing that human rights can be exercised.

Patrick Fougeyrollas
Doctor in Social Anthropology
RIPPH−INDCP President
CIRRIS Researcher

A participatory approach to accessibility
If the introduction of 'accessibility' issues into urban planning is an essential prerequisite for designing towns for today and the future, dealing with 'accessibility' reveals, in a surprising and exhilarating way, the extent to which consideration of disability allows a town to be 'thought out' and 'made' so that it is accessible to everyone, from people with disabilities to those without, from young people to the elderly.
In such a perspective, revealing in its approach and ambitious in its scope, 'accessibility audits' are basic tools which not only allow the needs of each person to be taken into consideration, but also give an idea of the thinking behind urban facilities that consider the chain of movement as a whole, from the private space to the public space, from the workplace to the service area. The question now arises as to the method and the manner to be adopted in order to address such challenges: a necessarily participatory method that gets the players concerned around the same table; a method that considers the context and potential feasibility of what the audit reveals once the results have been converted into recommendations and proposals for facilities. Without doubt, this guide is seeking to address an approach to, and goals and conditions for an inclusive and participatory audit. It is an ambitious and straightforward guide, and this double necessity has become the very essence of its implementation. A guide which also concentrates on context so that its recommendations are both realistic and achievable. Lastly, it is a guide which sets out the course and the steps to follow, suggesting tools that go straight to heart of the matter with appropriate operational potential.

Emmanuel Matteudi
Research lecturer
Grenoble Institute of Urban Planning
PACTE−CNRS
University of Grenoble−Alps

From tool to action for a more accessible environment
Accessibility audits, which are used to identify barriers to mobility in a given space (street, market, school, bus, etc.) are undeniably a relevant and efficient tool to reduce and remove physical obstacles which affect the daily life of people with disabilities throughout the world. In my opinion these audits offer numerous advantages: they are a tool for providing information and raising awareness; an advocacy tool for representative associations; a tool for dialogue between people with disabilities and local authorities; and above all, a planning tool that allows local authorities to draw up an action plan to improve accessibility.
The methods and expertise required to produce an accessibility audit can vary in complexity, depending on context and expected results.
As accessibility is an absolute prerequisite for the inclusion of people with disabilities, the important thing is to seize this audit tool and put it into action. In this sense, the practical guide you are holding is an invaluable aid on how to take practical steps to build a more accessible environment.

Éric Plantier-Royon
Town & Disability Project Officer
Villeurbanne Town Hall

Introducing accessibility to developing countries
Whenever I hear the word 'accessibility', I immediately think of all the obstacles that people with disabilities encounter during their everyday lives and which prevent them from reaching their full potential, and which undermine the Convention on the Rights of Persons with Disabilities (CRPD).
Yet making a living space accessible is simply the basis of living together in a respectful and harmonious way, of simple respect for society's rules of politeness, like saying 'good morning'.
Initial audits on accessibility rarely lead to anything, and even more rarely are the representatives of civil society involved. 'They' do not think about it. And when 'they' (politicians or technicians) are called to order, in shame, because they should have taken an interest, we suddenly find that buildings and road systems have been fitted with access ramps– last minute facilities (not always well constructed) which provide an alibi for the lack of vision shown by a society which includes people with disabilities and people with temporary reduced mobility (the injured, pregnant women, etc.).
Accessibility is too often reduced to these famous ramps, and people, whose sensory impairments, mental health problems or intellectual impairments restrict access to the information and culture that help with their independence, are forgotten.
Even though accessibility policies are gradually but laboriously appearing in western society, considerable effort is needed to introduce them into the society of developing countries.
This is an opportunity that must be seized in order to encourage the proactive acceptance of people with disabilities and their inclusion into the community.
This practical guide will provide all stakeholders, and our field teams in particular, with the opportunity for participatory, pragmatic, reasoned, inclusive and long-lasting reflection on accessibility.
This field-worker manual is therefore not to be used with restraint!

Ludovic Bourbé
Director, Technical Resources Division
Handicap International Federation

Introduction

This guide to the implementation of an accessibility audit in low- and middle-income countries is an integral part of the strategy developed by the Knowledge Management Unit of Handicap International's Technical Resources Division (DRT). It formalises, shares and distributes (internally and externally) the technical knowledge and expertise required to implement the association's quality action plans.

This document capitalises on the progress made by Éric Plantier-Royon, Technical Adviser on Accessibility from 2004 to 2010, who laid the groundwork for accessibility for all. He developed a support strategy for the programmes of the Development and Emergency Response Divisions of Handicap International, with the aim of gradually improving awareness of accessibility in their projects in a more crosscutting and systematic manner.

It also reflects the technical and strategic support missions in the field of accessibility and inclusive local development carried out by Handicap International between 2011 and 2013– missions which provided 'food for thought' about the concept of accessibility for all.

This is how various projects dedicated to environment and service accessibility came into being, demonstrating the interest that funding bodies, and local, national and international players had in this topic; such projects include:
- Universal access to basic services in the cities of Timbuktu and Bamako (Mali);
- Universal access for people with reduced mobility in the city of Tétouan (Morocco);
- Inclusive local development and universal access, promoting the social participation of people with disabilities in the towns of Menzel Bourguiba and Manouba (Tunisia);
- Action for access to urban transport in the city of Port-au-Prince for people with reduced mobility (Haiti).

In addition to these projects, a certain number of Handicap International's 'sectoral' projects have embraced accessibility as the preferred means of facilitating access to services for disabled people, such as:
- Technical unit for accessibility in Port-au-Prince, which is not a project *per se* but a tool available to all projects that are part of the Haiti programme;
- Education for All: for the inclusion of children with disabilities in the Algerian education system (Algeria);
- The regional project DECISIPH–Rights, Equality, Citizenship, Solidarity and Inclusion of People with Disabilities (West Africa);
- Town & Disability project in Maputo and Matola (Mozambique);
- Town & Disability project in Toliara, Toamasina, Antsiranana, Mahajanga and Antananarivo (Madagascar);
- Reinforcing the inclusion of people with disabilities into society in the province of Aceh (Indonesia);
- Centre for accessibility, disability monitoring and awareness (Sri Lanka).

In a practical way, this guide outlines the key stages in an accessibility audit, namely:
- Organising an extensive tour of a target environment and its surroundings, and analysing the chain of movement that could be adopted by users, including people with reduced mobility;
- Precise monitoring of the position and quantity of the equipment and accessories available in the chain of movement;

- Analysing, where appropriate, the conditions for welcoming, assisting and evacuating people with reduced mobility;
- Drawing up a detailed report of the exact observations made in order of importance, which will subsequently serve as a tool to help the competent authorities to make decisions;
- Providing on-site feedback from the audit to all those involved in its implementation;
- In the presence of stakeholder representatives, organising a meeting with local authorities who will bear ultimate responsibility for deciding to provide access to (if not fund), in whole or in part, the work and facilities highlighted in the audited environment.

This guide is aimed at all Handicap International stakeholders intervening on a local or 'community' level (a clearly-identified geographic region allowing outreach). It is a reference document to guide the preparation and implementation of accessibility audits, including those involving Handicap International's offices.

It is intended primarily for use in Handicap International's programmes, but it may be more widely distributed, particularly among our local partners, such as:
- Local authorities and their technical services;
- Devolution state technical services;
- Public and private service providers;
- Disabled people's organisations;
- Construction and accessibility professionals.

To get a full grasp of the field of an accessibility audit, the reader is invited to look beyond the following pieces of received wisdom which still hold sway:
- ''Why invest so much in accessibility given that it only targets people with disabilities?''
  It makes life easier for all of us, by allowing us to mix, exchange, share and enrich ourselves in all our diversity.
- ''Accessibility is for specialists, as they are the only ones able to apply start-of-the-art standards.''
  It is also, and often, a simple case of common sense. Consider the lack of public spirit of some drivers who park on the pavement.
- ''Accessibility is expensive.''
  Not if it is included at the outset in an individual project. Yes if part of a global, urban vision, featuring access to everything for everyone... which itself represents added value.
- ''First and foremost, accessibility means ramps and accessible toilets. Beyond that, it consists of fittings that are too specific to be considered in a systematic manner.''
  But, for example, when accessible toilets in a public building are neither signposted, nor indicated by visual or auditory means, nobody will be able to find them.

Furthermore, the term 'accessibility' as used in this guide refers systematically to the concept of universal access, which is described in the first part.
Lastly, the content of the documents quoted in the text and its appendices are to be adapted to suit the specific context of each country, region, living space, service and environment subject to an accessibility audit.

Hugues Nouvellet
Technical Adviser in Inclusive Local Development & Accessibility
Handicap International Federation

Principles and benchmarks

Definitions and related concepts

A

Definitions

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Accessibility

Article 9 (Accessibility) of the United Nations' Convention on the Rights of Persons with Disabilities[1] (CRPD) states that "To enable persons with disabilities to live independently and participate fully in all aspects of life, 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."

Accessibility must be taken into consideration in a crosscutting manner, regardless of the context, as it is one of the conditions for fulfilling these rights. In this regard it is also a general principle of the CRPD (Article 3) and applies to the Convention as a whole. Handicap International defines the principle of physical accessibility in its Accessibility Policy Paper[2] as follows: "An accessible environment is an environment which allows for the freedom of movement and use in total safety, regardless of age, gender, or impairments, of a space or product which can be used by all, with no obstacles, with dignity and the highest possible levels of independence."

Universal accessibility

"Universal accessibility is the nature of a product, procedure, service, information or environment which, with equity as its goal and with an inclusive approach, allows everyone to participate independently in activities and to achieve equivalent results."[3] Inherent in this approach is the creation of a world where all people can develop freely, without constraint, and which aims to provide a geographical and social environment free of barriers, allowing all occupants, whoever they are, to develop freely and safely. Universal accessibility should thus be designed with all people in mind and is therefore intended for all users, regardless of who they are. Of course it implies that particular attention be paid to people with disabilities, whatever the nature of their disability, who are particularly vulnerable to environmental obstacles. Universal accessibility is intended for people with reduced mobility, such as the elderly, pregnant women, overweight people, short people, young people, people who carry heavy loads, people with temporary limitation, etc.

The term 'universal accessibility' thus has two meanings:

- Access to everything: places, goods, equipment, services, events, information, etc.;
- Access for all: access for all members of the community regardless of their abilities and disabilities.

This concept therefore concerns the whole population affected, or not, by disability with no consideration given to the origin, gravity or the temporary or permanent nature of the disability.

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The 7 principles of universal accessibility

1. Use by all
To ensure similar and safe use of outdoor spaces, buildings and services by all, including people with a functional limitation (auditory, intellectual, autism spectrum disorders, language/speech, motor and visual).

2. Accessible space and use
Create appropriate facilities and environments in such a way that all users can access, enter, circulate in and use them, regardless of their size, posture or level of mobility.

3. Simple and intuitive use
Create facilities and equipment that are easy to navigate and use, and provide information that is simple to understand, regardless of the abilities, experience, knowledge, linguistic and cognitive capacities or level of concentration of the user.

4. Flexible use
Create varied facilities meeting different needs that will be satisfactory to all users, including those with a functional limitation.

5. Use requiring little physical effort
Create short distances between buildings and facilities, and install rest stops for everyone, especially for those who have difficulty negotiating long distances. Create spaces where a person in a wheelchair can adequately work and move about.

6. Safe use
Create facilities and equipment that are easy to use and maintain, as well as facilities that can be evacuated quickly and easily, therefore improving security in emergency situations.

7. Access to information
Create facilities and equipment that promote access to information for all, specifically people with visual, hearing or intellectual impairments, as well as for illiterate people or people from different cultures.
In practice, the following elements will assist a population with varying needs: less-tiring distances to negotiate, open spaces that are well designed and clearly marked,

safer areas that are well lit and adaptable, easy-to-maintain materials and equipment that is easy to handle.
Source: *Société Logique*
http://www.societelogique.org/contenu?page=accessibilite/principes

Accessibility norms and standards
A norm is a common national or international reference framework defined by consensus and documented, whose aim is to harmonise an activity, process or method within a particular sector. Its aim is to guarantee certain characteristics of a product or service, notably quality, respect for the environment, safety, reliability, efficiency and interchangeability. A norm is regularly updated in order to keep pace with market and technological developments.
A technical norm is issued by a standardisation body, such as the French Standards Association (AFNOR), the European Committee for Standardization (CEN), and the International Organization for Standardization (ISO).
With regard to accessibility, two levels must be considered: national norms, some of which are listed in the Bibliography (from countries which have legislated in this area), and standards, adopted by international bodies such as Accessibility and Usability of the Built Environment (ISO/TC/59/SC 16) and Web Content Accessibility Guidelines (WCAG) 2.0 (ISO/IEC 40500:2012).
Numerous low- and middle-income countries, however, have not yet implemented such tools or where they do exist they are still inadequate or not applied. Organisations which represent users, including people with disabilities, play a crucial role in making authorities accept their responsibilities, but also a vital role in forcing changes to accessibility norms (which are very often drawn up by specialists without consulting civil society) depending on the context.

Unbroken chain of movement

The above definitions are only effective if the principle of an unbroken chain of movement is respected. By unbroken chain of movement, we mean that it is essential that accessibility be considered in a comprehensive manner by organising a pilot project (in a well-defined area) that allows all the places and services to be made accessible to be connected seamlessly.

In a particular district and around its central square, for example, it could involve linking the local mayor's office, primary school, public library, health centre, private clinic, mosque, information (spatial tracking) and communication facilities. This would allow all users to take part in the activities offered by the district on a daily basis.

This chain of movement (a pre-requisite for access to services) assumes that if one of the links is missing, the chain is broken and that all efforts to provide access to the other links render the overall journey incomplete, and thus inaccessible.

Reasonable accommodation

Given that a disabling situation is often the result of a non-adapted environment, in certain circumstances measures must be taken to remove obstacles that prevent people with disabilities or reduced mobility from accessing places, taking part in a work project or activity, or using a service. According to the *Association Socialiste de la Personne Handicapée* (ASPH–Socialist Association for People with Disabilities), based in Belgium:

- Reasonable accommodation must be effective; it must therefore provide a tangible and durable solution;
- Reasonable accommodation must allow equality; it must be possible for all facilities to be used without hindrance by all users;
- Reasonable accommodation must allow people with disabilities to be independent, i.e. able to perform a task or get to a precise location without the assistance of a third person;
- Reasonable accommodation must be safe; the implementation and use of the facility must not put the user in danger.

According to the CRPD (Article 2), "'Reasonable accommodation' means necessary and appropriate modification and adjustments not imposing a disproportionate or undue burden, where needed in a particular case, to ensure to persons with disabilities the enjoyment or exercise on an equal basis with others of all human rights and fundamental freedoms."
Reasonable accommodation must not therefore impose a disproportionate burden upon the services charged with implementing it, although their refusal to provide it is a form of indirect discrimination.

B

Related concepts

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Disability & accessibility issues

According to Article 1 of the CRPD, "Persons with disabilities include 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."
Each type of disability requires that specific accessibility criteria be taken into consideration to remove the barriers constituting the obstacle. Even if the accessibility norms have been defined on the basis of a standard wheelchair and its user (given that the situation of a person in a wheelchair is often considered to be the most difficult situation to understand from an accessibility point of view), they can and must be adapted according to the context, the diversity of people and their abilities or disabilities, and the effects and impacts sought in terms of accessibility.

Discrimination

People with disabilities and their representatives can claim discrimination to force the States Parties of the CRPD to respect their obligations with regard to the accessibility criteria outlined in Article 9 of the Convention.

According to the International Disability Alliance (IDA), and based on its draft contribution to the World Programme for Human Rights Education[4] of the Office of the High Commissioner for Human Rights (OHCHR) regarding Article 5 of the CRPD (Equality and Non-discrimination), "Discrimination on the basis of disability" means any distinction, exclusion or restriction on the basis of disability which has the purpose or effect of impairing or nullifying the recognition, enjoyment or exercise, on an equal basis with others, of all human rights and fundamental freedoms in the political, economic, social, cultural, civil or any other field. It includes all forms of discrimination, including denial of reasonable accommodation."

