

Model Policy for Inclusive ICTs in Education for Persons with Disabilities

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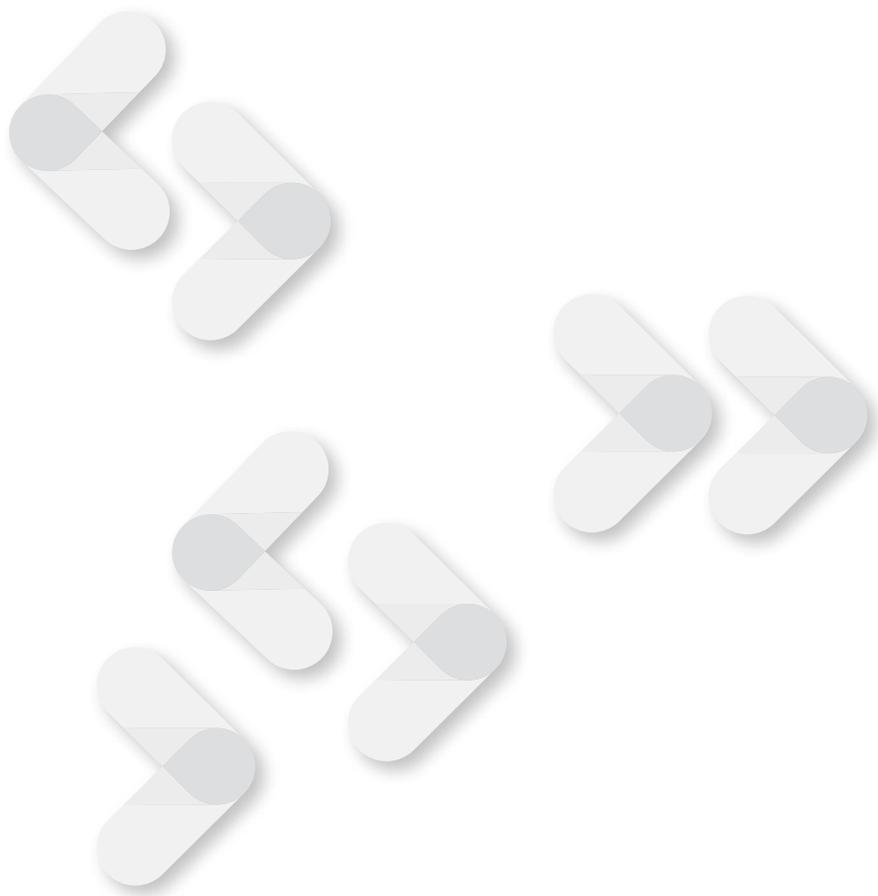
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Acknowledgments

The publication has been drafted by Amanda Watkins of the European Agency for Special Needs and Inclusive Education (www.european-agency.org) with the technical support of Axel Leblois of G3ict, on previous work from UNESCO and G3ict, as well as information collected during the World Summit on the Information Society (WSIS) +10 Review Event, February 2013, in particular the working group meetings "Towards WSIS+10 and Beyond: Inclusion of Persons with Disabilities in Knowledge Societies", cohosted by UNESCO and G3ict.

An initial draft of the model policy document was then subject to two main review activities.

The first involved key experts for ICTs within inclusive education, who considered the draft model policy document against current national and international policies. Four experts provided written contributions giving international perspectives on the implementation aspects of the model policy in countries with a varied level of human and economic development, as well as ICT infrastructure. These contributions were then incorporated into a revised draft of the model policy document. The contributions of the following experts are gratefully acknowledged to this phase of the work:

Alex Corenthin, Director of Information Systems – University Cheikh Anta Diop of Dakar (UCAD), Senegal;

Dave Edyburn, Professor, Department of Exceptional Education, University of Wisconsin, USA;

Shilpi Kapoor, Managing Director, BarrierBreak, Mumbai, India;

Kenneth Eklindh, former Head of the Section for Inclusion and Quality Learning Enhancement Education Sector, at UNESCO, Sweden.

The second review activity involved a larger number of contributors representing a range of stakeholder groups – organisations of people with disabilities, decision-makers for ICT and/or education and researchers in ICT and/or education – who gave inputs via a peer review process. The peer review inputs were used as the basis for the final draft of the document. The contributions of the following peer reviewers are also gratefully acknowledged within this second phase of the reviewing activities:

Stuart Aitken, Communication and Assistive Technology for People with Disabilities (CALL) United Kingdom;

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James Thurston, International Accessibility Policy, Microsoft Corporation.

In addition, the draft of the model policy document was presented for comment at a meeting of representatives of government agencies or Disabled People's Organisations in Bogota, Colombia.

Annex 1 accompanying this document presents an overview of the methodology for developing the model policy document, as well as a summary of the main feedback received from all three of these review activities.

In addition to drafting and reviewing the model policy itself, all the activities also contributed to the identification of key materials to support the implementation process of the model policy document, presented in Annex 2 to the document. This Annex is an *initial* attempt to identify resources to support policy implementation relevant to the area of inclusive ICTs in inclusive education, but they are by no means comprehensive or complete.

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Foreword



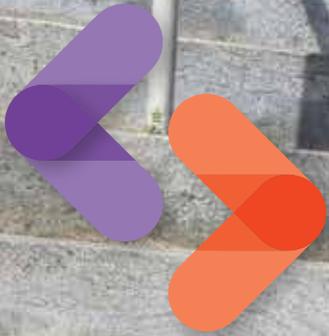
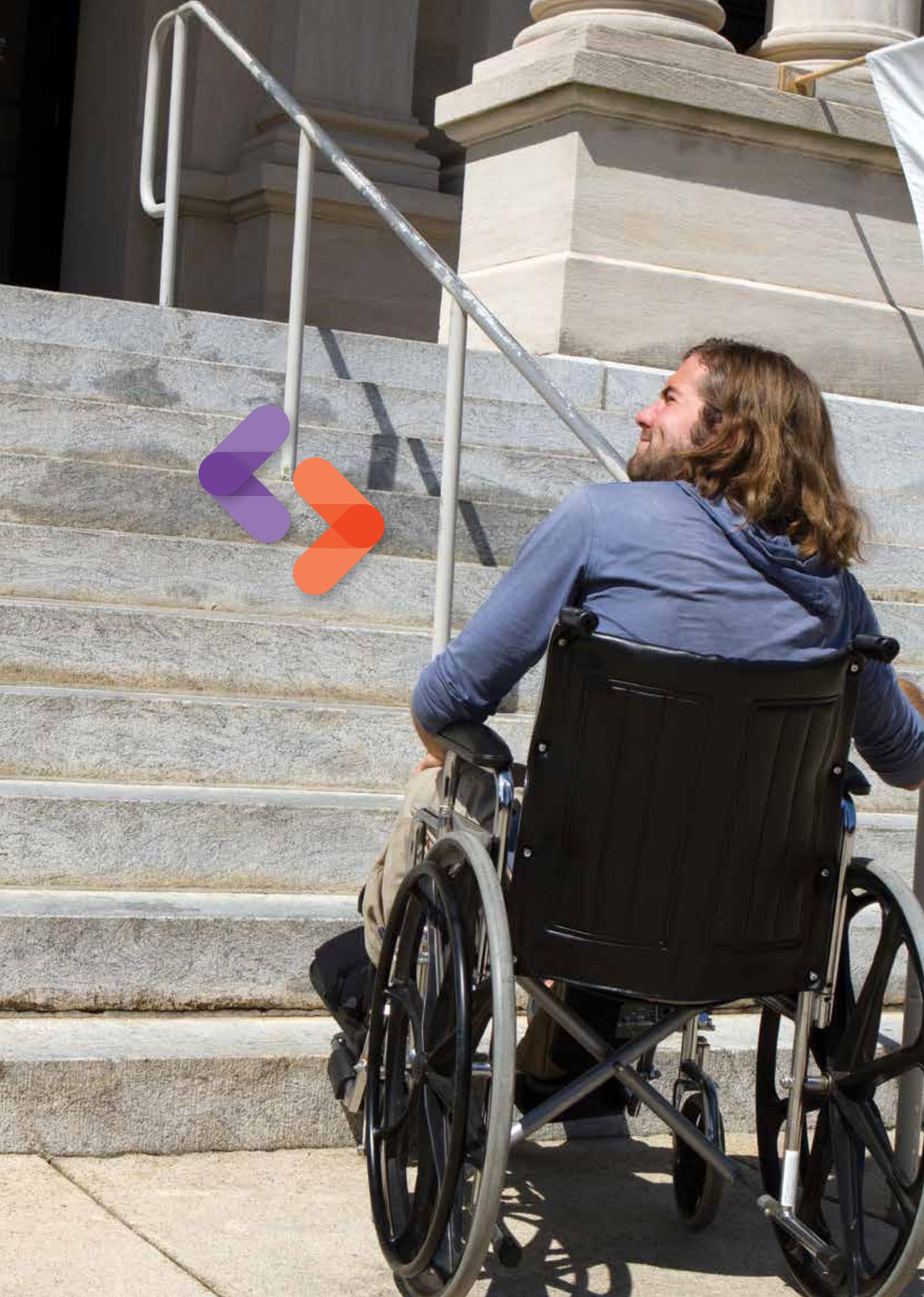
People with disabilities, around 1 billion in number around the world are a significant percentage of the world's population. Unfortunately, many of them are not provided with equal opportunities in education as their peers and are denied their rights of being an integral part of the learning community. It is the responsibility of all Member States to achieve social justice through the protection of the equal rights of their citizens, including persons with disabilities, to education, science, culture, communication and information using various technological solutions. Within this context, the role of ICT to foster inclusive education for learners with disabilities and improve their quality of life has been globally recognized.

In developing countries, almost 90% of the children with disabilities are out of the education system and therefore inclusive education is still a challenge and an unfulfilled dream for those children and their families. Nations around the world face their own barriers to accessible and inclusive education, including socio-economic, cultural, physical and legislative factors. Yet, the duty remains for each Member State to continue the struggle to achieve such fundamental freedoms for all, in the face of any adversity. Since the ratification of the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) in 2008, Egypt has been exerting its efforts to overcome the challenges facing the implementation of inclusive education and mainstreaming it in all schools.

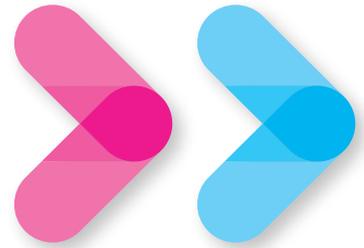
UNESCO's Model Policy for Inclusive ICTs in Education for Persons with Disabilities recognises the unique settings in which national policies could be developed, implemented and monitored. Therefore, it assists countries to formulate inclusive education frameworks that are adapted to each country's specific circumstances, in order to develop actions that are suitable and effective for each Member state and its citizens. It represents a ground-breaking initiative for UNESCO and its Member States, signifying a significant step forward in the global effort to provide information and knowledge for all.

A handwritten signature in black ink that reads "Atef Helmy". The signature is written in a cursive style with a horizontal line under the name.

Atef Helmy
Minister of Communications and Information Technology
Arab Republic of Egypt



Introduction



This document presents a Model Policy for Inclusive Information and Communication Technologies (ICTs) in Education for Persons with Disabilities. The focus is upon the use of ICTs to support the implementation of the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD, 2006), specifically:

- ▶ Article 9: *Accessibility*;
- ▶ Article 21: *Freedom of Expression and Opinion, and Access to Information*;
- ▶ Article 24: *Inclusive Education*.

This model policy is part of the United Nations Educational, Scientific and Cultural Organization (UNESCO) and Global Initiative for Inclusive Information and Communication Technologies (G3ict) joint efforts to facilitate the implementation of the UNCRPD.

The main objective of the joint initiative was to develop a model policy document to be used as a template to assist UNESCO Member States in promoting the effective use of inclusive ICTs in education for learners with disabilities, although it must be emphasised that the policy objectives and actions outlined in this document are equally applicable to any learners who are vulnerable to exclusion from any sector of education (i.e. those who may be identified as having learning difficulties and/or experiencing different forms of social disadvantage).

The intention of the model policy document is to assist Member States in the process of developing policy in order to achieve the wider goal of inclusive education across all educational sectors and settings. Therefore, the model policy document must be seen as:

- ▶ A blueprint for short, mid and long-term action;
- ▶ A possible audit tool for Member States to identify their current progress in relation to key objectives and actions.

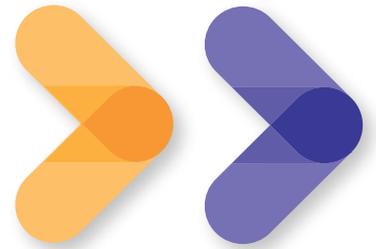
As such, the model policy may serve as a resource for developing the contents of new national policy documents, complement existing policy documents, or individual sections or annexes could be used as resources for auditing or implementing existing policies. The model policy may also be used as a platform to raise awareness and engage in national level dialogue with multiple stakeholders.

This publication has been prepared with the objective of being modified and supplemented by relevant national institutions working in the field of information on ICT in education. Throughout the document, instances where relevant national information should be inserted are indicated by the use of highlighted text boxes. To accompany this printed document, an editable electronic version will be made available on partners' websites.

Within the work, policy is understood to refer to rules, regulations and standards established by local, regional, national and international government or other recognised authorities. Policies govern, or regulate systems that direct services, programmes and other infra-structural activities in different sectors of a society (World Health Organisation, 2001; International Classification of Functioning, Disability and Health, Geneva, WHO).

The intended audience for the model policy is those decision makers responsible for policy formulation and implementation within national governmental bodies and institutions including ministries of education, communication and information technology, social affairs, business and industry, innovation and research.

Background to the Inclusive ICTs in Education Policy document



Learners with disabilities at all levels of education – pre-school through to adult education – are vulnerable to exclusion from educational opportunities. The World Report on Disability (2011, World Health Organisation / World Bank) estimates that there are between 93 and 150 million school-aged children with disabilities globally. Many of these learners are excluded from educational opportunities and do not complete primary education. Many more learners do not have equal access to educational opportunities as a result of their learning difficulty, or exclusion factors arising from social disadvantage.

Essential terms used throughout the model policy document have been defined in the glossary, presented at the end of this document. These terms are underlined in this section for ease of identification.

For learners that do have access to primary education, this also results in them not achieving the necessary basic skills for long-term social and digital inclusion. This limits their access to further educational opportunities as well as employment – both of which result in long-term social and economic costs to societies.

While data exists at the national level for some countries (for example, the Organisation for Economic Co-operation and Development suggests that up to 35% of students in OECD countries require some form of special support to meet their individual learning needs during their school careers), in many countries there is no accurate data on educational exclusion on the basis of **disability** and as a result, at the international level, there is only limited comparable data available on this issue.

If available, national summary data on prevalence of learners with disabilities should be inserted here.

At the global level, it is recognised that within all educational contexts – from school based through to **lifelong learning** opportunities – addressing the educational needs of all learners is a quality imperative. The active participation of learners with disabilities in **inclusive education** is cost-effective in the long-term as it contributes to the elimination of discrimination, promoting wider **social inclusion**.