Fit-for-purpose

According to the [French] Centre for Studies on Networks, Transport, Urban Planning and Public Construction (CERTU)[5], to 'properly design' a facility that is open to the public, whatever it may be, its use must be fully understood; this is called 'fit-for-purpose'. Fit-for-purpose is the ability of a piece of equipment, a facility or a place to meet the needs and expectations of its users and consumers. In a building, for example, it refers to the building's suitability for its intended users, particularly elderly people or those with disabilities, and its adaptability over time in terms of progressive social utility. Throughout the audit, care must therefore be taken (in terms of demand and being fit-for-purpose)[6] to approach accessibility from the point of view of disability diversity: physical, visual, hearing, mental and intellectual. See the Tool Box for further details.

↳ **Tool D–Identifying obstacles according to the type of disability.**

Accessibility and access to services

Access to basic services (both public and private) by citizens in general, and the most vulnerable in particular, is currently a major area of concern for all development partners, be they funding bodies, national decision-makers, local authorities, devolved state services, civil society organisations, service providers, etc.

But access to services will only be partial if they are not physically accessible. Accessibility is therefore a pre-requisite for access to services, particularly in terms of geography (road systems, transport and its inter-modality, proximity to centres of population) and immediate surroundings.

To encourage all the parties concerned to commit jointly to accessibility projects and to participate in audits with the aim of improving access to services, an Inclusive Local Development approach is relevant, especially as the governments of low- and middle-income countries advocate the effective decentralisation of their services. It must be stressed once again that accessibility to an environment and access to services must be based on the principle of reasonable accommodation.

Inclusive local development

Inclusive development is a development model that promotes equality and the widest social participation at the grassroots level. It allows vulnerable people, including people with disabilities, to enjoy the same rights as any other member of society and to be sources of knowledge and expertise regarding the design and implementation of policies. Inclusive development means that development policies, programmes and projects are designed and evaluated with regard to the impact on the lives of people with disabilities as well as others in the wider community.

To learn more about inclusive development, please look at the website of the Make Development Inclusive[7] project, run by the International Disability and Development Consortium (IDDC) and financed by the European Commission.

Definitions and related concepts

Inclusive Local Development (ILD)[8] refers to inclusive development applied on a local level, i.e. within a given territory, a centre of population, a coherent geographical space with which a stakeholder can identify, and where possible, where there is a corresponding administrative unit.
This level of intervention is conducive to creating a concerted response to vulnerability and disability issues and to developing collaborative projects in cooperation with numerous stakeholders. Proximity to a range of development actors and stakeholders facilitates a crosscutting approach, where disability issues can be integrated into different processes, strategies and structures of the development.
Where a government is decentralising and transferring competencies (education, healthcare, access to water, transport etc.) to local authorities, ILD is based on consultation and dialogue with local communities, including local authorities, disabled people's organisations and local development stakeholders.
In line with CRPD (Article 19 'Living independently and being included in the community', and Article 29 'Participation in political and public life'), the general objective of ILD is to encourage greater participation of people with disabilities in a given area. It promotes an overall approach to the rights and requirements of people with disabilities and encourages the inclusion of a disability component in existing policies, projects, services and initiatives.
It involves mobilising each type of stakeholder in the community, including the authorities and those responsible for taking decisions, each according to his role and prerogatives as defined notably in the decentralisation reform framework.

Issues and challenges relating to accessibility

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Specific issues

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Accessibility issues reflect the use that the majority of citizens make of the services they are entitled to use as legal entities and can be categorised as follows:
- **Ethical issues:** accessibility brings a change in attitude to make the world more habitable in human terms, by advocating respect for equality among all citizens, regardless of who they are;
- **Social issues:** accessibility is a means of integration and fighting (?) exclusion, in that it facilitates the daily life of the most vulnerable people;
- **Quality of life:** accessibility helps to improve citizens' quality of life in terms of use, comfort for all and well-being;
- **Safety issues:** an environment made accessible is one that is safer for everyone, shielded from danger and reassuring;
- **Environmental issues:** accessibility promotes an optimised use of public transport, allowing everyone to use it rather than forcing part of the population to resort to individual means of transport for lack of alternatives; it also gives pedestrians a prominent position;
- **Economic issues:** well thought out and taken into consideration upstream of a project, accessibility does not generate any significant additional costs, but makes savings in the sense that a service's clientele expands;
- **Universality:** accessibility can affect everything and everybody.

B

The need for accessibility audit

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Upstream of improving accessibility (in the true sense of the term) in a given centre of population, district, process or service, an accessibility audit provides an overview and analysis of the situation in terms of the obstacles facing the different kinds of limitation, allows the desired work and facilities to be described and the costs to be calculated.

Local authorities, those responsible for the road system, transport managers, service providers and users thus acquire an accessibility roadmap which will allow them to organise themselves and correctly plan the work required to improve accessibility. Furthermore, the accessibility audit creates the dialogue and synergy dynamism needed by these stakeholders, who come from different backgrounds and who are not used to working together, within an inclusive local development framework as described above. Lastly, the accessibility audit offers the opportunity to learn about disability issues and to consider the more marginalised groups in local development strategies.

C

Identifying obstacles

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Identifying obstacles to accessibility is the central phase of an audit, allowing the state of buildings, road systems, public spaces, means of transport, information and means of communication to be assessed.
The results of this phase, analysed in terms of accessibility norms and safety, and considering the views of those who took part in the audit with regard to being fit-for-purpose, can be used to draw up a plan to improve accessibility which is then submitted for deliberation to the project owner, who in general is the local authority or the manager of the facility open to the public (FOP).

Principles of intervention

In response to the issues raised above, this accessibility audit support tool reflects the practices noted in those regions where the programmes of Handicap International and its partners include accessibility in their operational strategies as a crosscutting issue required to provide access to services for people with disabilities. This inalienable right is recalled in the CRPD adopted by the United Nations on 13 December 2006 and ratified by a majority of the countries where Handicap International operates.

Thanks to the CRPD, accessibility is built on a more solid human rights foundation, although its implementation is still largely inadequate. This document seeks to support the operational translation of this key principle into practical action, taking into account: the diversity of the contexts where it will be implemented; any emergency, transitional and development situations; legislative framework relating to disability; and the normative aspects of accessibility standards. These latter aspects provide food for thought in that they cannot be adapted to suit every situation. This is without forgetting the socio-economic and cultural factors which underlie creativity, adaption and common sense in the concept of reasonable accommodation.

The accessibility audit process described and developed here is intended to be both pragmatic and, obviously without being exhaustive, available to as wide an audience as possible, which is the very foundation of the concept of universal accessibility or 'design for all'. Its 7 principles (described in the Definitions and Related Concepts section) guarantee an equitable and inclusive approach for the multitude of environments in which we all move.

Consideration of accessibility thus implies that issues of common use are raised. If it is not possible to anticipate each personal situation, then it is important that questions are raised about the particular issues that certain groups may face depending on their abilities or disabilities, and about the most satisfactory solution for all concerned; for example:

- What adjustments can be made to help both the movement of people with a visual disability (who prefer tactile markings on the ground) and those who use wheelchairs (who prefer a smooth surface)?
- How can we assure that safety notices can also be understood by people with intellectual disabilities?

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Giving a central role to disabled people's organisations

An accessibility audit is the opportunity for the representatives of people with disabilities, and in more general terms for users, to be visible and proactive, and to suggest proposals to local authorities and services, which is consistent with recognising the representatives of civil society as the key driving force in their environment.
To this end, disabled people's organisations (DPO)[9]—guided by the programmes of Handicap International or their development partners—must launch a series of actions based on the theme of accessibility which they will have to draw up and implement in order to be considered legitimate and credible partners in the auditing process, working on behalf of all communities:

- Training their members;
- Petitioning local and national authorities;
- Raising awareness among the general public, service providers and professionals;
- Arguing in favour of the choice of route to be made accessible.

B

Identifying and prioritising the measures to be undertaken to guarantee accessibility for all

An accessibility audit is a means of informing the decision-making process for the subsequent implementation of a project or plan to improve the accessibility of a given environment, building, or information or communication system. In this respect the audit has three objectives:

- To analyse the situation in a zone, from the point of view of accessibility for people with different types of disability and reduced mobility, and in terms of the obligations as defined in the legislation in force where it exists, by listing the obstacles to accessibility;
- To describe the work, equipment and adaptations desired to achieve the required level of accessibility, by defining the technical recommendations arising from the obstacles identified, where possible in accordance with the principle of reasonable accommodation;
- To evaluate the costs of the work, equipment and adaptations.

This audit will provide project owners, project managers, professionals, service providers and users with a roadmap to improve accessibility which will allow them to organise themselves and correctly plan the work envisaged.
Primarily a teaching tool, the audit will allow each stakeholder to understand the difficulties involved in accessing his environment (of which he may not have been aware) and to acquire enough time to identify, prioritise and carry out the necessary adjustments.

C

Mobilising and guiding the stakeholders affected by accessibility issues

As part of the implementation process of an accessibility audit, it is important to provide tools for the stakeholders who (together out of necessity) take part in the process of improving accessibility in the following areas:

- Focusing on accessibility for the greatest number;
- Supporting the principle of user participation, including people with disabilities;
- Selecting fields of application, routes and sites to be made accessible;
- Taking decisions which come under the jurisdiction of the competent authorities;
- Planning, controlling and monitoring activities arising from the audit;
- Evaluating the work, facilities and adaptations undertaken;
- Taking ownership of the methodology of the audit;
- Informing and communicating with the user population;
- Learning from and drawing on local experience.

There are many potential stakeholders in an accessibility audit, although each is vital to its success and each has its own roles and responsibilities:

- **Local authorities** (elected representatives) who have an essential double role–focusing on the political message in defence of disabled people's rights and universal accessibility, and deciding to implement a project to improve accessibility;
- **Technical services** of the locality where the audit is carried out, who are able both to draw up and estimate the costs of the technical recommendations, and to convince elected representatives of the project's feasibility;

Principles of intervention

- **Professionals** directly involved in accessibility, such as urban planners, architects, civil engineers, occupational therapists, businessmen, craftsmen, and also the universities and vocational centres who are responsible for designing, controlling, providing technical advice and executing the project;
- **Organisations representing users**, such as those representing disabled people (DPO), the elderly, women, young people, and neighborhood committees and residents' associations etc., whose diversity guarantees that the obstacles identified in the audit will be examined extremely thoroughly;
- **Service providers** managers of facilities open to the public (FOP) and service open to the public (SOP)—both public and private facilities, such as health facilities, physical and functional rehabilitation centres, schools, banks, shops, public libraries, bus stations, public gardens, parks etc., that are at the end of the chain of movement—must be able to offer their services to the population as a whole.

D

Making practical recommendations for the implementation of accessibility-related policies, principles and norms

This involves:
- Promoting the idea of use for all to existing services, public and private, in the area where the accessibility diagnosis is being run;
- Providing the tools for applying existing regulations and standards;
- Helping to reform and/or develop new regulations and standards;
- Stimulating the development of structures and mechanisms to facilitate the consideration of accessibility on an institutional level (such as local accessibility commissions), where they are not yet in place.

Scope

The scope of the concept of accessibility (and therefore of accessibility audit in a region, zone, district and/or on a well-defined route) as discussed in this document, concentrates on the accessibility of an environment, a built environment, information and means of communication. Society's awareness of accessibility and services (as characteristic features of a place, infrastructure, training, etc.) is a necessary pre-condition for service access as the end-result of a wider process.[10] This is an important point, in that access to services involves other aspects, such as changes in attitude and policy, adaptation of practices (sometimes called social accessibility), which in turn require additional skills such as the functional implementation of services, professional training for service providers, receiving users, psychosocial assistance for users, etc.

A

Urban environment

By accessible urban environment we mean the sum total of the measures that enable movement between the people's home/dwelling and the services he requires, comprising:
- **Road systems:** traffic lanes that constitute a road network (roads, streets, tracks, paths) and their ancillary structures (pavements, street furniture, public lighting, car parks, sanitation systems, etc.);
- **Facilities open to the public** (public spaces): thoroughfares and gathering places that are open to all (squares, public gardens, markets, fountains, river banks, etc.);
- **Means of transport:** vehicles (taxis, buses, coaches, trains etc.) and their ancillary structures (taxi ranks, bus shelters, bus stations, railways stations, bridges, etc.).

B

Built environment

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A built environment is the sum total of the buildings erected after planning permission has, in principle, been granted, comprising:
- **An individual home:** a building comprising just one dwelling and with its own entrance;
- **Collective residential building:** a residence in a building consisting of several dwellings, where the apartment is the basic unit;
- **Service open to the public (SOP):** all buildings, premises and enclosures (public and private) into which people are admitted to use a service, either freely or upon payment of a fee or contribution, or in which open meetings or meetings by invitation only are held, free of charge or otherwise (health facilities, schools, sports halls, cinemas, post offices, banks, etc.).

C

Information and communication

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Means of information and communication combine the techniques used to process and impart information, and include:
- **Signage:** to enable coherent and practical use of a road system; comprising signals, signs, traffic lights, etc., which manage traffic, provide direction and inform users;
- **Signposting:** the graphic presentation of information involving a complex system of symbols that guide visitors around a given space, including arrows, logos and pictograms;
- **New information and communication technologies** (NICT): these refer to the techniques used to process and impart information, mainly IT, internet, mass media and telecommunications.

Haiti, 2011

Practical guide

The second part of the guide describes the various stages to be implemented to ensure that an accessibility audit will be successful (it cannot be improvised). There are three main stages: preparation, execution and implementation.

Overview of an accessibility audit

1
PREPARATION

Set up a monitoring committee
Select the route to be audited
Legal and technical documentation
Select the methodology
Raise awareness among stakeholders
Train professionals

↓

2
EXECUTION

Preliminary meeting of the monitoring committee
Obstacle identification process
Obstacle identification process: debriefing
Initial report to decision-makers
Technical recommendations
Cost estimate

↓

3
IMPLEMENTATION

Prioritisation and planning workshop
Invitation to tender
Monitoring
Control
Evaluation

Stage 1–Preparation

Whether the project is devoted purely to accessibility or is an integral part of a sector-based project, those involved in the execution of an accessibility audit must be prepared to play their part and assume their responsibilities if the operation is to succeed fully. The general public, including people with disabilities, must be kept informed of the aims of the audit and its usefulness for the population as a whole, otherwise there is a risk that the (sometimes substantial) investment will be misunderstood and therefore inappropriate.

🔍

Case study 1

An example from the Universal Access to Basic Services project (UABS) in Mali shows the importance of providing information about the usefulness of the facilities installed. A patient arrived by tricycle for an appointment at the health facility in Badalabougou in Commune V in Bamako, after it had been made accessible.

As usual the patient parked his tricycle at the bottom of the ramp which had been fitted out and signposted with an adequate logo and crawled along to climb the stairs leading to the consulting room.
A nurse who noticed this asked him why he had not used the ramp. The patient retorted that he did not know what this facility was for. The nurse then took him back and showed him how to use the ramp, thus allowing him to reach the consulting room on his tricycle.

🔍

Case study 2

The following example, taken from the Town & Disability project in Madagascar, shows the importance of raising awareness among the agents of a given service, in this instance the Public Records Office of a district in the town of Toamasina. The manager of the registry office did not understand the function of the access ramp and the purpose of the guide strips on the ground which had been installed by the town's technical services department. This lack of understanding thus prevented him from informing and assisting people with reduced mobility and partially sighted people about how to use these facilities.

A

Setting up a monitoring committee

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For an accessibility improvement plan resulting from the audit to succeed, everything must be done to establish a multi-stakeholder monitoring committee which must be in place for the long term, if one does not already exist in the area concerned. It must come under the aegis of the local authorities when their expertise is called upon, or under that of the decision-makers who manage the services.

The role of the monitoring committee is to supervise the entire accessibility process, to participate actively in the audit and, by means of a detailed report, to submit costed technical recommendations to the local authorities regarding the removal of obstacles that prevent freedom of movement and the provision of access to public and private services.

This committee can consist of (a minimum of) one representative from each of the following partners in the development, as appropriate:
- Local authorities;
- Municipality's technical services department;
- Professionals from accessibility sector;
- Civil society organisations, including DPOs;
- User groups;
- And, depending on the context, managers from services open to the public.

B

Selecting the route to be audited

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In all cases, the choice of route must take account of path and/or building user flow so that the challenges, reasoning and workings behind it can be understood, and the most frequently used places and services identified. This analysis can also provide clarification during the investment decision-making process.
Even though the paths or buildings to be made accessible are often predefined in a project document, it is essential that provision be made to hold a preliminary meeting with the monitoring committee, local authorities, service providers and users (including DPOs) to ensure:
- That the local urban master plan does not feature any works scheduled to be undertaken by the authorities which, in the short or medium term, would lead to the destruction of any facilities agreed by the project or to the expropriation of the site to be made accessible, for example, the opening of a two-lane highway;
- That, in more general terms, an analysis of urban function and community projects is an essential pre-condition; that all considerations about accessibility must be included in all facility-related issues and priorities in a systematic manner;

- That the opportunities arising from this urban master plan with regard to the possibility of 'tacking' any accessibility projects from the project in question onto the works scheduled by the authorities must be actively seized;
- That the choice of accessible facilities is relevant, particularly in terms of usefulness and frequency of use from the point of view of the user;
- That, as appropriate, the targets identified in the local development plan and those to be achieved by the project in terms of successful accessibility, are consistent.

C

Legal and technical documentation

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It is important that the members of the monitoring committee are provided with the tools required before the audit itself is carried out. Such tools include all relevant documentation relating to disability and accessibility issues that will allow committee members to put the audit into context in terms of current legislation, regulations and norms.
For example:
- **Legal framework:** law on the protection of people with disabilities, law on accessibility, executive decrees, rulings, government directives, etc.;
- **Technical documentation:** building regulations, urban master plan, accessibility norms, and technical factsheets.

Where this documentation is poor or does not exist locally and/or nationally, you are advised to select documents from the Tool Box and Appendices.

D

Selecting the methodology

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The implementation of an accessibility audit can be approached from two somewhat different angles, but they will both produce similar results in terms of technical and regulatory recommendations.

The **first approach** requires local ILD stakeholders (those without the technical support provided by an institution such as a school of architecture) to commit themselves to fully understanding an accessibility route, and has the following strengths and weaknesses, which are equally valid for the second approach:

- It is simple and easy to organise, and cheap;
- It unites local stakeholders around the theme of accessibility, and soon leads to consensus;
- It puts the users as representatives of civil society in a position of strength in front of the authorities (elected representatives and technical services) and service providers (public and private);
- It facilitates the decompartmentalisation of the service providers who are taking part;
- It allows the technical service agents of the area where the audit is to be held to be involved and then gradually gain a full understanding of the idea of accessibility;
- It does, however, require a detailed strategy to mobilise all the stakeholders involved.

The **second approach** consists of mobilising the students of a school of architecture or urban planning alongside local stakeholders, and has the following strengths and weaknesses:

- The very nature of a training/action plan will produce a pool of conceptual and technical resources, especially as accessibility is still misunderstood and missing from university courses;

- It produces a dynamic collaboration between students who represent the future, and technical service agents, with the former likely to introduce the latter to the innovative nature of an audit;
- It favours the long-term integration of accessibility as a discipline in university courses;
- It requires the intervention of a consultant architect or urban planner as coordinator, which is generally very expensive;
- It runs the risk of becoming 'specialist' in terms of the corporatism that designers such as architects and urban planners sometimes display, and their occasional tendency to stick together as professionals;
- It could prove to be complicated in terms of organisation, time and cost.

The ideal solution would be to 'mix' the two approaches to obtain a reasonable balance between local stakeholders and specialists in the field of accessibility.

Summary of the two approaches

Method 1

+	−
Easy to organise and less expensive	Difficult to mobilise stakeholders
Consensus around the theme	
Promotes civil society	
Decompartmentalises services	

Method 2

+	−
Broad pool of skills	Intervention by a consultant
Preparation of a technical summary	Risk of becoming specialist
Integration in university courses	Complicated (time & cost)

Handicap International's Technical Adviser on Accessibility is able to provide distance support for Handicap International programmes and projects throughout the entire accessibility audit process and the compliance upgrade procedure for the route and/or building.

E

Raising awareness among stakeholders

The examples quoted above show the importance of informing users about the functionality of the facilities introduced and of training public service personnel, in particular those who deal with people with disabilities, in order to promote and ensure the best possible use of these facilities.
It is therefore essential that steps are taken to raise accessibility awareness among:
- The general public, so that it can acknowledge their usefulness;
- Local authorities who have the power to accept, and even finance them;
- Civil society organisations, including DPOs, so that they can cascade down;
- Service providers, so that they can meet user needs in an efficient way.

Just like the continuity principle for the chain of movement, steps to raise awareness prior to an accessibility audit must be thought through in a coherent manner so as not to neglect (let alone forget!) any stakeholders.
It is essential that people with disabilities themselves are involved in raising awareness, so that they can help draw up messages and strategies, support the awareness-raising actions with their own experiences, and ensure subsequent monitoring.

Raising awareness among the general public

Raising awareness among the general public has the advantage of helping to change society's attitudes towards people with disabilities and reduced mobility, especially as these people are a reflection of the authorities' political commitment, and at the same time help enlighten the general public about the benefits of accessibility.
A wide variety of instruments can be used to raise awareness among the general public, with messages drawn up and disseminated by DPOs, such as:
- Inclusive events based around the theme of accessibility;
- Open-house days hosted by services that have already been made accessible;
- The use of signs within such services describing the facilities introduced;
- Media coverage of the accessibility audit;
- Announcements on radio and television;
- Posters, etc.

Raising awareness among the decision-makers

Raising awareness among local authorities is absolutely essential as it is they, as the contracting authorities, who ultimately decide whether or not to improve accessibility in their community. These authorities are also likely to be paying for these improvements out of their government budget, and/or with external funding raised within the framework of a decentralised cooperation scheme or from a development project run by an NGO such as Handicap International.
Furthermore, a community's elected representatives are duty-bound to apply, in the community where they have jurisdiction and on behalf of their electorate, the legislative framework in force and within which they can exercise their power. During an accessibility audit, it is therefore essential to remind them of their responsibilities, and also, by means of statistics where they exist[11], to show them the numerical importance wielded by people with reduced mobility and their entourage who live in their community, knowing that elected representatives (here

like everywhere else) listen steadfastly to any potential and sizeable electoral base. In theory it is the DPOs (supported or otherwise by their partners) which must drive home the awareness message, in that they legitimately speak in defence of the citizens' rights of their members... on condition that they are sufficiently well organised and adopt a common stance on the theme of accessibility.

If not, DPOs must be briefed by their partners before they act as spokesmen with the authorities; this can take time but it is essential if the concept of accessibility is to be accepted successfully on a pro-active and, in the long run, 'commonplace' basis.

Raising awareness among civil society
Raising awareness among civil society (user groups, human rights organisations, local NGOs, etc.) is just as essential as it is among local decision-makers if an inclusive approach to accessibility for all is to work. The more civil society knows about the implications and consequences of accessibility, the more balanced and constructive the dialogue between its representatives and local authorities becomes.

In keeping with the spirit of universal accessibility, DPOs must build partnerships with other organisations that represent civil society, such as women's, elderly people's and youth organisations, partnerships that demonstrate user resolve and that will bring pressure to bear on the decisions taken by local authorities.

Raising awareness among service providers
Service providers must be made aware of the whys and wherefores of accessible facilities, and be encouraged to recognise their usefulness so that they can popularise their practicality to their users. Such complete awareness will enrich the dialogue between local development stakeholders so that the chain of movement will generate services that must meet the needs of all users.

If service providers, their administrators, professional staff, customer services or technical staff adopt the principles of

accessibility, it will also help to foster the idea of employing staff who have disabilities on a equal level with their colleagues, thus integrating the very audience deemed to be a beneficiary of the service they themselves provide.

F

Training professionals

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In addition to raising the awareness of local development stakeholders, professionals in accessibility-related sectors such as architecture, urban planning, public works, public space planning, and construction must also be trained in the principles of accessibility, its normative aspects and implementation techniques. They too are local development stakeholders in that they are providers of services from their own sectors.

In most of the countries where Handicap International operates, accessibility is not understood, which does not mean that it has been rejected or neglected, but simply ignored. The fact that, in many instances, the area in question has never been subject to any previous attempt to introduce accessibility provides a great opportunity to win over those professionals who are in a position to implement it. Generally speaking, they are ready to learn and be recognised as pioneers in a new discipline.

Training professionals is clearly a vital task to remove obstacles preventing users from accessing services, so that these professionals can eventually integrate accessibility into their practices. Nonetheless, care must be taken to ensure that the process of improving accessibility *per se* does not simply become a 'job for specialists', otherwise there is a risk of friction between the idea of common usage of a given service on the one hand, and the too idealistic vision borne by designers who at times can be

disconnected from the realities of everyday life on the other.

In all cases, the training of professionals must consist of a common core and modules that are stakeholder- and context-specific:

- A common core of concepts associated with disability issues (appropriate vocabulary, statistics [where they exist], explanation of the disability creation process, etc.), a complete adherence to the United Nations Convention on the Rights of Persons with Disabilities, and knowledge of current national legislation regarding the rights of people with disabilities;
- Other trade-specific modules to be defined as appropriate.

Furthermore, an accessibility audit is the perfect opportunity to discuss the practical aspects of this type of training.

Training the designers

Training courses for designers, be they from technical service departments, schools or private architecture, urban-planning or civil engineering practices, may cover the following:

- Universal accessibility;
- Current regulations, or failing that, international norms;
- Carrying out an accessibility audit;
- Drawing up a compliance upgrade plan.

Training technicians

Technicians responsible for implementing the plan for improving accessibility, such as businesses, control systems professionals and civil security, need to be informed, have their awareness raised and be trained, notably in:

- Accessibility norms;
- Employment law;
- Construction site safety.

Training craftsmen

In a given context, if the designers are not (or barely) familiar with accessibility, the craftsmen working on the site (builders, painters, sanitary engineers, plumbers, carpenters, low-skilled workers) must certainly be trained in:

- The correct concrete mix for access ramps;
- The appropriate materials for floor and surface finishes;
- Colour contrasting for routes, walls and partitions.

Stage 2—Carrying out a participatory audit

Bibliographic documentation and accessibility websites aside, this stage is largely based on the experience gained from the participatory audit carried out during the following technical support missions run by the author of this guide:

- The schools in Sétif, Bouzeguene and Bordj El Bahri (Algeria), January 2012;
- Handicap International's office in Kigali (Rwanda), February 2013 ;
- The health centre in Agla, Cotonou (Benin), July 2013.

It is also based on reports written during field visits to ILD/Accessibility missions in Cambodia, Haiti, Indonesia, Madagascar, Mali, Morocco, Mozambique and Tunisia.

- In a balanced and representative manner, split the various stakeholders along the selected route into 'mini' groups of 4–5 people, who will then discuss their respective observations together;
- Within these 'mini' groups, encourage people to volunteer for certain roles: note-taking, sketches, measurements, check-lists, photographs, etc.;
- Suggest that the stakeholders, including user representatives (and regardless of their abilities), volunteer to take part in role-play during the obstacle detection exercise: in a wheelchair, on crutches, wearing ear protectors, using a walking-stick with their eyes covered, etc.;
- Depending on the context, provide all participants with some or all of the tools suggested in this document's Tool Box and other documents from the legal framework, and keep referring to them.

A

Preliminary meeting of the monitoring committee

Before proceeding with the actual audit in the field, it is essential that a sort of 'launch meeting' be held with all participating stakeholders to go over the main principles of accessibility introduced in the information campaigns, awareness raising exercises and training courses held beforehand, but also to:

- Ensure that all the local stakeholders involved in the process are there on D-Day, the day they take part in the obstacle identification procedure;
- Answer the latest questions raised by the participants, questions which have probably been left unanswered since the awareness-raising and training courses were held, and after the route to be diagnosed was selected;
- Remind everyone of the route to be diagnosed and the key points to which they need to pay attention;

B

Obstacles identification process

On D-Day, briefly recap the instructions given in the preliminary meeting (held no more than 1–2 days beforehand), and let the audit begin. Train the 'mini' groups to investigate the selected route and thoroughfare actively, step by step, meter by meter, whilst making sure that the empowered participants carry out their tasks to the best of their ability in terms of the supporting documents given to them.

⚠

In many low- and middle-income countries where they are still widely used, special attention should be given to the dimensions of tricycles which are bigger than wheelchairs, so that the relevant norms and standards can be adapted accordingly. An interesting and detailed video about wheelchairs available from Handimobility's website, and a technical document about tricycles from Handicap International's website are accessible from the Tool Box.
↳ **Tool A—Wheelchair vs Tricycle.**

During the audit, the project team must help the process along in a dynamic manner by providing stakeholders with the explanations they require, as and when they require them. This kind of support can take the form of:
‒ A recap of technical definitions depending on the type of obstacle encountered: projections, slopes etc.;[12]
‒ Pointing out obstacles that participants may not have detected or may have forgotten to note;
‒ Tackling a preliminary technical solution to the obstacles noted on site, with reference to the norms, in order to prepare the next stage of the process.

Various kinds of obstacle are described in the Tool Box:
↳ **Tool B—Statutory requirements.**
↳ **Tool C—Identifying the common obstacles to be detected.**
↳ **Tool D—Identifying obstacles according to the type of disability.**
↳ **Tool E—Identifying specific obstacles.**
↳ **Tool F—Questionnaire on the accessibility of a service.**

C

Obstacles identification process: debriefing

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Once the identification process has been completed, as a way of assessing accessibility issues and preliminary ideas for technical recommendations, it is important that the stakeholders meet on the same day (on site or in an appropriate room) to prepare a report for the decision-makers and other important stakeholders who were unable to take part in the audit, which report must show a preliminary consensus and involve:
‒ Quickly consolidating and analysing the data gathered;
‒ Sharing the full list of the obstacles detected;
‒ Discussing and noting stakeholders' observations, ideas, questions, etc.;
‒ Drawing up a preliminary prioritisation plan for improving and/or adapting the obstacles detected;
‒ Deciding how to designate the role of each type of stakeholder present for the next stage of the operation, based on the preliminary results of the audit, including such tasks as:
• Writing the report of the audit carried out by the project team, or where appropriate; the consultant engaged or the students mobilised;
• Dissemination of the results by the DPOs;
• Civil society advocacy with local authorities;
• Organisation of a prioritisation and planning workshop facilitated by the project team;
• Drawing up a list of specifications for the technical services.

D

Initial report to decision-makers

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Given that memory and observations are volatile things, and to show decision-makers the enthusiasm and interest that the audit undoubtedly generated among its participants, it is highly recommended that a report be submitted to local decision-makers and key reference people who were not able to take part in the exercise.

This report, which must be produced very soon after the diagnosis (ideally the same day or no later than the following day), and in the presence of all those who took part in it, must capture the interest of elected representatives and other reference people. The report could, for example, take the form of a PowerPoint presentation describing the process, supported by photographs of the obstacles identified and ending with the preliminary technical recommendations discussed during the detection process debrief.

Just like a PowerPoint presentation, a short film about the role-plays where participants in the diagnosis were placed in disabling situations along the route, can also play a pivotal role in winning decision-makers over to the principle of improving accessibility, and to encourage elected representatives to make a similar, preliminary verbal commitment before the entire audience.

If such a result is achieved after the report has been presented, it will be easier to build on the political commitment of the decision-makers when the accessibility improvement plan is under way.

E

Technical recommendations

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Using the data gathered during the audit and the items presented in the preliminary report as a basis, it is advisable to organise a preliminary meeting with the municipality's technical services department responsible for doing the work.

The aim of this meeting (at which a representative panel of the stakeholders who took part in the detection process must be present) is to review all the documents assembled and all the data gathered with the technical services one last time, so that an agreement in principle can be reached among all the parties present regarding the improvements and adaptations to be made.