The World Summit of the Information Society (WSIS) suggests that **information and communication technologies** (ICTs) should be used in all sectors of education and training as technology skills are essential for global citizenship (World Summit on the Information Society, Geneva Declaration of Principles: http://www.itu.int/wsis/documents/doc_multi.asp?lang=en&id=1161|0).

ICTs can be a valuable tool for learners with disabilities who are vulnerable to the **digital divide** and exclusion from educational opportunities. Inclusive ICTs can improve their quality of life by increasing participation and reducing social exclusion. This is internationally recognised, as are some of the barriers created by inaccessible information (World Summit on the Information Society WSIS +10 review final statement, Paris 2013: http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/wsis/WSIS_10_Event/wsis10_final_statement_en.pdf).

Access to appropriate ICTs in education is hindered by: *physical barriers* when inclusive ICTs and learning environments, content and materials are not accessible; *cognitive barriers* for some learners with intellectual disabilities or specific learning problems; *content barriers* that may occur when the operating language of a device or software is not the same as a learner's mother tongue; *didactical barriers* where learning is inflexible and teachers lack the skills to facilitate inclusive education; and *financial barriers* relating to the cost of devices, hardware and software.

The removal of these barriers requires the use of inclusive ICTs that facilitate inclusive education – that is commercially available products that are, as far as possible, universally accessible, along with **assistive technology** to provide access when this is not available via commercially available products.

Access to ICTs that support participation in learning opportunities for learners with disabilities is therefore an international policy imperative. Such access is a prerequisite to the achievement of the second Millennium Development Goal of Universal Primary Education (United Nations, 2000). It is also a crucial element for the effective implementation of the United Nations Convention of the Rights of Persons with Disabilities (2006) at national levels.

The availability of inclusive ICTs can enable all learners – in particular those with disabilities – to learn according to their individual learning preferences.

1.1 The Inclusive ICTs in Education Policy

Throughout this policy, the term ‘learners with disabilities’ is used. However it is recognised that actions taken to support learners with disabilities are most likely to be of benefit for other learners who may be vulnerable to exclusion in any sector or phase of education. Such exclusion may be a result of temporary or longer term learning difficulties, or educational disadvantage arising from gender, cultural, religious, linguistic background, sexual orientation, home circumstances, or socio-economic factors. Whilst the UNCRPD specifically focuses upon people with disabilities, the rights to inclusive education and also inclusive ICTs outlined in the Convention are equally applicable to all other individuals and groups who may be vulnerable to exclusion from society generally and education specifically. (Please refer to the introduction to section 2: National Mandate).

This policy adopts the broad definition of inclusive education as set out by UNESCO (2009): ‘Inclusive education is a process of strengthening the capacity of the education system to reach out to all learners ... As an overall principle, it should guide all education policies and practices, starting from the fact that education is a basic human right and the foundation for a more just and equal society.’(p. 8). Inclusive education is associated with principles of equity, social justice, democracy and participation. Inclusive education systems promote both equity and excellence for all learners. Improving educational attainment for all learners is crucial, not only to economic growth and competitiveness, but also to reducing poverty and fostering social inclusion.

This policy has been formulated in line with a vision of all learners being included within all societal activities, through educational opportunities that are enhanced by the use of inclusive ICTs. This vision will be facilitated if learners with disabilities are provided with:

- ▶ Inclusive learning opportunities at all possible stages of their education: from early childhood education, basic education ¹, post-compulsory school education, tertiary and higher education,

¹ Basic education has been operationally defined by UNESCO (2007) as education that goes beyond pre-school education, and consists at least of 9 years of compulsory education that progressively extends to 12 years. <http://unesdoc.unesco.org/images/0018/001802/180253E.pdf>

adult education and further lifelong learning opportunities;

- ▶ Access to appropriate and inclusive ICTs that support flexible, **personalised learning** approaches, incorporating support for developing **self-accommodation** in the use of ICTs.

Inclusive ICTs for education include:

- ▶ Mainstream technologies that are readily available in the commercial marketplace to all individuals. This may include computers, web browsers, word processors, whiteboards and mobile phones that contain in-built accessibility features to provide equally effective access for learners with and without disabilities;
- ▶ Assistive Technologies that compensate for difficulties in accessing and using mainstream technologies. This may include medical aids and also learning aids such as screen readers, alternative keyboards, augmentative and alternative communication devices and other specialised applications of technology used by individual learners with specific limitations in gaining access to ICTs;
- ▶ Compatibility between assistive technology products and mainstream technologies;
- ▶ Accessible media and formats, such as mainstream publication formats (MSWord, Powerpoint and structured and tagged PDF files) or HTML 5 (Hypertext Markup Language), videos with captioning, DAISY (Digital Accessible Information System) books, EPUB, etc.;
- ▶ Accessible digital learning content and instructional delivery systems such as those found in on-line learning environments or classroom and learners’ management systems.

The provision of inclusive ICTs for learners with disabilities involves removing barriers and enabling all learners to access the same educational opportunities as their peers. Inclusive learning opportunities respect diversity, encourage acceptance and social inclusion and ultimately benefit all learners, not just those with disabilities.

The applicability of ICT in education for learners with disabilities must be considered a ‘trans-sectorial’ field. There are many different sectors of expertise and activity that need to be taken into account in developing, implementing and evaluating policy objectives and initiatives. These include:

- ▶ stakeholder input and views;
- ▶ education and specifically meeting diverse learning needs in inclusive settings;
- ▶ ICT in education and **Knowledge Societies** generally;
- ▶ training of teachers, leaders and other education professionals and the training of IT professionals such as commercial programmers, software and content developers and web designers.

Therefore, a cross-sectorial consideration of all these inter-connected areas of activity must be undertaken in order to produce a coherent policy for the implementation of Inclusive ICTs in Education.

The national policy sectors that are necessarily involved in the provision of inclusive ICTs to support education are:

To be completed with reference to the relevant country policy sectors, for example: education in different sectors; inclusive education; business and industry, research and innovation etc.

1.2 Principles Guiding the Inclusive ICTs in Education Policy

The development and implementation of this policy is underpinned by three principles that relate to the concept of learners’ rights:

- ▶ A non-discriminatory approach encompassing human rights, gender equality and equity in access to services is taken at all levels of policy implementation.
- ▶ Access to inclusive education that provides inclusive curricula, as well as **reasonable accommodation** to meet individual needs, enabling all learners to access the same participation and achievement opportunities.
- ▶ The active and effective involvement of learners with disabilities, their families, representatives, or advocates in the development, implementation, monitoring and evaluation of policies and services aimed at facilitating learners’ access to inclusive education opportunities.

For these rights to be enacted, a number of targets for policy implementation must be worked towards:

- I. There is widespread access to inclusive, accessible and affordable educational ICTs that meet the individual needs of all learners.

- II. The provision of inclusive ICTs in education for learners with disabilities is aligned with the wider policy goals for inclusive education.
- III. The provision of inclusive ICTs for learners with disabilities is applied across the continuum of educational opportunities within lifelong learning. ICTs that support an individual learner are available to them in any formal, informal, or lifelong learning situation they wish to engage in.
- IV. The implementation of inclusive ICTs in education for learners with disabilities takes a systemic approach. At the level of the individual learner, the educational organisation or the overall educational system, a range of inter-connected factors are considered and addressed using inter-disciplinary approaches.
- V. Capacity building for stakeholders in education, ICT support and other information and IT professionals is crucial. General IT usage training is made available for all educational professionals and awareness raising and accessibility training is made available within professional groups from the ICT eco-system – such as school, university and public librarians, web designers and administrators,

IT staff, designers and professionals from the publishing sector.

- VI. Self-advocacy and training is provided for learners with disabilities, their families, representatives, or advocates.
- VII. Human resource management policies in educational organisations take account of and provide guidelines for the accommodation of the ICT and general needs of employees with disabilities.
- VIII. All national, regional and local government entities, civil society representatives and educational organisations involved in the policy implementation – whenever possible - procure inclusive, accessible technology products and services take a **universal design** approach.

The provision of inclusive ICTs in all sectors of education is not only a goal in its own right; it is also a tangible developmental checkpoint against which commitments to inclusive education generally can be evaluated.

Most importantly, the provision of inclusive ICTs in education is a way to increase effective access to information and knowledge and meaningful participation in educational opportunities. This access and participation has the ultimate goal of increasing life chances and social inclusion opportunities for learners with disabilities.

1.3 Critical Aspects of the Inclusive ICTs in Education Policy

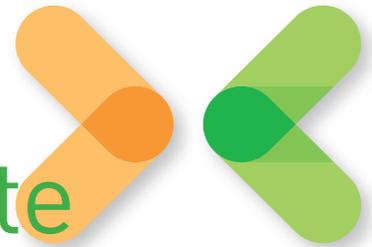
Within the Inclusive ICTs in Education Policy, a number of factors can be identified as critical aspects for policy development and subsequent implementation. These are:

- ▶ Multi-stakeholder engagement and participation;
- ▶ Cross sectorial and inter-governmental agency co-operation and co-ordination;
- ▶ Multi-level policy objectives;
- ▶ Progressive policy implementation based upon prioritisation of strategic actions;
- ▶ Continuous monitoring and evaluation of policy implementation and achievement of targets and milestones.

Each of these aspects is considered and developed in the following sections of the model policy document.



National Mandate



The international legislative framework underpinning calls for education for all date back to the 1948 Universal Declaration of Human Rights. The 1960 Convention against Discrimination in Education, the Convention on the Elimination of all Forms of Discrimination against Women (1979) and the 1989 Convention on the Rights of the Child, among other normative instruments, informed the World Declaration on Education for All, adopted in Jomtien, Thailand (1990). This sets out an overall vision for 'universalizing access to education for all children, youth and adults, and promoting equity.'

This vision was reaffirmed by the World Education Forum meeting in Dakar, April 2000, which declared that Education for All must take account of the needs of the poor and the disadvantaged, including working children, remote rural dwellers and nomads, ethnic and linguistic minorities, children, young people and adults affected by conflict, HIV and AIDS, hunger and poor health, and those with disabilities or special learning needs. It also emphasised a special focus on access to education for girls and women.

Inclusion and participation in all aspects of society is a fundamental human right. It is a means of realising other rights as all people – including learners with disabilities

– require opportunities to inform public policy making and challenge rights violations.

At the international level, inclusive education is seen as a process that addresses the diversity of needs of all children, youth and adults through increasing participation in learning, cultures and communities, as well as reducing and eliminating exclusion within and from education. The UNCRPD 2006 is clear that access to inclusive education is a right for people with disabilities and signatories who have ratified the Convention are mandated to provide an inclusive system at all levels of education.

2.1 Requirements of the UNCRPD

In the *Preamble* to the UNCRPD, ‘... the importance of accessibility to the physical, social, economic and cultural environment, to health and education and to information and communication, in enabling persons with disabilities to fully enjoy all human rights and fundamental freedoms’ is recognised.

The *General Principles* outlined in Article 3 are all clear imperatives for ICT accessibility and assistive technologies in support of inclusive education.

Within the *General Obligations* of Article 4.1, the requirement to: ‘adopt all appropriate legislative, administrative and other measures for the implementation of the rights recognized in the present Convention’ is critical.

The need for progressive implementation towards the achievement of the rights outlined in the Convention is described in Article 4.2: ‘With regard to economic, social and cultural rights, each State Party undertakes to take measures to the maximum of its available resources and, where needed, within the framework of international cooperation, with a view to achieving progressively the full realization of these rights, without prejudice to those obligations contained in the present Convention that are immediately applicable according to international law.’

Three further General Obligations must be considered important levers for promoting the use of inclusive ICTs to support education:

- ▶ ‘To undertake or promote research and development of universally designed goods, services, equipment and facilities, as defined in Article 2 of the present Convention, which should require the minimum possible adaptation and the least cost to meet the specific needs of a person with disabilities, to promote their availability and use, and to promote universal design in the development of standards and guidelines;’ In the context of inclusive ICTs, Universal Design should apply to: the development of mainstream standards that must have built-in accessibility requirements (for example W3C and EPUB); the design of goods, services and equipment; school environments and procurement; the design of learning environments and educational opportunities.
- ▶ ‘To undertake or promote research and development of, and to promote the availability and use of new technologies, including information and communications technologies, mobility aids, devices and assistive technologies, suitable for persons with disabilities, giving priority to technologies at an affordable cost;’
- ▶ ‘To provide accessible information to persons with disabilities about mobility aids, devices and assistive technologies, including new technologies, as well as other forms of assistance, support services and facilities.’

Article 9, on Accessibility, requires the identification and elimination of obstacles and barriers to accessibility, in all possible aspects of the life of a person with disabilities. This includes all forms of educational opportunities. The recommended *Specific Measures* identify action in relation to three areas with relevance to the use of ICTs to support inclusive education:

- ▶ ‘To develop, promulgate and monitor the implementation of minimum standards and guidelines for the accessibility of facilities and services open or provided to the public;’
- ▶ ‘To promote access for persons with disabilities to new information and communications technologies and systems, including the Internet;’
- ▶ ‘To promote the design, development, production and distribution of accessible information and communications technologies and systems at an

early stage, so that these technologies and systems become accessible at minimum cost.’

Two Articles describing *Specific Rights* for people with disabilities underpin the formulation of the policy on Inclusive ICTs in Education: Article 21: Freedom of expression and opinion, and access to information; Article 24: Education, which includes not only the right to education per se, but also access to an inclusive education system at all levels and lifelong learning that offers reasonable accommodation to meet individual needs.

Furthermore, Article 26 focusing upon Health and Article 29 focusing upon Participation in Political and Public Life, each refer to the availability of assistive devices and new technologies. Each of these policy sectors requires consideration to ensure co-ordination of all policy goals, as well as all services offered to people with disabilities.

2.2 Requirements of National Legislation

The issue of inclusive ICTs in support of education is at the interface between three legislative and policy fields:

- I. Education;
- II. ICTs, access to information and knowledge building societies;
- III. The fundamental human rights and freedoms of persons with disabilities.

The policy for Inclusive ICTs in Education takes into account legislation, policy and policy implementation issues at the national level in all these areas, in a coherent and inter-connected way.

The national legislative instruments and policy documents that support the stated goal of using inclusive ICTs to support education are:

.....
To be completed with references to the relevant country legislative and policy documents, for example legislative documents on: education in different sectors; inclusive education; use of ICTs etc.
.....

2.3 Lead Ministry

To ensure coherence and effectiveness, the Inclusive ICTs in Education policy identifies main considerations regarding responsibility for policy implementation. The most important of these is the identification of a *Lead*

Ministry whose role is to take a holistic approach and ensure the necessary links between different education, social affairs, employment and finance sector policies.

The **to be specified here based on the relevant national information** is the Lead Ministry and is responsible for:

- ▶ Supporting inter-ministerial work and fostering cross ministry collaboration;
- ▶ Ensuring harmonisation between and co-ordination across all relevant policy sectors and between all interested ministries and departments;
- ▶ Effectively engaging civil society representatives in policy development, implementation and monitoring;
- ▶ The establishment of a participatory and inclusive stakeholder approach to developing national strategies for the implementation of the policy;
- ▶ Benchmarking aspects of current national and regional practice in relation to inclusive education and the provision of inclusive ICTs;
- ▶ Monitoring all aspects of policy enactment and implementation;
- ▶ Co-ordinating data collection for benchmarking, monitoring and evaluating the policy;
- ▶ Disseminating findings to other ministries and departments;
- ▶ Ensuring seamless provision of inclusive ICTs in learning opportunities at all levels of education and lifelong learning for learners with disabilities that comply with all international and national legislative mandates;
- ▶ Cross-reference the inclusive ICTs in education policy with relevant directives from other policy sectors (for example general education, research and use of ICT in education) in order to ensure coherent policy implementation.