A 'final' agreement will be sought during the prioritisation workshop which concludes the 2nd stage of the process.

This meeting can also be the opportunity for a final visit to the site to be made accessible. The actual drafting of the technical recommendations can now begin, in the following stages:

- Measurements taken on site;
- Route plan drawn with the obstacles marked;
- Selection of technical solutions;
- Verification that these solutions comply with current norms;
- Recommendations introduced, obstacle by obstacle.

Only proven professionals (ideally from the municipality's technical services department, backed-up where necessary by the project team) are able to carry out the recommendations; for example, draughtsmen, architects, urban planners, public works engineers, civil engineers. Nonetheless, once the technical recommendations have been drawn up it is essential that the other stakeholders are involved so that their opinions can be collated and the technical proposals discussed from the user's point of view.

F

Cost estimate

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Estimates of the cost of implementing the technical recommendations (i.e. actual figures) must, as was the case for the recommendations themselves, be drawn up by the competent authorities in the municipality, the relevant decentralised government services, or even private service managers, with the support of the project team where necessary, whilst ensuring that locally available materials are favoured. See the Appendices for a sample cost estimate. This estimate is from the technical services department of the Communal People's Assembly of Bordj El Bahri in Algeria, after an accessibility audit was carried out at the Hassiba Ben Bouali primary school in January 2012.

↳ **Tool G–Cost estimate for Hassiba Ben Bouali school.**

Stage 3–Post-audit monitoring

The accessibility improvements decided upon at the prioritisation and planning workshop are not, strictly speaking, part of the audit process, although they are the logical consequence of it; this must not be forgotten downstream, so that coherence with the main action plan in terms of invitations to tender (market procurement), monitoring, control and evaluation can be guaranteed. It is also an opportunity to keep the stakeholders motivated and committed to accessibility issues, and to ensure that the recommendations generated by the audit are implemented successfully, thus giving real meaning to the 'ordinary' and systematic use of dialogue between the stakeholders involved in accessibility issues in a given territory.
Lastly, invitations to tender, and monitoring, control and evaluation are the very factors likely to allow a local accessibility commission to be set up–the only long-term body able to provide a solid base for, and ensure the continued existence of the practice of accessibility in a living environment.

A

Prioritisation and planning workshop

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- Using the results of the audit as its base, the multi-stakeholder monitoring committee, in the presence of a wider audience, presents its report to the local authorities, where possible in the local mayor's offices.
- The participants then discuss the issues, possibly in an adversarial manner, before reaching agreement, and then prioritising and selecting the changes to be made depending on the particular accessibility-related challenges and constraints in the given municipality.

➥ The participants must then draw up a timetable for the work, define the annual budget required, and identify the funding bodies, on the understanding that municipalities are sometimes prepared to finance the operation.

B

Invitations to tender

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➥ After the prioritisation and planning workshop, there are two final formalities: a decision from the contracting authority (the owner), and a vote in the local council (or by the manager of the service concerned), which constitute formal acceptance of the accessibility-improvement plan. This obviously crucial stage is made easier if all the stages outlined in this guide have been adhered to.

➥ Once the accessibility route-map has been established, the accessibility improvement work must be implemented in accordance with the rules, i.e. in accordance with the public procurement processes in force in the community concerned.

➥ By way of an example, the Tool Box contains the specification sheet for accessibility works at the Chahid Ismaïl Kefti primary school in Sétif, following an accessibility audit carried out in January 2012 and after the commune's invitation to tender was won by the company DIAFET AMOR.

↳ **Tool H—Procurement process for Chahid Ismaïl Kefti school.**

C

Monitoring, control and evaluation

————

It is the monitoring committee's role to supervise the monitoring and control procedures for the accessibility works decided upon, as per the following main stages:

➥ A pre-works meeting, so that all the professionals know their role, their leeway, and their duties and responsibilities;

➥ Regular site visits, during which any discrepancies must be noted so that they can be remedied where necessary;

➥ Preliminary hand-over, when the appointed main contractor (technical services department, architect, construction company, etc.) deems his work complete and the 'snagging' process begins;

➥ Final hand-over, once the snags highlighted in the preliminary handover have been remedied; this marks the end of the contract between the contracting authority and the main contractor.

⚠️

With regard to the works, improvements and adaptations, it is highly recommended that an independent works inspector be appointed, who carries enough legitimacy and credibility in the eyes of the other parties involved. This is probably the only way to guarantee quality results, but there is a substantial cost factor involved which must be borne in mind.

Stage 3—Post-audit monitoring

So that the action undertaken can be reproduced elsewhere—the aim of any development project—it is vital that it be assessed and documented from a number of angles, including:

- **Feedback from the interested parties**, who constitute a formidable pool of information that can be used to support and guide similar projects in their own community, and who can transfer their newly acquired skills to other living spaces;
- **Feedback from users**, who, as users of an environment made accessible, are perfectly entitled to defend and promote it, and assess its value with the decisions-makers;
- **Documents relating to the good working practices generated** (similar to the 'Making It Work'[13] approach, for example), which can be used to support advocacy action in favour of accessibility;
- **Media coverage of the results achieved**, to popularise the positive effects and impact of accessibility for all citizens with the general public.

Lastly, a well-documented process to achieve accessibility in an environment (whatever that environment may be) on a local level is an efficient tool for influencing a country on a regional and national level, so that the principles of universal accessibility can be integrated into the country's development strategy for all aspects of citizens' lives on a long-term basis.

Tunisia, 2012

Tool box

Tool A–Wheelchair vs Tricycle

In many low- and medium-income countries, the use of tricycles is common even though accessibility norms generally consider the dimensions of a wheelchair when calculating the room they need to manoeuvre.

Depending on the context, the ground coverage and particularly the length of these two types of technical aid must be known: 1.25m for a wheelchair, and between 1.4 and 1.9m for a tricycle.

- **Wheelchair dimensions**
  Social Services of Canada:
  Types of Wheelchairs (English):
  http://www.cdss.ca.gov/agedblinddisabled/res/VPTC2/11%20Use%20of%20DME%20in%20the%20Home/Types_of_Wheelchairs.pdf
  Handimobility (French):
  http://www.handimobility.org/blog/une-video-sur-les-dimensions-a-respecter-pour-fauteuil-roulant

- **Dimensions of an adaptive tricycle**
  Motivation: The Clip-on Tricycle Attachment (English):
  http://www.motivation.org.uk/wp-content/documents/WM3TRCO-01%20Summary%20V6%20NRS_110617.pdf
  Handicap International: Le tricycle à balancier fabriqué au Burkina Faso (French):
  http://www.hiproweb.org/uploads/tx_hidrtdocs/TricycleBalancier.pdf

Tool B–Statutory requirements

This list of statutory requirements provides an overview of the legal aspects of obstacles to accessibility.

This is a comprehensive list of statutory requirements (from French law Nº. 2005–102, 'On equal rights and opportunities, participation and citizenship for people with disabilities', adopted on 11 February 2005) relating to all types of obstacles that may be encountered during an audits.

It was designed for Service Open to the Public (SOP) and was drawn up with French norms in mind; it must therefore be adapted to suit the given context, although it is still a good tool for making sure that nothing is forgotten.

Updated in 2009 by the Public Works Directorate (DDE) of the French department of Puy-de-Dôme, it can be downloaded from:
http://www.puy-de-dome.gouv.fr/IMG/pdf/Guide_complet_ERP_avec_MaJ_Juin_2012.pdf

A similar tool in English exists on the Americans with Disabilities Act (ADA) website: Checklist for Existing Facilities:
http://www.ada.gov/racheck.pdf

Tool C—Identifying the common obstacles to be detected

The obstacles to be detected during an accessibility audit are numerous and varied in nature, but they can be picked out easily enough, on condition that they are sufficiently well understood, that a comprehensive identification process is in place, and that adequate tools are available.

➥ The nature of the obstacles to be detected and the main points to watch out for are described below in table format, although they are open to interpretation and adaptation depending on the context and situation.
By way of example, an inventory of obstacles (in French) that was drawn up by the *Association des Paralysés de France* (APF) in 2011 in the French department of Pyrénées-Orientales, gives an idea of the large number of obstacles that exist and the technical solutions that can be adopted to remove them: http://www.accessibilite-apf66.org/index.php?page=listepointsnoirs
➥ The organisation of a participatory process for identifying obstacles is described in the second part of the Practical Guide: 'Stage 2—Carrying out a participatory audit'.
➥ All the terms used in the following tables are defined in the **Technical Glossary of Accessibility Terminology** in the Appendices.

The nature of the obstacles encountered and defined by a pool of stakeholders representing the area where the audit has been carried out allows 'Point Zero' to be established—the initial state, the raw material—from which the parties involved, in a concerted and consensual manner, will draw up the accessibility plan to be implemented. The nature of these different obstacles therefore constitutes a body of knowledge that must be shared and integrated in the awareness-raising and training programmes for the stakeholders concerned. This is an essential prerequisite.

1. Required resources

To gain a better understanding of the following obstacles, readers are invited to consult:
➥ The CD-ROM **Design Manual for a Barrier-Free Environment** available from the website of the Australian Disability Development Consortium (ADDC): http://www.addc.org.au/content/resources/barrier-free-design-manual/1015
➥ The CD-ROM **Loqacce-Cité** published by *Centre Scientifique et Technique du Bâtiment* (CSTB): http://www.accessibilite-batiment.fr/fileadmin/loqacce/loqacce_cite.html

To locate and identify the obstacles along the entire length of the defined route it is essential to have the following tools, if they are available:
➥ A map of the area;
➥ Plans of the buildings and their surroundings;
➥ Aerial photographs of the area and buildings, taken from Google Earth for example if no maps and/or plans are available;
➥ Copies of the national legislative framework on disability and accessibility;
➥ Copies of the urban (master) plan;
➥ A list of the minimum statutory requirements;
➥ Technical aids for role-playing situations featuring people without disabilities: a wheelchair or tricycle, crutches or a walking frame, blindfolds and a blind person's white stick, ear defenders, etc.;
➥ A camera;
➥ A video camera;
➥ A 10m tape-measure;
➥ Graph paper, marker pens, pencils, erasers, etc.

The intention is to note where the black-spots are and reproduce them in an appropriate format which will later be used to draw up technical recommendations designed to remove obstacles (cf Examples of tools to use in a audit).

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2. Examples of tools to use in an audit

Identifying a route to make accessible on a map
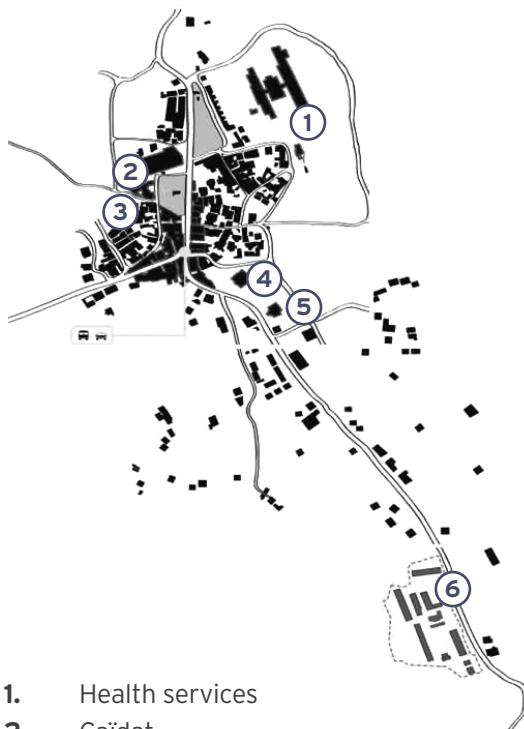
1. Health services
2. Caïdat
3. Mosque
4. Local council office
5. Post office
6. School

Rough sketch of an environment with routes mapped
(The Savane-Pistache quarter in Carrefour-Feuilles, Haiti)
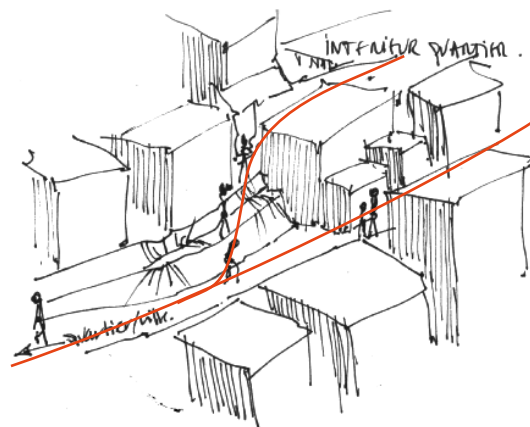
—— **Routes mapped**

Mapping the routes on an aerial photograph
(Immediate surroundings of the Hassiba Ben Bouali school)

0. Public garden
1. Route
2. Entrance 1 (pupils only)
3. Entrance 2
4. Yard 1
5. Yard 2
6. Administration
7. School building 1
8. School building 2
9. Stairwell
10. Possible vegetable garden
11. Latrines

—— **Routes**

Obstacle report with coding

(Commune of Menzel Bourguiba, Rue du 15 Octobre)

	Road system and roundabout	Status
Parking and moving around	Is there a carpark, is it accessible?	Non-compliant
	Are there any thoroughfares, are they accessible?	Non-compliant
	Of good quality?	Non-compliant
	Are there any projections?	Non-compliant
	Gradients ≤ 2%?	Non-compliant
	Manoeuvring space (diameter 1.5 m)?	Compliant
	Street furniture?	Non-compliant
	Holes/gaps (≥ 0.02 m)	Non-compliant
	Obstacles (street furniture or other)?	Non-compliant
	Accessible public WC?	Non-compliant
	Stairs accessible for blind people?	Not applicable
	Ramp (5% over 10 m)?	Not applicable
	Handrail?	Not applicable
	Siderails (0.05 m)?	Non-compliant
	Balustrade (staircases, over 0.4 m high)?	Not applicable
	Rest areas (at entrance and exit) 1.5 m?	Non-compliant
Crossing	Drop curb?	Non-compliant
	Pedestrian crossing?	Non-compliant
	Central reservation?	Non-compliant
Guidance	Signage?	Non-compliant
	Tactile warning markings?	Non-compliant
	Guide strips?	Non-compliant
	Interactive terminal?	Non-compliant
	Signage in Braille?	Non-compliant
Safety	Sufficient lighting?	Non-compliant
	Guardrail and safety posts?	Non-compliant
	Traffic lights?	Non-compliant
	Speaking terminal for blind people?	Non-compliant

Non-compliant
Compliant
Not applicable

Tool C—Identifying the common obstacles to be detected

Using photographs in PowerPoint when reporting back on the diagnosis

Report on a review based on statutory provisions:
↳ **Tool B—Statutory requirements**

Photos of role-playing situations featuring participants in the audit

3. Examples of obstacles and main vigilance points

TRAFFIC LANES

Pedestrian crossing
Toamasina market—Madagascar

Problem accessing the ramp on the other side of the street; Uneven surface;
Open gutters in places; Risk of flooding;
No signage—horizontal or vertical
↳ **Re-lay tarmac**
Pedestrian crossing to be upgraded
Surroundings to be made secure

Junction of pedestrian crossing and pavement
Martil beach in Tétouan—Morocco

Projection on drop curb too high, over 2cm;
Difficult for a person in a wheelchair to negotiate; Trip hazard for a blind or partially sighted person
↳ **Reset the drop curb**
Speed humps either side of ground markings

Pavement access
Cotonou–Benin

Sidewalk end with inadequate lowering, greater than 2 cm; Difficult for a person in a wheelchair to negotiate, trip hazard; Dangerous drain regard, misplaced pole, private encroachment on the public pavement, dangerous barbed wire

↳ **Reset the drop curb**
  Repair the drain regard and move the post
  Restoration of public domain

Road crossing
Tunis–Tunisia

Curb too high; Pavement not dipped along its length or at the end; Central reservation impassable; User forced to take great risks