The work of the Lead Ministry is enacted in line with the nationally developed co-ordinating mechanisms required by Article 33 of the UNCRPD, specifically **to be completed here, in line with the relevant national procedures**.

The Lead Ministry is responsible for ensuring active consultation and involvement for learners with

disabilities, their parents, families, or advocates as outlined in Article 4 of the UNCRPD. Such dialogue provides awareness raising with parents and families – of learners with and without disabilities – concerning the rights of children and other learners to inclusive education and ensures access to information about laws, policies and practice, as required by Article 8 of the UNCRPD.

The work of the Lead Ministry demonstrates a commitment to universal design in policy content – supporting inclusive education and ‘learning’ environments and procurement of inclusive technology – as well as in all aspects of policy implementation, evaluation and monitoring. This means that all relevant directives within the education, health, social affairs and employment sectors must clearly address the rights of learners with disabilities.

The commitment to meeting learners’ rights takes into account the potential of inclusive ICTs to:

- ▶ Support the ‘development by persons with disabilities of their personality, talents and creativity, as well as their mental and physical abilities to their fullest potential’ as outlined in Article 24.1(b) of the UNCRPD;
- ▶ Serve as a tool to support inclusion in all school activities – academic, social, sporting or cultural, as referred to in Article 30.5 (d – Participation in Cultural Life, Recreation, Leisure and Sport) which calls on States Parties to ensure that children with disabilities have equal access to play and recreation including where those activities take place in educational settings;
- ▶ Address areas of possible multiple-discrimination faced by women and girls with disabilities as described in Article 6;
- ▶ Meet the specific needs of learners with disabilities for whom ‘language’ may be signed or take another non spoken form as described in Article 2, or for whom the language used in school is an additional language and/or not their home language/mother tongue.

2.4 Policy Implementation Monitoring Mechanism

The Lead Ministry acts as the central authority for the practical implementation and monitoring of the Inclusive ICTs in Education policy ensuring effective ongoing co-operation between different ministries, governmental organisations and civil society stakeholders.

In order to ensure co-ordinated governance of the Inclusive ICTs in Education policy, within **to be completed** months of the policy coming into effect, a formal monitoring mechanism must be identified and instituted.

The identified monitoring mechanism will:

- ▶ Ensure that relevant baseline data is collected for policy benchmarking and monitoring purposes;
- ▶ Provide a point of contact in relation to promoting and monitoring inclusive ICTs;
- ▶ Identify progress, issues and bottlenecks to be addressed;
- ▶ Identify approaches to effectively respond to both national and local level needs.

Potential monitoring mechanisms include:

- ▶ A Standing Advisory Committee with representatives from all relevant governmental, civil society agencies and stakeholder groups;
- ▶ The designation of a Chief Accessibility Officer with responsibility for promoting and monitoring inclusive ICTs in education.

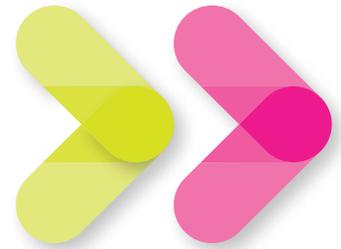
2.5 Effective Date and Application

This policy should be cited as the “Inclusive ICTs in Education” policy and will come into effect upon publication in the **official national government publication mechanism to be referred to here.**

The Inclusive ICTs in Education policy applies to all forms of government accredited formal and informal educational provision, within all levels of early childhood education, basic education, post-compulsory school education, vocational education, tertiary and higher education, adult education, lifelong learning opportunities and on-line learning environments.



Policy Objectives



The long-term vision behind the Inclusive ICTs in Education policy is that inclusive ICTs are used effectively in education to enable all learners – in particular those with disabilities – to learn according to their individual learning preferences and to promote the long-term inclusion into wider society of learners with disabilities, particularly through enhancing their social inclusion and employment opportunities.

Therefore, the goal of the policy is to provide access to an appropriate learning environment that is supported by inclusive ICTs for learners with disabilities. The expected long-term outcome of the policy is that learners with disabilities are able to effectively use inclusive ICTs according to their own learning preferences.

This requires widespread capacity building to ensure the development of a systemic approach to the use of inclusive ICTs in education.

A number of *Policy Objectives* are crucial to achieving this goal. The Policy Objectives are linked to three different levels of the education system that impact on the educational experiences of learners with disabilities (see figure 1):

Learner level

- ▶ Inclusive ICTs are used as a tool for supporting learners with disabilities to participate in inclusive education and personalised learning opportunities. This means that: learners are taught to self-assess and manage their own ICT accessibility and assistive technology preferences as early as possible. They are then supported to develop this skill during their lifelong learning experiences. The ICT needs of learners who require additional support are identified in partnership with parents/families/advocates who can help learners to communicate their preferences.
- ▶ Inclusive ICTs to support learners with disabilities are not only available within certain educational settings (e.g. schools); inclusive ICTs are transferable to different social, educational and lifelong learning contexts.

Organisation level

- ▶ All educational organisations and all professionals working within and around these organisations are effectively supported to use inclusive ICTs to widen participation and increase learning opportunities for learners with disabilities.

System level

- ▶ All stakeholders in the ICT sector and inclusive education agree that inclusive ICTs can be used to widen participation and increase educational opportunity for learners with disabilities;
- ▶ An effective inclusive ICT infrastructure – incorporating needs assessments, procurement, installation, maintenance, training and support – that promotes innovation in inclusive education practice at organisational levels is developed and maintained in the long term within all educational settings;
- ▶ On-going active dialogue and consultation is maintained with main stakeholders: learners with disabilities, their parents, families and advocates, as well as representatives from civil society, community-based rehabilitation service providers and the professionals working in the inclusive ICTs eco-system;
- ▶ There is support for research and development initiatives that take ‘user involved’ as well as ‘user centred’ approaches and lead to new inclusive ICT tools that are applicable to learners with disabilities;
- ▶ Effective data collection for benchmarking, short, mid and long term policy monitoring and evaluation is carried out.

All of these Policy Objectives must be achieved for the successful implementation of the Inclusive ICTs in Education Policy. The overall effectiveness of the implementation of this policy will be judged against the achievement of these Policy Objectives.

The inter-connections between the different Policy Objectives are not hierarchical or linear. The Policy Objectives are inter-related and mutually supportive and these inter-connections must be clear if the ultimate policy goal of providing appropriate learning environments that are supported by inclusive ICTs for learners with disabilities is to be achieved.

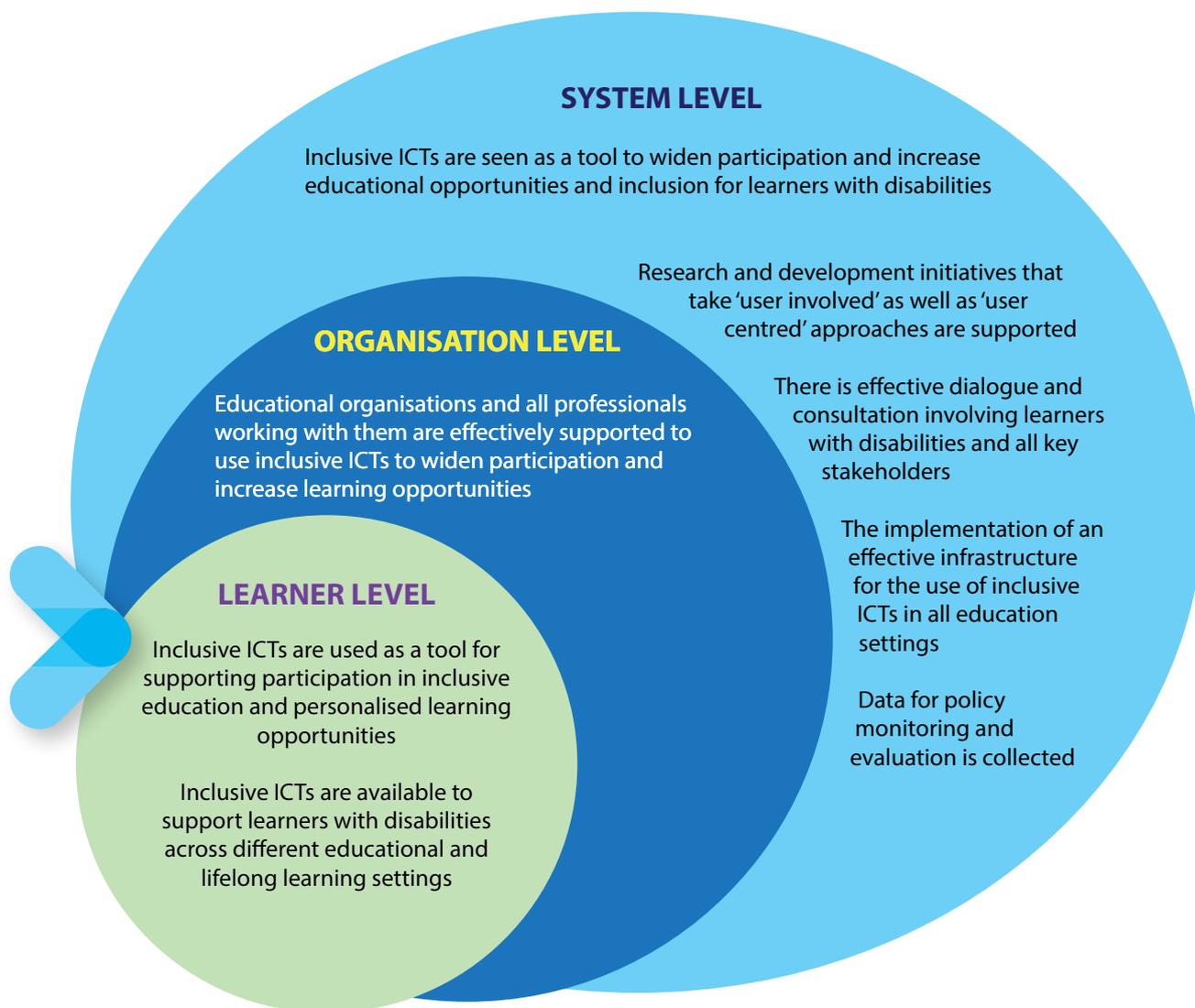
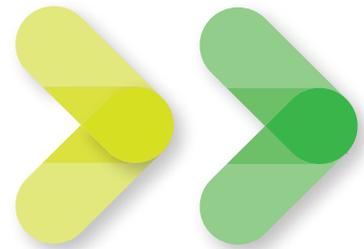


Figure 1: *Policy Objectives*



Policy Actions linked to Policy Objectives



The Policy Objectives identified in section 3 directly relate to *Policy Actions* that must be taken at the three levels of the inclusive education system: learner, organisational and system levels. The Policy Actions are not technology specific, rather they are activities that will not become out dated as a result of developments in technology.

4.1 Policy Actions Linked to Phases of Policy Implementation

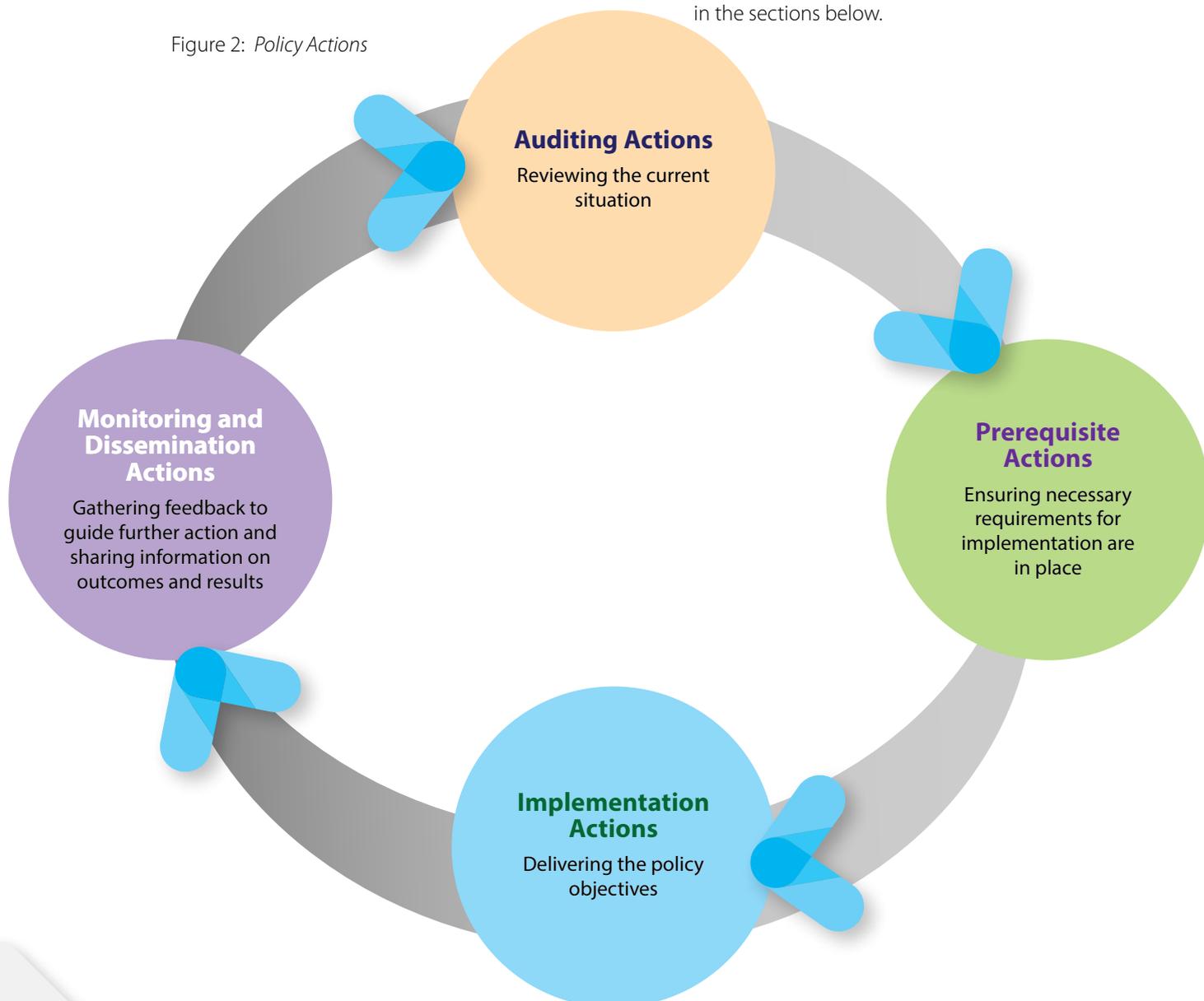
Policy Actions must be taken during four interconnected phases of the overall policy delivery. These phases provide a progression of policy delivery that must be addressed for the effective implementation of the policy: auditing the current situation; ensuring essential pre-requisites are in place; implementing the activities that enact the policy objectives; monitoring all policy implementation activities and disseminating information on the outcomes of the policy implementation. The phases must be seen as cyclical, as monitoring and dissemination actions necessarily lead to further auditing actions and so forth (see figure 2).