↳ **Secure pedestrian crossing to be upgraded with central reservation**

THOROUGHFARE, PAVEMENTS AND LACK OF PUBLIC CONSIDERATION

Ground quality and street furniture
Port-au-Prince–Haiti

Uneven surface, street furniture, slippery when wet; Signs obstruct the pavement; Badly parked car; Traffic disruption; Trip hazard, risk of falling

↳ **Re-lay surface**
  Provide a non-slip surface
  Move the signs
  Consider a pedestrian crossing

Lack of consideration from motorists
Port-au-Prince–Haiti

Lack of consideration from motorists; Pathway blocked

↳ **Dialogue between authorities and motorists**
  Intervention by local police

Tool C—Identifying the common obstacles to be detected

Lack of consideration from local residents
Tunis—Tunisia

Lack of consideration from local residents;
Impossible to pass; User forced to go onto
the road; Danger
↳ **Dialogue between authorities
   and local residents
   Intervention by local police**

Local alley
Port-au-Prince—Haiti

Varied and variable surfaces; Significant
differences in level; Hazardous thoroughfare
↳ **Install a ramp
   Re-lay surface**

Holes and gaps
Port-au-Prince—Haiti

Non-standard grill on drain, with holes
wider than 2cm; Traps for walking sticks and
small-diameter wheels; Difficult for people
with an unsteady gait
↳ **Replace the grill**

INCLINES

Width of thoroughfare
Tunis—Tunisia

Congested pathway with street furniture
and/or obstacles; Incline higher than 2%;
Fall from the pavement hazard; Danger for
people with visually impairment; Paving
stones tiresome for people in wheelchairs
↳ **Move the posts
   Reset the incline
   Reset the type of ground**

PROJECTION

Handicap International office
Kigali–Rwanda

Projection hindering access to a meeting room
↳ **Remove projection by adding a mini-ramp**

STREET FURNITURE

ATM and post-box
Tunis–Tunisia

Raised platform in front of the cash machine (ATM) is too high, ATM and post-box are too high off the ground
↳ **Remove the raised platform and reposition both items 90cm above the ground**

Posts for lighting and signage
Maputo–Mozambique

Posts partially obstructing the passage to join a school with an insufficient distance from the pavement edge (less than 1.40 m); Self-locking paving stones very tiring for a person in a wheelchair; No safety rail at the curb while transition is greater than 40 cm
↳ **Move or eliminate the street furniture Reset the nature of the pavement Install a safety rails**

Tool C—Identifying the common obstacles to be detected

Guide strips
Banda Aceh–Indonesia

Anti- 'two-wheel' device which prevents the passage of a wheelchair and is dangerous for blind and partially sighted people, despite (or because of?) the presence of a tactile strip
↳ **Dialogue between site managers and users of two-wheeled vehicles is essential, the device obviously needs to be removed**

Café's terrace
Menzel Bourguiba–Tunisia

Passage hindered by the café's terrace and vehicles (moped on the thoroughfare and car at the end of the pavement), conflicting interests
↳ **Dialogue between authorities, users and retailer is essential
In the worst-case scenario, the local police may have to be involved**

ACCESS

Staircase
Tunis metro–Tunisia

Given the numerous flights of stairs, the metro platforms are accessible on one side but not on the other
↳ **Badly designed from the outset, to be completely re-designed, with a lift**

Stairs to access a mosque
Banda Aceh–Indonesia

Stairs impractical for people with reduced mobility; Without handrails
↳ **Install a ramp but with the risk to denature the architecture of the building
Find another way to install a ramp**

Bizarre parking space
http://aixsolite.wordpress.com/?s=parking

Access to the parking space is impossible because it is served by just one alleyway so narrow that vehicles cannot get through
↳ **Find another place to provide a parking space!**

TRANSPORT

Metro entrance
Tunis–Tunisia

Difficult if not impossible to negotiate the turnstile on the left of the photo; The grill on the right which could facilitate entry/exit is locked; Slippery floor, no visible thoroughfare and too reflective
↳ **Give permission to use the grill**
Re-lay the floor, and think of installing a guiding system on the floor

Getting on a bus
Tunis–Tunisia

Impossible to get on the bus, despite the sign indicating accessibility
↳ **Fit the bus with a platform lift or a removable ramp; Re-lay the platform and raise it**

SURROUNDINGS OF SERVICES OPEN TO THE PUBLIC (SOPS)

Area surrounding a school
Maputo–Mozambique

No ground markings on the pedestrian crossing and no speed humps on either side of it; Interlocking paving stones are difficult to negotiate for people who use a wheelchair; Thoroughfare between the pavement and the school entrance is interrupted
↳ **Bring the pedestrian crossing into line with the standards**
Re-lay the pavement
Build a gentle slope at the junction between the pavement and the school

Tool C—Identifying the common obstacles to be detected

ENTERING AND LEAVING A BUILDING

Ramp
Museum of Banda Aceh—Indonesia

Compliant ramp, except for the slippery surface and lack of signage; No grip for wheelchairs and walking sticks, risk of falling especially when wet
↳ **Tiles prohibited, so must be removed!**
   Re-lay the surface, for example with textured concrete

Ramp
Tunis—Tunisia

No signage or handrail; Surface does not facilitate movement; Too steep, well over 5%; Dangerous ramp and unusable for everyone
↳ **Ramp to be taken down, as it is counter-productive**
   Consider a platform lift
   Or find another entrance to upgrade

Entrance to a service open to the public (store)
Port-au-Prince—Haiti

Unusable access for a person with reduced mobility
↳ **Reset the incline (here over 2%)**
   Install a ramp
   Lower the reception desk

RECEPTION DESK AND OFFICE FURNITURE

Caisse d'Épargne (Bank)
Toamasina–Madagascar

Slippery, reflective floor; Reception desk
is too high; Desk has no leg space
↳ **Re-lay the floor with a non-slip
   and non-reflective surface
   Re-configure part of the desk to include
   a lower section
   Replace the desks with furniture
   that has leg space**

DISTRIBUTION/SERVING HATCH

Health centre in Agla
Cotonou–Benin

The hatch for dispensing medicine is
unreachable
↳ **Install a hatch that protrudes from the
   wall, or review the distribution system**

HORIZONTAL THROUGHFARES

Floor in a SOP
Port-au-Prince–Haiti

Slippery, reflective floor; Visual guide strips
are not centred; Thoroughfare is cluttered
↳ **Re-lay the floor with a non-slip,
   non-reflective surface
   Review the guiding system
   Raise staff awareness about the
   importance of an obstacle-free
   thoroughfare**

**Tool
box**

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Tool C—Identifying the common obstacles to be detected

Corridor in a SOP
Tunis—Tunisia

Stairs at the end of a passageway; Protruding walls; Passageway is too narrow, under 1.4m; Difficult if not impossible for a person with reduced mobility to use
↳ **Suggest an alternative route**

VERTICAL THOROUGHFARE

Chahid Ismaïl Kefti school
Sétif—Algeria

Poorly fixed balustrade; No handrail; Untreated steps
↳ **Balustrade to be secured; Install handrail; Provide anti-slip nosing, and a contrasting colour for the risers**

TOILETS

Toilets in a SOP
Cotonou—Benin

Failing of the mobility chain; Flight of stairs; Non-comply dimensions; Impossible to use by a person in a wheelchair; Difficult for a person with reduced mobility
↳ **With 2 latrines, create 1 accessible toilet Allow 2 ramps: one at the back exit of the SOP, and the other for the toilet that will be made accessible**

Toilets in a public garden
Banda Aceh–Indonesia

Obscured sign, toilets locked and being used as storeroom; Obviously being used for a different purpose
↳ **Remind the management of the need to monitor and control its facilities**

CONTROLS

Health centre in Agla
Cotonou–Benin

The switch is too high (120cm off the ground); Difficult to locate as it is too similar in colour to the wall
↳ **Re-position 90cm off the ground Paint in cardinal red, for example**

Health centre in Agla
Cotonou–Benin

Tap difficult to use
↳ **Replace with a single lever tap**

SIGNAGE

Health centre in Agla
Cotonou–Benin

Medicine price list: too busy, font too small; The sign is badly placed
↳ **Re-design the sign and place it near the access ramp**

Tool
box

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Tool C—Identifying the common obstacles to be detected

LIGHTING

Health centre
Maputo—Mozambique

Dazzling light; Prevents information from being read
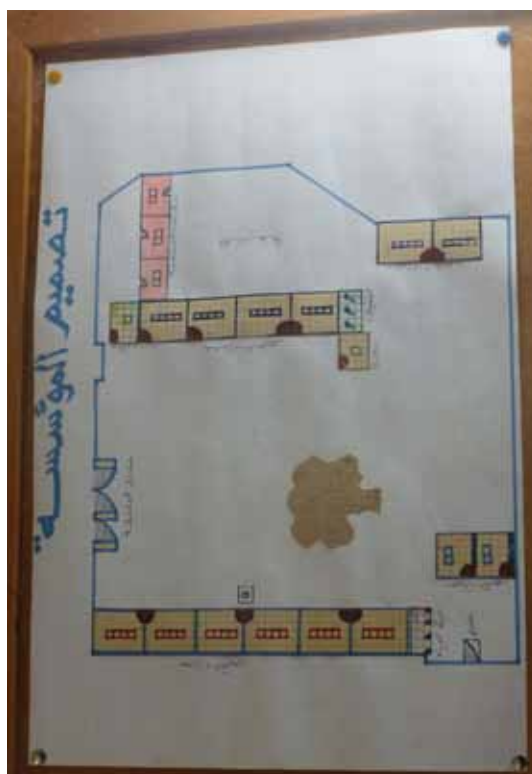↳ **Revise the lighting system**

SITE PLANS

Town hall
Toliara—Madagascar

The font is too small; Lack of pictograms
↳ **Revise the plan**

Omar YaKoubi Houra school
Bouzeguene—Algeria

The font is too small; Lack of pictograms; Difficult to follow
↳ **Revise the plan**

Tool D—Identifying obstacles according to the type of disability

When carrying out an accessibility audit and identifying obstacles on a given route, particular attention must be paid to obstacles that hinder free movement and the use of objects and controls for people with mobility, visual, auditory, intellectual or mental disabilities.

This is why it is important to have people with a variety of disabilities present during the audit, so that they can describe the specific type of obstacles that affect them. People with disabilities are in fact real 'experts' in detecting obstacles that bother them, or prevent or prohibit them from attending to everyday tasks, which they have every right to do.

Other participants can also be placed into a similar disabling situation to acquire a better understanding of the difficulties that this category of users faces.

The main difficulties encountered are described below; they are classed by type of disability and should provide food for thought.

Motor impairments

- **Prehension difficulties:** inappropriate or poorly placed control and handling systems (door knobs, window catches, switches, taps, letter box openings etc.);
- **Unsuitability for technical aids** (wheelchairs, walking frames, crutches, etc.): depends on the ground, equipment, street furniture, width of thoroughfare, etc.

Key questions to ask the people concerned
- Are the building's surroundings easily accessible for you (pedestrian crossings, pavements, external entrances, courtyards etc.)?
- Does the gradient of the ramps allow you to use them independently?
- Are the corridors completely obstacle-free?
- Can you easily access the different floors?
- Are the toilets appropriately fitted?
- Are the various control mechanisms at the correct height?
- Does the security system allow for easy evacuation?

For further information
- Guide pratique d'accessibilité universelle (Ville de Québec—Canada—2010): http://www.ville.quebec.qc.ca/citoyens/propriete/amenagements_adaptes.aspx

Visual impairments

- **Lack of guidance system:** no colour contrast, no raised guidance system on the ground or in interior and exterior vertical and horizontal thoroughfares (staircases and lifts; corridors etc.);
- **Inadequate signage:** on buildings, obstacles (beware of obstacles that are up high), and equipment; inappropriate signage: no contrast, no association between text and image;
- **Insufficient contrast:** difficult to see and read; thus difficult to identify non-contrasted hazards, walls and ceilings, hidden furniture and equipment;
- **Poor lighting:** for thoroughfares, equipment etc. (not powerful enough for the type of room, natural light not used, artificial light is too direct, not enough lighting points, no light management systems [blinds, curtains, etc.]);
- **Lack of safety:** glazed parts not identified, isolated steps, staircases not fitted out, etc.

Tool D—Identifying obstacles according to the type of disability

Key questions to ask the people concerned
- Can you identify the building?
- Are the obstacles and hazards indicated?
- Can you move around and find information?
- Does the signage allow you to move around on your own?
- Can you find large-print information?
- Can you find any tactile or audio facilities to help you use the services?
- Are there any special facilities available?

For further information
- Access to the Built Internal Environment (National Council for the Blind of Ireland—NCBI): http://www.ncbi.ie/information-for/architects-engineers/access-the-built-internal-environment
- How to Make Your PowerPoint Presentations Accessible: http://www.michigan.gov/documents/dmb/How_to_Make_Your_PowerPt_Presentations_Accessible5_199082_7.pdf
- Les besoins des personnes déficientes visuelles—Accès à la voierie, au bâti et aux transports (Confédération Française pour la Promotion Sociale des Aveugles et Amblyopes—CFPSAA—France—2012): http://www.cfpsaa.fr/spip.php?rubrique62
- Rendre un document PowerPoint accessible (Programme de certification des compétences en accessibilité du Web—PCCAW): http://certif.accessibiliteweb.com/accueil/base-de-connaissances/l-accessibilite-des-documents/article/rendre-un-document-powerpoint

Hearing impairments

- **Inappropriate signage:** no audible signals or signals backed up by visual signals; inappropriate signs: not contrasted, no association between text and image
- **Acoustic discomfort:** in communal thoroughfares, entrance halls (residential), reception areas, meeting rooms, dining rooms etc.;
- **No access to information:** no written transcription of information imparted, no welcome in sign language; no written versions of information imparted orally and visually (documents, written instructions) etc.;
- **Lack of communication facilities:** no induction loop, subtitles, wifi connection, online documents etc.;
- **Lack of security:** no visual warnings, no smoke detectors with flashing lights, inappropriate lighting, vertical thoroughfares without handrails etc.

Key questions to ask the people concerned
- Are any specific facilities or measures available for you?
- Can you easily contact people outside the building?
- Are you able to understand and be understood thanks to good acoustics?
- Are you able to understand thanks to an induction loop?
- Are you able to understand because the sound or AV system is sub-titled?
- Are you able to communicate because the staff is aware of how to communicate with you?
- Are you able to communicate with a person who has a basic knowledge of sign language?
- Are you able to communicate with a person who has an in-depth knowledge of sign language?
- Are you able to communicate with a person who knows sign language and who is still in the building?
- Are you able to be notified of danger?

For further information
- Toolkit for Working with the Deaf and Hard-of-Hearing (The Retirement Research Foundation–TRRF): http://www.rrf.org/wp-content/uploads/MMW-Deaf-Universal-Toolkit-05-24-12.pdf
- Les besoins spécifiques des personnes sourdes ou malentendantes en fonction des lieux–Exemples de solutions (Association pour l'Accessibilité du cadre de vie aux personnes Sourdes, devenues sourdes ou malentendantes–2-AS–France–2012): http://www.2-as.org/site/index.php?cat=acc&page=besoins

Intellectual and mental impairments

Definitions[14]
Given that issues of intellectual and mental disability are all too frequently confused, now would be a good time to remind ourselves of some definitions.
- **Intellectual disabilities:** "Intellectual disabilities are related to intellectual impairments, usually associated with a developmental disorder or a pervasive developmental disorder, whatever the cause (genetic, chromosomal, bio-organic, and environmental including nutritional). By intellectual impairment we understand the significant, persistent and long-term limitation of a subject's intellectual functions (assessed by measuring Intellectual Quotient) compared to other subjects of the same age who do not present this limitation."
- **Mental disabilities:** "Mental disabilities are associated with the chronification of serious mental disorders (…). [People with mental disabilities have] no systematic or permanent intellectual impairments but behavioral and emotional disabilities which translate into difficulties in acquiring or expressing psychosocial skills (incapacities in terms of language or behavior and those

related to protection or assistance). This leads to attention deficit and difficulties in drawing up and following action plans, as well as the alternation between calm and stressful states."