These phases are:

1. *Auditing Actions*: reviewing the current situation
2. *Pre-requisite Actions*: ensuring necessary requirements for implementation are in place
3. *Implementation Actions*: delivering the policy objectives
4. *Monitoring and Dissemination Actions*: gathering feedback to guide further action and sharing information on outcomes and results

For each of the four phases of policy implementation, a number of critical questions must be posed and addressed in collaboration with all stakeholders. A description of the focus for these questions is presented in the sections below.

Figure 2: Policy Actions



Auditing actions: Where we are? Where do we want to be?

Pre-requisite actions: What are the baseline requirements for policy implementation? Are the identified minimum requirements realistic? What steps must be taken to put these minimum requirements in place?

Implementation actions: What actions will we take? How long will this take? What resources are needed? How will we know we have achieved the objectives?

Monitoring and Dissemination actions: What information do we need to collect to make sure the policy implementation is on track? How will we share information on the results? How can we ensure transparency of information?

4.2 Policy Actions Linked to the Specific Policy Objectives

Whilst there will be national, regional and local level priorities for implementation (please refer to section 5.1 for more details on prioritisation) all of the identified Policy Actions are mandatory for the effective achievement of the Policy Objectives.

For each of the eight Policy Objectives identified in section 3, specific Policy Actions are linked to the four phases of policy implementation. In the tables below, the mandatory Policy Actions that must be taken for each Policy Objective are presented in line with the four stages of overall policy implementation.

4.2.1 Policy Actions at the Learner Level

Policy Objective: Inclusive ICTs are used as a key tool for supporting learners with disabilities to participate in inclusive education and personalised learning opportunities.	
Actions	Description
Audit	<ul style="list-style-type: none"> ▶ Identifying the barriers to the use of inclusive ICTs - gender, social or geographic isolation and/or socio-economic factors – within local level situations and their potential impact on learners with disabilities.
Pre-requisite	<ul style="list-style-type: none"> ▶ Developing action plans to address the identified barriers to the use of inclusive ICTs. ▶ Providing all teachers working in all education sectors with initial and on-going training that adequately prepares and supports them to work in inclusive education settings. ▶ Developing structured ICT ‘needs assessment’ procedures in all educational sectors that have a role in identifying individual learners’ functional needs for particular inclusive ICTs. ▶ Providing training for teachers and other educational professionals in maximising the use of accessibility features in mainstream ICTs. ▶ Providing training for teachers and other educational professionals in identifying learners’ ICT preferences and supporting learners’ to self-assess and self-accommodate their ICT access preferences.
Implementation	<ul style="list-style-type: none"> ▶ Improving assessment of and for learning through the use of inclusive ICTs that allow learners to identify and then communicate their needs, as well as demonstrate and share their achievements. ▶ Supporting teachers in all educational contexts to take personalised learning approaches supported by the use of inclusive ICTs. ▶ Ensuring access to curricula materials that are based on and encourage the use of personalised learning approaches and learners’ self-accommodation in using inclusive ICTs. ▶ Integrating the use of inclusive ICTs for learners into any individual education plan or similar individualised education planning document.
Monitoring	<ul style="list-style-type: none"> ▶ In collaboration with educational organisations across all sectors, collecting agreed quantitative and qualitative data on learners’ participation in and achievements and outcomes from inclusive education.

Policy Objective: Inclusive ICTs are available to support learners with disabilities in education across different educational and lifelong learning settings.

Actions	Description
Audit	<ul style="list-style-type: none"> ▶ Carrying out local level situation analyses on the availability of inclusive education opportunities for learners with disabilities in different sectors of pre-school, basic, post-compulsory, higher and adult education and lifelong learning opportunities. ▶ Carrying out local level situation analyses on the availability of inclusive ICTs in different educational settings. ▶ Carrying out local level situation analyses on the availability of training for professionals working in different educational settings in using inclusive ICTs.
Pre-requisite	<ul style="list-style-type: none"> ▶ Identifying minimum standards for the availability of inclusive ICTs, ICT training and services across all educational sectors. ▶ Identifying gaps in the provision of inclusive ICTs in different educational sectors and develop specific strategies to address the gaps.
Implementation	<ul style="list-style-type: none"> ▶ Developing and implementing inclusive ICT transition plans to support the availability of requisite inclusive ICTs for learners moving between educational settings. ▶ Ensuring equitable access to and support in using inclusive ICTs in all educational contexts so that learners can progress from being enabled, to capable, confident users of inclusive ICTs.
Monitoring	<ul style="list-style-type: none"> ▶ Monitoring cross sector co-operation and work to ensure on-going equitable access to inclusive ICTs across educational settings and learning opportunities.

4.2.2 Policy Actions at the Organisational Level

Policy Objective: Educational organisations and all professionals working with them are effectively supported to use inclusive ICTs to widen participation and increase learning opportunities for learners with disabilities.

Actions	Description
Audit	<ul style="list-style-type: none"> ▶ Involving all professionals working in educational settings in identifying priorities for capacity building, including agreeing professional standards, training priorities and effective support mechanisms.
Pre-requisite	<ul style="list-style-type: none"> ▶ Implementing a coherent programme of training in using inclusive ICTs for all educational professionals that covers initial education as well as continuing professional development programmes. ▶ Within all training programmes ensuring coherent links between specific training in the use of inclusive ICTs and general training in inclusive education. ▶ Providing training for professional trainers in the use ICTs generally and inclusive ICTs specifically. ▶ Providing educational leaders with training and support in enacting a vision for and managing the process of using inclusive ICTs in inclusive education. ▶ Establishing links between the training of all educational professionals and the training of ICT accessibility specialists to ensure a shared approach that uses the same terminology and concepts. ▶ Establishing inter-disciplinary support structures for all professionals working in educational settings to use inclusive ICTs in their work. ▶ Ensuring human resources policies at organisational level take into account the general needs of staff with disabilities, as well as any specific requirements for inclusive ICTs.

Policy Objective: Educational organisations and all professionals working with them are effectively supported to use inclusive ICTs to widen participation and increase learning opportunities for learners with disabilities.

Actions	Description
Implementation	<ul style="list-style-type: none"> ▶ Developing Inclusive ICTs in Education policies and plans at organisational level that are in alignment with the national policy. ▶ Ensuring that all educational organisations have access to different forms of digital curricular, content and materials, instructional delivery systems and educational software that can be modified to meet the demands presented by specific learning situations. ▶ Providing clear and coherent guidelines on how to develop digital curricula materials that provide: physical access; sensory access and cognitive access for learners with a wide range of needs, so that all learning content is accessible. ▶ Providing clear and coherent guidelines on how to ensure that standardised, high stakes assessment procedures (such as formal public examinations) can be made more inclusive through the use of inclusive ICTs.
Monitoring	<ul style="list-style-type: none"> ▶ Supporting all educational organisations to benchmark their use of inclusive ICTs and then develop monitoring strategies for the effective use of inclusive ICTs to support all learners. ▶ Ensuring that all educational organisations follow recognised minimum standards for topics such as web accessibility, learner e-safety and open access content.

4.2.3 Policy Actions at the System Level

Policy Objective: Inclusive ICTs are seen as a tool to widen participation and increase educational opportunities and inclusion for learners with disabilities.