People with sensory impairments and people with intellectual or mental impairments largely face the same difficulties.
- **Lack of support with regard to comprehension and decision-making:** inappropriate documentation and signage–no images, no colours, and no text/image association;
- **Obstacles not dealt with and exterior environment not made secure** (school playgrounds, swimming pools, lakes, pedestrian thoroughfares etc.); an automatic door, which is often essential in a confined space for people with a motor impairment, can cause problems for some people with an intellectual or mental impairment who have a tendancy to abscond;
- **Poor lighting:** thoroughfares, equipment etc.; natural lighting not favoured, lighting not focused on objects, no gradual switching-off of time-delayed lighting systems;
- **No simplification of thoroughfares and messages etc.;** no open space offices and libraries, inappropriate signage, etc.

Key questions to ask the people concerned
- Did you recognise the building?
- Can you locate the entrance and find the opening times?
- Can you enter the building?
- Can you identify the different services?
- Can you find the information you need to help you find your way around?
- Is this information clear?
- Can you process verbally transmitted precise information?
- Can you locate 'easy to read' information?
- Can you find someone who can help you?

Tool D—Continued

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For further information
- Accommodations for People with Intellectual Disabilities (Vermont Network—VN): http://www.vtnetwork.org/advocate-accessibility/cognitive
- Make it Easy—A guide to Preparing Easy to Read information (Irish Working Group on Accessible Information—2009): http://www.walk.ie/userfiles/file/Make%20It%20Easy%20-%20A%20guide%20to%20preparing%20Easy%20to%20Read%20Information.pdf
- Pour vous accompagner dans vos démarches en matière d'accessibilité en faveur des personnes ayant une incapacité intellectuelle (Union Nationale des Associations de Parents, de personnes handicapées mentales et leurs amis—UNAPEI—France, 2010): www.unapei.org/IMG/pdf/GuidePratiqueAccessibilite.pdf
- Règles européennes pour une information facile à lire et à comprendre (UNAPEI—2009): http://www.unapei.org/IMG/pdf/GuidePathways.pdf

Tool E—Identifying specific obstacles

This section looks at situation-specific vigilance points (the other points discussed previously are still valid) and suggests links to websites.
The downloadable files and technical guides listed in the Bibliography feature accessibility norms and standards and thus describe the obstacles to be identified and removed.

Public transport

Assessing the accessibility of transport services is a huge task which must focus on the existing network, accessibility of staging points, passenger information, price structure and the concept of intermodality between different means of transport.
Web links
- The public transport accessibility audit process (Pinnacle Research & Policy Ltd—PRPL—2010): http://www.pinnacleresearch.co.nz/research/audit/PTaudit_instructions2010.pdf
- Schéma directeur d'accessibilité des transports urbains (Agglomération Annemasse—Les Voirons—2010): http://www.annemasse-agglo.fr/fileadmin/user_upload/Pdf/grands_projets_actions/deplacements/SDAaggloBD.pdf

Compliance of bollards and posts on the road network

To ensure that bollards and posts installed on the road network do not present a mobility obstacle, particularly for people with a visual impairment, a nomograph is required.
Web links
- Les bornes et potelets (Syndicat mixte d'action pour l'expansion de la Gatine): http://www.intragatine.org/PaysGatine/Portail2/ressources/guide-materiaux/mobilier-urbain/09-Les_bornes_et_potelets-guide_materiaux_pays_gatine_2011.pdf

Information and signage

When permanent information is provided for visitors in the form of visual signage, visitors with disabilities must be able to access and process it. Information and signage must be visible and legible for all users.

Web links

- Access to the Built Internal Environment (National Council for the Blind of Ireland–NCBI): http://www.ncbi.ie/information-for/architects-engineers/access-the-built-internal-environment
- Fiche technique n° 6: Signalisation (Institut Nazareth & Louis Braille et Société Logique–Canada–2003): http://www.societelogique.org/contenu?page=infotech/deficience

Signage

Signage is a chain of information allowing users to move from one link to the next in that chain without breaking it; the constant theme of 'location' will help the user to find information as he will know where to look for it. Visual signage must be accompanied by audio or tactile signage for people who are blind.

Web links

- Signage (National Institute of Building Sciences–NIBS): http://www.wbdg.org/ccb/browse_cat.php?c=22
- Guide pratique de la signalétique et des pictogrammes (Union Nationale des Associations de Parents, de personnes handicapées mentales et leurs amis–UNAPEI–France–2010): http://www.unapei.org/IMG/pdf/Unapei_Guide_pratique_signaletique_et_pictogrammes.pdf

Contrasts and colours

To facilitate the detection of facilities, equipment, controls and furniture (and also to avoid their being a hazard) there must be a visual contrast either between the object and its mounting or backdrop, or between two constituent parts of the object in question.

Web links

- Contrast Calculator (Designer Sign Systems–DSS): http://www.dss-osu.com/contrast-calculator
- 10 colour contrast checking tools to improve the accessibility of your design (406 BEREAST): http://www.456bereastreet.com/archive/200709/10_colour_contrast_checking_tools_to_improve_the_accessibility_of_your_design
- Colour, Contrast & Perception: Design Guidance for Internal Built Environments (The Research Group for Inclusive Environments–The University of Reading–UK–2004): http://old.amdro.org.uk/English/environment/planning/buildingcontrol/Technical%20Guidance/Documents/Colour%20Contrast%20and%20Perception.pdf
- Calculateur de contraste (ARGOServices): http://www.argos-services.com/boite-a-outils/calculateur-de-contraste
- Contrastes et harmonies (ONIP Peintures–2011): http://www.onip.com/documents/nuancier-contrastes-et-harmonies.pdf
- Guide des bonnes pratiques de mise en couleur (Union Professionnelle Peinture Finition–UPPF–France–2009): http://www.untec.com/untec/pdf/8723_Guide-mise-en-couleur-accessibilit%C3%A9.pdf

Tool E–Identifying specific obstacles

Workplace

An accessibility audit of offices, adjoining premises and outbuildings must obviously be considered in order to provide access to employment for everyone–the gateway to accessing other basic human rights. Let's start with Handicap International's offices!

Web links

- Accessibility Survey of Handicap International Belgium Offices in Vientiane and Sepon (Handicap International–2013): http://www.hiproweb.org/uploads/tx_hidrtdocs/HIB_Office_Accessibility_Survey_FINAL_2013.pdf
  Available in French: http://www.hiproweb.org/uploads/tx_hidrtdocs/Diagnostic_Accessibilite_Bureau_HIB_2013.pdf

Workstation

The participants in a workstation diagnosis must adopt a participatory approach with the assistance of an occupational therapist who helps to deal with disabling situations that affect people of all ages. The therapist will propose technical solutions aimed at improving the workstation by considering the physical and social environment of a person with a disability at work, and by asking a series of key situation-specific questions during the diagnosis.

Web links

- Disability employment–Reasonable accommodations (OPM Agency): http://www.opm.gov/policy-data-oversight/disability-employment/reasonable-accommodations
- Aménagement des postes de travail: http://informations.handicap.fr/art-emploi-formation-39-2521.php

Computer stations

Computers in workplaces or those used in internet cafés or provided in school computer rooms, for example, are generally not adapted for use by people with disabilities, yet hardware and software solutions do exist even though they are still very expensive.

Web links

- Considering Assistive Technology for Students with Disabilities (Georgia Department of Education): http://www.gpat.org/Georgia-Project-for-Assistive-Technology/Pages/Considering-Assistive-Technology-for-Students-with-Disabilities.aspx
- Access'Solutions: http://www.accessolutions.fr
- Inventaire technique des logiciels, outils et équipement de référence accessibles aux personnes handicapées (DECISIPH–Handicap International–2012): http://www.hiproweb.org/uploads/tx_hidrtdocs/inventaire_technique_logiciels_outils_equipement_PH.pdf

NICT

The use of new information and communication technologies is a very specific field in terms of accessibility; a practical guide will be published at a later stage. Nonetheless, the following internet links provide an insight into the points to consider when removing obstacles to their use by people with disabilities (bridging the digital divide, Web accessibility, iconography, public multimedia spaces).

Web links

- Inclusive Information and Communication Technologies for People with Disabilities: http://dsq-sds.org/article/view/167/167
- World Wide Web Consortium (W3C): http://www.w3.org
- Noun Project: http://thenounproject.com
- Pour le plein accès des personnes handicapées aux technologies de l'Information et de la Communication (Conseil français des personnes handicapées–2007):

http://www.cfhe.org/upload/
Publications/2010/acces_au_numerique_
nonaccessible.pdf
- World Wide Web Consortium (W3C) France:
  http://www.w3c.fr/a-propos-du-w3c
- Collection gratuite d'icones du "Noun
  Project": http://thenounproject.com/fr
- L'accueil adapté de personnes handicapées
  dans un espace public adapté (Philippe
  Cazeneuve–Caisse des dépôts et
  consignations–2009):
  http://www.creatif-public.net/IMG/pdf/
  GuideHandicapEPN.pdf et
  http://www.creatif-public.net/IMG/
  GuideCReATIF2.pdf

Meetings and events

In an ILD context, which involves dialogue
between stakeholders in a given area,
frequent meetings must be held between
local authorities, service providers and civil
society. It is therefore important to ensure
that these meetings are totally accessible for
everyone.
Web links
- Guide to Improve Accessibility for Persons
  with Disabilities: For Inclusive Meetings!
  (DECISIPH–Handicap International–2010):
  http://proadiph.org/IMG/pdf/guide_
  accessibilite_anglais.pdf
  Available in French: http://proadiph.org/
  IMG/pdf/guide_accessibilite_francais.pdf
- Planning an accessible meeting: A
  checklist (Ontario):
  http://www.mcss.gov.on.ca/en/mcss/
  programs/accessibility/understanding_
  accessibility/planning_meeting_checklist.
  aspx
- Organiser une réunion accessible à tous
  (Ministère de l'Écologie, de l'Énergie,
  du Développement durable et de
  l'Aménagement du territoire–2006):
  http://www.handiplace.org/media/pdf/
  autres/reunion_accessibilite_2010.pdf

Polling stations

A citizen's right to vote in his community is
an inalienable right, as stated in Article 29
'Participation in political and public life' of
the CRPD. Voting is therefore an important
democratic exercise for people with
disabilities and reduced mobility.
↳ **Tool F–Questionnaire on the
accessibility of a service.**
Web links
- Recommendations for Accessible
  Elections in Europe (Inclusion Europe–2011):
  http://inclusion-europe.org/images/
  stories/documents/Publications/
  Publications_website/Elections_
  Recommendations_EN.pdf
  Available in French:
  http://2012.unapei.org/IMG/pdf/bonnes_
  pratiques_elections_accessibles.pdf
- Accessible elections (Inclusion Europe):
  http://inclusion-europe.org/en/projects/
  accessible-elections

Schools

Identifying obstacles, along with work and
adaptations to be carried out in schools, is
an essential factor in support of inclusive
education; it facilitates the inclusion of
children with disabilities and allows staff
with disabilities to work more comfortably, be
they administrative, teaching or maintenance
staff.
Web links
- Making your school accessible for
  visually impaired pupils and visitors
  (Cambridgeshire County Council–Visual
  Impairment Service):
  http://www.cambridgeshire.gov.uk/
  downloads/file/1402/making_your_school_
  accessible
- Accessibilité des bâtiments d'écoles–
  District de Samlot, Province de
  Battambang (Vincent David–Handicap
  International–2004):
  http://www.hiproweb.org/uploads/tx_hidrt
  docs/Doc_tech_accessibilite_ecoles.pdf

Tool E—Identifying specific obstacles

Access to water

Too often marginalised, but under the jurisdiction of the local authorities, access to water is an essential basic service for populations in situations of vulnerability who, without water, hygiene or sanitation are unable to aspire to decent living conditions.

Web links

- Making public drinking fountains accessible to all (Handicap International Madagascar—2012):
  http://www.hiproweb.org/uploads/tx_hidrtdocs/LessonsLearnedDrinkingFountains Madagascar.pdf
  Available in French:
  http://www.hiproweb.org/uploads/tx_hidrtdocs/CapitalisationBornesFontainesMadagascar.pdf

Emergencies

Accessibility diagnoses are often neglected, if not forgotten, when setting up camps for displaced people, even though people with disabilities and reduced mobility are in greater need of assistance as they are doubly affected by the emergency situation and their disabling situation.

Web links

- Accessibility for all in an emergency context: A guideline to ensure accessibility for temporary infrastructure, WASH facilities, distribution and communication activities for persons with disabilities and other vulnerable persons (Handicap International—2009):
  http://www.hiproweb.org/uploads/tx_hidrtdocs/Accessibility_in_Emergency.pdf
  Available in French:
  http://www.hiproweb.org/uploads/tx_hidrtdocs/Laccessibilite_pour_tous_situations_urgence-HI_Haiti_2010.pdf

- Prise en compte des besoins des personnes handicapées dans les situations d'urgence: Accessibilité de l'assistance humanitaire lors des mouvements de population (Handicap International—2011):
  http://www.hiproweb.org/uploads/tx_hidrtdocs/prise_en_compte_besoins_ph_situations_urgence_goma.pdf

- Guide de bonnes pratiques—Accessibilité (Handicap International Haiti—2011):
  http://www.hiproweb.org/uploads/tx_hidrtdocs/ATU_BROCHURE_FRENCH_light.pdf

Tool F—Questionnaire on the accessibility of a service

📄

Note

The following questionnaire on the accessibility of polling stations in Tunisia is offered as an example and can be adapted to suit other aspects of accessibility, e.g. the accessibility of a health centre, school or government building, or as part of a pre/post-project study.

ACCESSIBILITY OF POLLING STATIONS 2011—TUNISIA

Details of the polling station

Town : _____

Code : _____

Quarter/district

_____

Address :

_____

_____

Type of building :

☐ School ☐ Library

☐ Town hall ☐ Council offices

☐ Governorate ☐ Other

Details of the person who filled in the questionnaire

Last name/first name: _____

_____

Profession/activity:

_____

_____

Address:

_____

_____

Organisation (if a member of an organisation):

_____

Opening times of the polling station:

_____

_____

PART 1 Car park	Yes	No	Don't know N/A
1. Is there a permanent or temporary car park?			
2. Are there spaces reserved for people with disabilities?			
3. Is there at least one 2.5 x 3m space?			
4. Is the surface of the car park stable, flat and negotiable (not gravel, sand etc.)?			
5. Are the spaces reserved for people with disabilities nearest the entrance to the polling station?			
6. Is there signage (international standards) at the entrance to the car park that can be seen even when the car park is full?			
7. Is the route to the polling station visibly marked?			
Comments :			

Tool F—Questionnaire on the accessibility of a service

PART 2 **Route from the car park to the polling station**	Yes	No	Don't know N/A
1. Is there an accessible route (at least 120cm wide) from the car park to the polling station?			
2. Is the surface of this route stable, flat and negotiable (not gravel, sand etc.)?			
3. Is the route free of all obstacles (equipment, boxes etc.)?			
4. Where the route has differences in height, are there ramps in place?			

Comments :

PART 3 **Entrance to the polling station**	Yes	No	Don't know N/A
1. Is the ground outside on the same level as the entrance to the building?			
2. If not, is there a ramp?			
3. If there is a ramp, is it of the minimum width (120cm)?			
4. If there is a ramp, does it have an acceptable gradient?			
5. Does the ramp have guardrails?			
6. Does the ramp have an anti-slip surface?			
7. Does the ramp have a support handrail (especially on ramps that are not comfortable to use or not compliant)?			
8. Is there enough space (at least 150cm) before and after the ramp?			
9. Is there an entrance threshold over 5cm high?			
10. If so, is there a ramp?			
11. Is the door wide enough for a wheelchair (over 120cm)?			
12. Is the door handle within easy reach (no higher than 120cm off the ground and easy to use)?			
13. Is there enough space (at least 150cm) before and after the door?			

Comments :

PART 4 **Moving around inside the polling station and its facilities**	Yes	No	Don't know N/A
1. Is there clear signage indicating the way into the polling station? Or a person showing the way?			
2. If there is a corridor, is it least 120cm wide?			
3. Is the surface of the corridor stable, negotiable, non-slip?			
4. Is the corridor free of all obstacles (boxes, tables, cupboards etc.)?			
5. Is there enough room for people in wheelchairs to turn or turn around (at least 160cm)?			
6. Is the corridor all at the same height?			

	Yes	No	Don't know N/A
7. If there are different levels in the corridor, are the thresholds less than 5cm high, or are there ramps?			
8. Are there any toilets in the building?			
9. Are the toilets accessible for people in wheelchairs (door at least 80cm wide, space around the toilets etc.)?			
10. If there are obstacles in the voting place, are there identifiable people available to help get to it?			

Comments :

PART 5 **Queueing**	Yes	No	Don't know N/A
1. Is the floor of the queuing area flat?			
2. Is the floor stable, non-slip?			
3. Are chairs and rest areas provided for people with reduced mobility, elderly people, pregnant women (at a reasonable distance from the voting station)?			
4. Is there someone (or a system) to provide information about waiting time or available booths?			
5. Is the queuing position visible (floor marking, for example)?			

Comments :

PART 6 **The act of voting**	Yes	No	Don't know N/A
1. Is there at least one identifiable booth bearing the international accessibility symbol?			
2. Does the booth have a light above the door or a bell?			
3. Is there a low table and a high table in the booth?			
4. Is there at least one booth accessible to wheelchairs (minimum 110cm wide, 160cm deep)?			
5. Is the booth sufficiently well lit?			
6. Is there a threshold over 5cm high?			
7. If so, is there a ramp?			
8. Is there voting material (ballot papers) for people with a visual impairment (Braille)?			
9. Is the ballot box at a height accessible for people in a wheelchair (120cm)?			

Comments :

Tool F—Questionnaire on the accessibility of a service

PART 7 **Exit from the polling station**	Yes	No	Don't know N/A
1. Are there any specific directional signs (showing the way to entrances and exits)?			
2. Is the way in also the way out?			
If not, please answer the following questions:			
3. If there is a corridor, is it least 120cm wide?			
4. Is the surface of the corridor stable, negotiable, non-slip?			
5. Is the corridor free of all obstacles (boxes, tables, cupboards etc.)?			
6. Is the full length of the corridor of even height?			
7. If there are different levels in the corridor, are the thresholds less than 5cm high, or are there ramps?			
8. Does the route lead directly to the car park?			

Comments :

PART 8 **Questions for the polling station manager**	Yes	No	Don't know N/A
1. Have you received any specific instructions relating to people with disabilities?			
2. Have one or more persons been identified to inform/assist people with disabilities?			
3. If so, have they been given any specific instructions (training/information)?			
4. Have any people with disabilities been to the polling station today?			
5. If a person with a visible intellectual/mental impairment comes to the polling station, will he be entitled to vote alone?			
6. Will he be entitled to vote assisted?			
7. If a person with a visual impairment comes to the polling station, will he be entitled to enter the booth with his/her carer?			
8. If he is not accompanied, will he be entitled to ask for assistance from one of the station's officials?			

Comments :

Tool G—Cost estimate for Hassiba Ben Bouali school

COMMUNAL PEOPLE'S ASSEMBLY OF BORDJ EL BAHRI
TECHNICAL SERVICES DEPARTMENT
PROJECT: HASSIBA BEN BOUALI PRIMARY SCHOOL (PILOT SCHOOL)

COST ESTIMATE

N°	Description	U	Q	P/U	Amont
	Exterior				
1	Fit school signs in steel plate fixed onto round steel tubes	U	2	9 000.00	18 000.00
2	Mark out pedestrian crossings	M²	50	150.00	7 500.00
3	Fit a rubber speed hump with phosphorescent colours	ML	30	7 000.00	210 000.00
4	Fit lighting columns with lights	U	4	10 000.00	40 000.00
5	Remove old edging	ML	20	200.00	4 000.00
6	Strip old surfaces	M²	40	200.00	8 000.00
7	Construct a ramp in welded mesh-reinforced concrete	M²	40	1 000.00	40 000.00
8	Fit metal railings to protect pupils from the public highway (1m high)	ML	40	7 000.00	280 000.00
	Interior				
9	Modifications to front door	F	F	7 000.00	7 000.00
10	Construct a ramp in welded mesh-reinforced concrete with a textured surface in the schoolyard	M²	60	1 400.00	84 000.00
11	Fit flagpole on reinforced concrete base and with an approach ramp	M²	10	6 000.00	60 000.00
	Corridor				
12	Concrete slope from the corridor to the yard on the side opposite the main entrance	M²	10	1 000.00	10 000.00
	Sanitary fittings				
13	Fit a western-style WC	U	1	10 000.00	10 000.00
14	Washbasin with mixer tap	U	1	6 000.00	6 000.00
15	Hardwood door with sign	U	1	10 000.00	10 000.00
16	Tap with shower spray	U	1	3 000.00	3 000.00
17	Fit copper pipework	ML	30	1 000.00	30 000.00
18	Construction of a 10cm thick hollow-block wall	M²	50	1 300.00	65 000.00
				Total ex VAT	892 500.00
				VAT	151 725.00
				Total inc. all taxes	1 044 225.00 Dinars

Tool H–Procurement process for Chahid Ismaïl Kefti school

THE PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA
WILAYAH [PROVINCE] OF SÉTIF
DAÏRA [DISTRICT] OF SÉTIF
COMMUNE OF SÉTIF
TECHNICAL SERVICES DEPARTMENT

SPECIFICATION SHEET

TITLE OF PROJECT:
Work to improve accessibility at Chahid Ismaïl Kefti school
LOCATION: Telidjen, in the commune of Sétif
FUNDING PROGRAMME: Self-financing

CONTRACTING AUTHORITY: Communal People's Assembly of Sétif
CONTRACTOR: DIAFET AMOR
TIMEFRAME: 2 months
COST: Refurbishment: 3 705 682.50 DZD
         + Surfaces: 1 462 032.00 DZD
            Total: 5 167 714.50 DZD

SPECIFICATION SHEET IN THE AMOUNT OF: Five million one hundred and sixty seven thousand seven hundred and fourteen Algerian dinars and fifty centimes.

WORK TO BE CARRIED OUT:
- Improvements to the school surroundings (tiling and access for people with disabilities
- Painting
- Courtyard surfacing
- Refurbishment of one classroom and lighting
- Refurbishment of sanitary facilities for people with disabilities
- Support rails and ramps

SCOPE OF THE PROJECT:
To improve and adapt the school environment to provide access for pupils with disabilities, in accordance with Algerian accessibility norm **N.A. 16227–2009.**

Cachet et signature

**Tool
box**

69

Morocco, 2011

Appendices

Acronyms

CERTU	Centre d'Études sur les Réseaux, les Transports, l'Urbanisme et les constructions
CRPD	Convention on the Rights of Persons with Disabilities
DAD	Direction de l'Action de Développement–Development Division
DAU	Direction de l'Action d'Urgence– Emergency Response Division
DECISIPH	Droit Égalité Citoyenneté Solidarité Inclusion des Personnes Handicapées–Right, Equality, Citizenship, Solidarity and Inclusion of People with Disabilities
DPO	Disabled People's Organisation
DRT	Direction des Ressources Techniques–Technical Resources Division
FOP	Facility Open to the Public
LID	Local Inclusive Development
NICT	New Information and Communication Technologies
NGO	Non Governmental Organisation
SOP	Service Open to the Public
UABS	Universal Access to Basic Services

Technical glossary of accessibility

🔍

For further information
Some of the terms defined in this glossary have links to websites and downloadable documents, which in general are the source of the definitions and which allow the reader to expand his knowledge of accessibility issues.
To follow
At a later stage this glossary is likely to be updated with examples, drawings and photographs.

Access aisle
''Clear, level area parallel to a parking space for people with mobility disabilities to get in or out of a car or van.''[15]

Access ramp
''Section of a given route built with a deliberate slope to deal with a localised difference in level.''[16]
It is a slanting platform that allows people in wheelchairs or who use crutches to move between the different levels of a surface without the need to raise that surface.

Accessibility
''A building or facility deemed accessible to people with disabilities is one where, under normal operating conditions, people with disabilities can, with the greatest possible degree of autonomy, circulate, access premises and equipment, use equipment, find their way around, communicate, and use the services for which the establishment or installation was designed.''[17]

Accessibility caravans
''Key buildings open to the general public are audited to improve the public's understanding of the obstacles faced by people in disabling situations. A certain number of stars are awarded to each building according to its accessibility. These awareness-raising

campaigns are extremely effective for at least three different reasons: the increased awareness amongst the general public and the media, the training of disabled people's organizations prior to the event, and the creation of a concerted dynamic for carrying out local diagnoses."[18]

Accessibility diagnosis
"It is used to assess the barriers to mobility in a given space (a road, a market, a school, etc.) and inside existing private or public-sector facilities. It should lead to the identification of the main difficulties, with the aim of proposing effective, low-cost solutions."[19]

Accessible parking
"Parking spaces which are useable by people with mobility and stamina limitations."[20]

Accessible route
"A continuous, unobstructed path connecting all accessible elements and spaces of a building or facility."[21]

Accessible site plan
A detailed plan at the entrance of a public building (town hall, school, health centre, market etc.) showing the location of offices, consulting rooms, toilets, stalls etc.). It can be tactile, in Braille, with pictograms, etc.

Adaptable design
"Easily renovated to create a barrier-free environment."[22]

Architectonic
"Relating to the science of architecture and its conformity with construction techniques."[23]

Architectural
Relating to architecture.

Architecture
"Architecture is the art of using appropriate techniques to design, combine and use elements that are solid or empty, fixed or mobile, opaque or transparent, to constitute a protective volume providing man, in every aspect of his life, with shelter from all natural and artificial disruption. The rules governing these volumes also apply to their relative proportions and materials, their colours and position in a natural space or environment, an ensemble which may or may not create a homogenous unit, with varying dimensions, from simple shelter to metropolis, and whose appearance achieves an aesthetic effect or not, depending on its success."[24]

Areas of refuge
"An area separate from the general floor area by a fire separation having a fire-resistance rating at least equal to that required for an exit, that is smoke protected and served by an exit or a firefighters elevator. It should also be a size that allows a minimum floor space of 850 x 1200 mm per non-ambulatory occupant, with no fewer than 2 such spaces."[25]

Arm rest
Arm rests allow "elderly people, those who tire easily and those have difficulty moving, to get up more easily"[26] from a wheelchair, toilet, seat, bench, etc.

Assistive listening systems
"Improves sound reception for persons with hearing disabilities by providing amplification while blocking out unwanted background noise."[27]

Audible signals (alarms)
A system that emits a sound, largely intended to provide a signal or warn of a danger, particularly to warn partially sighted people when a fire breaks out in a service open to the public. For example, two-tone audible signals are sometimes used at pedestrian crossings on junctions; they are also useful for partially sighted people.
"Audible alarm systems can be accompanied by a visual flashing warning device for deaf people or people who are hard of hearing."[28]

Automatic door-opening mechanism
"A device which allows a door to be released or opened from a distance, often combined with an intercom or remote control system."[29]

Balustrade
A balustrade is a protective barrier fitted onto the edge of an open staircase, the perimeter of a landing, balcony, mezzanine, gallery or any other place such as a roof, to prevent accidental falls.

Barrier-free access provision
The creation of an accessible and useable environment for people with disabilities.

Bollard
''Usually a 900 mm high post to mark pedestrian path from vehicular traffic.''[30] ''To ensure constant conformity with accessibility norms, bollards and posts must be selected so as to improve their 'visual detectability', mainly by using contrasting colours and luminance.''[31]

Brushed/textured cement or concrete (anti-slip)
''Brushed concrete is obtained by means of mechanical or manual brushing of the concrete as it starts to set, thus creating parallel striations which help with adherence and improve the aesthetic appearance.''[32]

Bush-hammered surface (anti-slip)
''Concrete whose surface has been subjected to a mechanical process after hardening; it involves hammering with a pointed tool called a bush hammer. The appearance of the surface varies according to the depth of the blows and type of hammer used.''[33]

Chain of movement
''A chain of movement, which includes the built environment, road systems, public space facilities, transport systems and hubs, are organised so that they are accessible in their entirety for people with disabilities or reduced mobility.''[34]

Clear width
''Horizontal opening with no obstructions.''[35]

Comfort zone
See ''Rest area''.

Continuation of a handrail
''The need to continue a handrail is so that a person, particularly a blind or partially sighted person, does not have to remove his hand from it. A handrail can thus be considered continuous if the hand can be guided without interruption. Handrails comprising several distinct parts can be deemed accessible if they have no gaps wide enough to present a risk that the hand will 'lose its way'''.[36]

Contrasting colours
''A contrast is a difference between two things (shape, value, colour etc.). A contrast between two or more colours is therefore said to exist when marked differences or intervals between them can be observed.''[37]

Controls
''On each floor in a dwelling, the areas of circulation, entrance doors and internal doors must, from the outset, feature minimum accessibility features for people with disabilities. Control mechanisms must be easy to identify and use by such people.''[38] This mainly concerns door handles, window catches, electrical switches, lift buttons, taps, toilet flushes, etc.

Detectable indicator/Directional indicator
''A tactile surface feature built in or applied to walking surfaces to act as a wayfinding guide or orientation cue for people who are visually impaired (Often a paver insert composed of tactile raised lines applied in the direction of pedestrian travel).''[39]

Difference in level
The difference in level between two closely spaced points in the same unit (pavements, the edges of a road, etc.).

Direction sign
Rectangular signs help the user to select a route to follow, or provide information on the destination of the route selected. These signs can carry symbols (e.g. to indicate an interchange) or ideograms (e.g. to indicate a hospital).

Door manoeuvring space (usable space)
"Door manoeuvring space is required on both sides of every door or gate along the given route, with the exception of those opening onto staircases and those in non-adapted toilets, showers, fitting rooms and changing rooms."[40]
"Usable space allows a wheelchair to be positioned, or a person using one or two walking sticks to assume a position to use a piece of equipment, control mechanism or service."[41]

Drop curb (paved ramps)
"A regulation-compliant lowering in the pavement at intersections and places on the pavement where a pedestrian route must access the road."[42]
Sections of the pavement where the curb is lowered to provide access for people in wheelchairs and people with reduced mobility.

Edge protection
"To ensure that the wheels of a wheelchair do not veer off a ramp or landing when the sides of ramps and landings are not at grade or adjacent to a wall."[43]

Exterior route
"An accessible route must allow access to the main entrance, or one of the main entrances, of a building from the site access point. The choice and design of this route are such that they facilitate the continuity of the chain of movement with the exterior of the site. The accessible route must be the common or one of the common routes."[44]

Flare
"A sloped surface that flanks a curb ramp and provides a graded transition between the ramp and the sidewalk. Flares bridge differences in elevation and are intended to prevent ambulatory pedestrians from tripping."[45]

Flight of stairs
See "Staircase (terminology)".
"A portion of a staircase between two platforms, comprising steps. The steps are straight (parallel) in a straight flight, they radiate in a spiral staircase (French-style), and

are skewed, balanced/winding or flying in a quarter-turning staircase."[46]

Floor
"Any difference in height along a horizontal thoroughfare equal to or greater than 1.2m is an offset level and deemed to be a floor."[47]

Footprint (ground coverage)
"The surface area that all buildings occupy on the ground; it is the vertical projection on the ground of the building(s) from the construction alignment, except for traditional overhangs, architectural features and balconies."[48]

Functional device
See "Technical aid".
"A device assists users in accomplishing day-to-day functions. For example: a wheelchair, walker, cane."[49]

Glazed partition
All glazed partitions on thoroughfares, or immediately adjacent to them, must be identifiable by means of visual elements that contrast with their immediate environment.

Grill, hole, gap
A given route must be usable, with no obstacles for wheels, walking sticks or feet, and be equipped to allow public spaces to be used and crossed, which means that holes and gaps on the ground resulting from the presence of grills or other fittings must be no more than 2 centimeters wide.

Guide strips (tactile surface on the ground) or tactile strip
"Tactile guide strips (tactile guidance strips) are used to create a guide on the ground that can be detected by the feet or a walking stick, and can be visually identified. They are placed in areas of intensive circulation (reception halls, stations, shopping centres, squares, forecourts etc.) where the identification of information and routes is not obvious, and at pedestrian crossings or public transport stops as a location marker."[50]
Guide strips identify routes to services or communal spaces.

Handrail
''Fixture on a wall or balustrade designed to offer a hand-hold to those using [a ramp or staircase].''[51]
''Handrails, at single or different heights, allow people with disabilities to circulate and find their way around. Handrails can be fitted on flat or sloping planes or on staircases.''[52]

Hygiaphone
A transparent and perforated grill on ticket counters.

Illuminated path
''Fitted with movement detectors, it guides people moving around at night with the aid of non-aggressive lighting. An automated system with a timer, it switches itself on when the person approaches and then later switches itself off. This radio-based solution does not require major building work and allows existing lighting systems to be kept.''[53]

Inclination
''Transverse slope or incline on the ground or in a structure perpendicular to the direction of travel.''[54]
''Where the transversal section of a route is too steep, walking is hindered, and a much greater effort is required from a person in a wheelchair to stay on course.''[55]

Incline (slope)
''Slope parallel to the direction of travel calculated by dividing the vertical drop by the horizontal distance covered.''[56]

Induction loop
''An induction loop can be fitted in a concert hall to allow people who are hard of hearing and who use a hearing aid, to detect sound clearly. Positioned around the edge of the hall, the installation of an induction loop amplifier provides people who are hard of hearing with access to sound directly in their hearing aid. Opera, theatre, meetings, cinema etc. thus become accessible to people who are hard of hearing.''[57]

Information panel
Rectangular signs with a blue background, or a white background with a blue border, providing useful information for users. These signs are more often than not used as locational markers. They can indicate the presence of an obstacle (a speed hump, for example), and provide directional, positional (they can also be used to inform drivers about which lane to take) and situational information that is useful to users.

Infrared system
''Specialized sound system that converts sound into infrared light; the light is reconverted into sound by a portable receiver.''[58]

Leaf
The movable part of a door.

Lighting
''The quality of the lighting, artificial or natural, for interior and exterior traffic must be such that it does not create visual discomfort. Access devices and [communication devices] require a superior quality of lighting.''[59]

Luminance contrast
''Occurs when there is not only a contrast in colour between a surface and it's background, but there is a luminance factor to the surface which provides a slightly reflective quality, further highlighting an area from the background.''[60]

Lux (lx)
A unit of light: 1 lux corresponds to the light produced by one candle at a distance of 1 meter.

Manoeuvring space
A space allowing ''a wheelchair to be manoeuvred and a person using one or two walking sticks to manoeuvre. It provides space to change direction or turn around.''[61]

Marker
Designates a pedestrian area, signals a hazard to be avoided, or indicates a given route to follow.

Measurement
The action of measuring length.
The figure resulting from an act of measurement.
The length in meters.

Multiple leaf doors
"Two or more doors separated only by a door frame. Each door is called a leaf."[62]

Norms (standards)
"A norm is a set of characteristics describing and governing a particular field, object, product, etc. It is drawn up by seeking a consensus among all the market's stakeholders: producers/manufacturers, laboratories, public authorities, users, consumers and even countries."[63]

Nosing
See "Staircase (terminology)".
"Part of a step that protrudes over the riser; the height of a balustrade or handrail is measured from the nosing."[64]
"It must be easily identifiable by blind and partially sighted people so as not to constitute an obstacle for the feet when climbing stairs. Various adjustments can be made so that they are non-slip, visually contrasted against the staircase, and do not protrude too far over the riser."[65]

Obstacle
"An object that limits the vertical passage space, protrudes into the circulation route, or reduces the clearance width of a sidewalk or trail."[66]

Pavement
Pavements allow pedestrian traffic and "play host to street furniture such as electricity supply facilities and publicity boards, traffic lights, flower-pots, vending machines and benches, all of which are undeniably useful and necessary."[67] Street furniture must not prevent users from moving around.

Pedestrian crossing
"Crossings are an essential safety link in the chain of movement. The principle behind them is that a pedestrian, without disabilities or with a visual impairment, can cross at the narrowest point in maximum safety."[68]

Person with reduced mobility
"A person with reduced mobility… is a person whose movement is hindered or prevented for reasons of size, motor, sensory or cognitive state, age, or as a result of the devices and equipment he must use in order to move around."[69]

Pictogram (or intuitive icon)
"A drawing reproducing the content of a message without the use of words."[70]
"There are two types: informative and directional. The former depict a type of disability and appropriate equipment. The symbols and letters are white on a blue background. Directional pictograms refer to appropriate equipment and the direction to follow. The symbols and letters are black on a white background."[71]

Post
See "Bollard".

Principal entrance
"An entrance used most frequently by the public and building occupants."[72]
"The main [or principal] entrances to a building must be easily identifiable by architectural features or by the use of different materials or visual contrasts."[73]

Projection
Localised difference in level between one horizontal plane and another.

Reception
"Any facility, equipment or item of furniture located at a public reception point that is required to access public open spaces with the intention of using or understanding those spaces, must be identifiable, accessible and usable for people with disabilities."[74]

Reception desk (hatch)
A counter used to manage the flow and registration of objects, often located between two parts of the same building and accessed from the appropriate side depending on the role of the person: client and seller, postal worker, bank worker, etc.

RECU
A concept relating to universal accessibility.
''Good accessibility is built around the RECU principle: Reach, Enter, Circulate, Use:
Reach: Being able to get to the service you wish to use (transport, signposting, road systems etc.)
Enter: Being able to enter buildings
Circulate: Being able to move about inside buildings
Use: Being able to use the services provided in the building.''[75]

Removable ramp
A portable ramp (made of wood or metal) that can be removed and moved around. They provide a solution when just a few steps need to be negotiated.

Rest area (lower, intermediate, upper)
''Allows non-wheelchair users with reduced mobility or people who use a wheelchair to recover and catch their breath.''[76] ''Rest areas are required at each end of a slope and an inclined plane to allow mobility scooters to turn safely, and when near a door to allow the door to be manipulated without risk.''[77]

Riser
See ''Staircase (terminology)''.
''The vertical part between two steps. A riser is a safety feature, although not used systematically (for example, loft-ladders, etc. do not have them); staircases that do not have risers are referred to as 'open' staircases''.[78]

Road system
A road system is a public domain dependency. It consists of traffic thoroughfares, squares, trees and drains.

Roll-in shower
''To be used while staying in a wheelchair, standing, or sitting (by adding a seat to the shower stall).''[79]

Route (access road)
The route to follow to get from one place to another.
Public or private routes, from the street or car park to the accessible entrance to a FOP.

Run
''Horizontal distance of a stair or ramp.''[80]

Safety
''When an accessible route crosses a route used by vehicles, it must feature elements that raise pedestrians' awareness that they can cross at this point.
There must also be ground markings and signage to tell drivers that they are crossing a pedestrian route.''[81]

Service Open to the Public (SOP)
''According to Article R 123.2 of the French Construction and Housing Code: 'Services open to the public are all buildings, premises and enclosures into which people are admitted either free of charge or upon payment of a fee or contribution, or in which open meetings or invitation-only meetings are held, fee-paying or not. All persons admitted to the establishment, whatever their status and including staff, are deemed to be members of the public'.''[82]

Siderail (edge protector, edge)
''Allows people in wheelchairs to avoid the risk of falling off a ramp. It also acts as a tactile marker to guide blind people or partially sighted people who use a walking stick.''[83]

Signage
That which serves as a means of recognising somebody or something.
The information and signs themselves must be visible, legible and understandable for all users.
Where the signage has been adapted, ''the height of the sign, size of the characters, colour contrasts and Braille transcription

are simple, cheap solutions to make signs that indicate services, offices and communal spaces easy to read."[84]

Simplified telephone
"This telephone can be answered or hung up without direct intervention on the receiver. It can be controlled by voice or infra-red."[85]

Single-lever handle
Handle shaped like a duck's beak–easier to grasp than a rotary handle.

Site plan (or location map)
"A site plan is a plan representing the location of a construction project in relation to its immediate surroundings. It shows the boundaries and orientation of the site, position and height of the construction, access roads and service connections."[86]

Skirting board
"A flat protruding strip at the foot of a wall in a building."[87]

Slope (incline)
"Axial slope or incline on the ground following the direction of travel."[88]
"The slope of a ramp is expressed as the height to the length (i.e. 1:16 indicates for each 1 m in height, there is 16 m in length)."[89]

Speech synthesis
"Information technology that allows text to be read out with an artificial voice; speech synthesis is the opposite of speech recognition where a program recognises the human voice and transcribes it into text. One of the main applications is computer screen vocalisation for partially sighted people by means of screen-reader software."[90]

Staircase (terminology)
"Understanding the language of the staircase means complying with the existing important technical rules and regulations that were defined centuries ago, regardless of the type of building."[91]

Step tread
See "Staircase (terminology)".
"The horizontal part where one places the feet. In terms of dimensions a step is defined by its width, tread and height. Formally a step can be: straight or square (if it is rectangular); winding or flying if both extremities have a different width; skewed if not winding but not perpendicular to the stringer. The bottom step is known as the starting step and the top one is the arrival or landing step."[92]

Street furniture
"The sum total of the public or private objects or apparatus installed in a public space, associated with a function or service offered by the community."[93]

Support rail
A technical aid allowing a person in a wheelchair to move across from a wheelchair to a WC.

Tactile cuing/Warning
"A change in surface condition that provides a tactile cue to alert pedestrians of a hazardous situation."[94]

Tactile guide/marker
Guide strips consisting of a tactile surface, i.e. a surface that is detectable by touch for blind or partially sighted people, and which warns of the danger presented by a route crossing; they are placed at the ends of a pedestrian crossing.

Tactile signage
Raised symbols are generally associated with Braille.
Tactile signage is essential so that blind people can find their way around and find information in complete autonomy.
It can, for example, be used to indicate the number of a building, on condition that is within reach (around 1.2m above the ground). The tactile elements can be raised characters or Braille. To be tactile, they must:
– be raised by 1.5mm
– be 15–50mm high
– have slightly rounded contours.

Tactile signs
"Signs having raised letters which are interpreted or read by tracing with fingers over the surfaces."[95]

Tactile warning surface
See "Warning strip".

Telephone adapted for use by people who are hard of hearing
"Telephoning is difficult, if not impossible for a person who is hard of hearing. A telephone call plunges the interlocutor who is hard of hearing into one of the most complicated communication situations for a person with a disability: unable to lip-read or use sign language, the person is alone with his disability. Various solutions are available"[96] (amplifiers, software etc.).

Teleprinter
"A device consisting of a keyboard and printer which allows messages to be sent down a telephone line. By pressing a key, the sender will send a signal to the person receiving the printed message."[97]

Texture contrast
Allows detection by the feet or walking stick, but must not disrupt the route or pose a hazard for people who use a wheelchair or have difficulty walking.

Threshold
A change in level at the bottom of a door opening.
If the threshold is over 2cm high (a projection), it represents an obstacle for a wheelchair or tricycle, a hazard for people who use a walking stick or crutches and people who have balance issues, and even–quite simply–for people who are subject to attention deficit issues.

Toilets
"Where toilets are provided for public use, each accessible level must have at least one lavatory with accessible washbasin fitted out for people with disabilities who use a wheelchair. Where there are separate lavatories for each sex, separate accessible lavatories must be provided. [Each] lavatory [must have] space... next to the toilet bowl... and a manoeuvring space that allows the wheelchair to turn around completely."[98]
"WCs must be suitably signposted by means of a logo and signs, and must satisfy different requirements (negotiable entrance, enough space to take a wheelchair, height of toilet bowl and washbasin, handrail etc.)."[99]

Tread
See "Staircase (terminology)".
The horizontal distance between two nosings. On a curving staircase, the theoretical tread is the width of the step measured along the tread line (line of constant tread).

Truncated domes
"Small domes with flattened tops that are used as tactile detectable warning indicators at transit platforms, vertical drops and curb edges."[100]

Under furniture leg room (clearance)
The space between the floor and the lower part of a piece of furniture (washbasin, desk, hatch etc.) allowing a person in a wheelchair to use the facility easily.

Universal accessibility
"Universal accessibility is a design concept which advocates the construction of an obstacle-free environment, such as a building, a place, equipment or objects. Its basic concept is to build a world in which the entire population, including people with functional limitations, can live in freedom and security."[101]

Universal design
"Universal design" means 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. "Universal design" shall not exclude assistive devices for particular groups of persons with disabilities where this is needed."[102]

Useable door width (usable space)
"The minimum effective clear width of a door, assuming that the door is open at 90° (going through the door in a straight line)."[103]

Videophone with sign-language interface
"A video-interpretation system allows telephone calls to be redirected to a group of interpreters who translate them there and then: the conversation is immediately relayed in sign language via videophone."[104]

Visual contrast
"Visual contrast is a fundamental tenet of the concept of accessibility, and must be respected from the very outset when a surface is selected (floor, wall and ceiling), when tactile markers are to be fitted and when a future signage system is being designed. 'Contrast is the difference between the reflective index of light falling on the object to be viewed and the reflective index of the light of its environment' (The Needs of People With Visual impairments– Access to Transport, compendium by the CFPSAA [French confederation for the social advancement of blind and amblyopic people], October 2010)."[105]
It allows partially sighted people and people with mobility difficulties (people who use walking sticks, the elderly etc.) to identify an obstacle and avoid tripping over it.

Visual signage
"Visual alarm systems with regular intermittent lighting (flashing, or revolving) to warn deaf people or people who are hard of hearing of danger. The light sources can be white or coloured, for example red for a fire alert or evacuation, and orange to warn of other dangers."[106]

Visual warnings
"The use of contrasting surface colours to indicate a change in environment, such as at a curb ramp where the sidewalk changes to the street."[107]

Warning signs (danger)
A triangular sign with a red border and a symbol indicates a potential hazard. Vigilance is required on the part of the user.

Warning strip (tactile ground surface)
"Tactile warning strips alert people with visual impairments to the presence of danger by creating a marker on the ground that is detectable with the feet and a walking stick, and can be identified visually. They are placed at the top of each flight of stairs, on either side of a pedestrian crossing and along the platforms of guided public transport systems (train, tram, metro etc.), sea and river transport systems."[108]

Web accessibility
An accessible website must be able to be viewed by any and every person, especially by people with disabilities (visual, auditory, motor impairments etc.). To ensure web accessibility, the W3C consortium has produced a series of technical recommendations regarding website construction.
"The social value of the Web is that it enables human communication, commerce, and opportunities to share knowledge. One of W3C's primary goals is to make these benefits available to all people, whatever their hardware, software, network infrastructure, native language, culture, geographical location, or physical or mental ability."[109]

Window breast
In a building, the window breast is that part of a wall (internal or external) between the floor and the lower part of a window or a blackboard.

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A few accessibility-related websites

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Credits

**Conduct an accessibility audit
in low- and middle-income countries**

This aim of this guide is to assist the various participants
in an accessibility audit.
Within the framework of inclusive local development, an
accessibility audit is a complex, substantial and technical
process to implement:

- **Complex**, because it involves the participation of a large
  number of different stakeholders who are not necessarily
  used to being together, working together and who may not
  know each other;

- **Substantial**, because it requires considerable preparation
  time so that the stakeholders involved are as well prepared
  as possible;

- **Technical**, because it requires some rather specialised skills
  when recommendations to remove the identified obstacles
  start to come together.

An accessibility audit is a formidable **exercise in
participatory democracy** which, in the long term, can be
used as the basis to formalise the relationship between
stakeholders in a municipality accessibility commission or
even a municipality commission for inclusive development,
which will have responsibility for suggesting, studying,
organising and implementing actions to improve accessibility,
with, of course, dialogue as the guiding thread.

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