Actions	Description
Audit	<ul style="list-style-type: none"> ▶ Undertaking regional and local level audits to identify priority areas for capacity building in relation to the training of all educational professionals.
Pre-requisite	<ul style="list-style-type: none"> ▶ Mobilising opinion on the right to inclusive ICTs in education for all learners, as well as the added value of ICT accessibility for the wider population. ▶ Developing widespread awareness raising campaigns that have the explicit aim of developing positive attitudes towards disability.
Implementation	<ul style="list-style-type: none"> ▶ Raising awareness of the wider societal benefits of inclusive ICTs, including better facilities for all learners not just those with disabilities – and the social return on investment in terms of improved outcomes of the educational system. ▶ Ensuring that the agreed policy objectives relating to the use of inclusive ICTs in education are reflected in other policy directives (for general education, inclusive education and use of ICT in education) and that the policy content is cross-referenced with all other relevant policies, in order to ensure coherent policy implementation.
Monitoring	<ul style="list-style-type: none"> ▶ In collaboration with stakeholders from across all sectors, collecting agreed feedback information on the effectiveness of the implementation actions in promoting positive attitudes and beliefs regarding the use of inclusive ICTs in inclusive education.

Policy Objective: An effective infrastructure for the use of inclusive ICTs is implemented in all education settings.

Actions	Description
Audit	<ul style="list-style-type: none"> ▶ Cross referencing all inclusive ICTs in education policy actions and initiatives to wider, mainstream ICTs in education policies such as the development of high-speed broadband connections in all education settings.
Pre-requisite	<ul style="list-style-type: none"> ▶ Establishing multi-stakeholder governing bodies to oversee the implementation of the policy objective and all related policy actions. ▶ Identifying minimum standards for the provision of ICT accessibility tools across all educational sectors to cover: universal design approaches, inter-operability guidelines, accessibility standards and procurement guidelines. ▶ Cross-reference national minimum standards with those outlined in international legislation, as well as those used in other country contexts. ▶ Defining resource requirements, sources, possibilities and constraints. Identify civil society strengths and resources to be capitalised upon. ▶ Establishing a procurement framework agreement at national level that is guided by universal design principles. ▶ Identifying a responsible lead body for procurement that has the necessary technical and knowledge capacity to enforce the framework agreement. ▶ Establishing a national resource database of inclusive ICT procurement possibilities (products, accredited vendors etc.).
Implementation	<ul style="list-style-type: none"> ▶ Agreeing with all stakeholders the priority actions to be taken and identifying timeframes for implementing, evaluating and reviewing actions. ▶ Promoting universal design principles in the education suppliers' ecosystem. ▶ Establishing links between the training of teachers and the training of librarians; media and information personnel; IT providers; IT professionals; web designers and administrators and assistive technology support personnel to ensure a shared approach that uses the same terminology and basic concepts. ▶ Ensuring that service providers responsible for delivering educational and/or ICT related services are aware of their responsibilities and act in compliance with the Inclusive ICTs in Education policy. ▶ Developing stakeholder led initiatives to support the sharing of assistive technology resources across different end user groups. ▶ Developing stakeholder led initiatives to support the increased accessibility of community based, informal learning opportunities, including increased access to public learning resources and distance learning opportunities.
Monitoring	<ul style="list-style-type: none"> ▶ Collecting systematic data relating to compliance with the identified minimum standards for the provision of inclusive ICTs across all educational sectors.

Policy Objective: Effective dialogue and consultation involving learners with disabilities from education, their parents and representatives; representatives of the inclusive ICTs eco-system.

Actions	Description
Audit	<ul style="list-style-type: none"> ▶ Undertaking regional and local level situation analyses to identify main stakeholders from education and the ICT eco-system to be involved in local, regional and/or national level dialogue.
Pre-requisite	<ul style="list-style-type: none"> ▶ Building a shared approach around the concepts of inclusive education for learners with disabilities that uses the same terminology and leads to stakeholder consensus. ▶ Developing and implementing a strategy to communicate the inclusive ICTs in education policy effectively to all stakeholders. ▶ Agreeing upon with all stakeholders the systems of accountability that will be linked to the policy and its implementation. ▶ Identifying with all stakeholders the milestones for policy implementation and the achievement indicators to be linked to monitoring and evaluation strategies.
Implementation	<ul style="list-style-type: none"> ▶ Identifying and supporting effective local level capacity-building initiatives to promote the development and use of inclusive ICTs in education. ▶ Providing training in the use of inclusive ICTs for parents, families, caregivers or representatives of learners with disabilities that is in parallel with the training given to education professionals. ▶ Supporting experienced inclusive ICT users to act as models of good practice for other learners, educators and ICT professionals. ▶ Establishing widespread access to inclusive learning tools, content and support for learners, their families and representatives in all formal and informal learning situations. ▶ Supporting educational organisations to be innovative in using inclusive technology to support participation and dialogue with different stakeholders in inclusive education.
Monitoring	<ul style="list-style-type: none"> ▶ Establishing procedures and timelines for collecting and reviewing stakeholders' feedback on the relevance and usefulness of dialogue opportunities.

Policy Objective: Research and development initiatives that take 'user involved' as well as 'user centred' approaches are supported.

Actions	Description
Audit	<ul style="list-style-type: none"> ▶ Undertaking regional and local level audits to identify priority areas for research, as well as gaps in capacity for conducting the required research.
Pre-requisite	<ul style="list-style-type: none"> ▶ Undertaking capacity building within the research community to ensure high quality research into the use of inclusive ICTs in inclusive education can be effectively undertaken at national and local levels. ▶ Investigating and securing funding from national and/or international sources to support any agreed research programme. ▶ Identifying minimum requirements for organisations wishing to access financial support for research.
Implementation	<ul style="list-style-type: none"> ▶ In co-operation with all main stakeholders, developing a comprehensive research and development programme that considers all aspects of inclusive ICTs in education policy and their mid and long term impact. ▶ Establishing a national open-access database / knowledge centre of research initiatives, findings and outcomes relating to the use of inclusive ICTs in different educational contexts.
Monitoring	<ul style="list-style-type: none"> ▶ Developing structures that allow the Lead Ministry to act as an observatory for research initiatives conducted at the local, national and international levels. ▶ Establishing procedures and timelines for collecting and reviewing stakeholders' feedback on the impact, relevance and applicability of research initiatives, programmes and outcomes.

Policy Objective: Data is collected for policy benchmarking, monitoring and evaluation.

Actions	Description
Audit	<ul style="list-style-type: none"> ▶ Cross referencing specific data collection relating to inclusive ICTs to existing national and/or international data collection procedures in order to avoid overlap of efforts. ▶ Identifying existing, relevant data for benchmarking purposes, as well as gaps and missing information to be collected in the future.
Pre-requisite	<ul style="list-style-type: none"> ▶ Engaging relevant stakeholders in agreeing an action plan with milestones for data collection to be used for policy monitoring and evaluation. ▶ Identifying main stakeholders and partners in data collection processes (organisations, researchers etc.). ▶ Agreeing with key stakeholders the relevant foci of quantitative, input focussed data collection (e.g. application of accessibility standards; procurement figures etc.) for benchmarking, monitoring and evaluation purposes. ▶ Agreeing with main stakeholders the relevant foci of qualitative, output focussed data collection, using a participatory approach and exploring process and outcome issues for benchmarking, monitoring and evaluation purposes. ▶ Agreeing a multi-faceted dissemination strategy encompassing all stakeholders, including key decision makers in other policy arenas and civil society partners. ▶ Identifying reporting mechanisms and strategies for sharing information on policy objectives, actions and their implementation with all interested parties.
Implementation	<ul style="list-style-type: none"> ▶ Developing a framework of data collection procedures that examines learners' rights, as well as system effectiveness issues. ▶ Collecting quantitative and qualitative data in line with the agreed framework that can be used for benchmarking purposes. ▶ At specified time-periods, collecting quantitative and qualitative data for on-going monitoring purposes. ▶ Within agreed timeframes, collecting quantitative and qualitative data for evaluation purposes. ▶ Collecting on-going quantitative and qualitative data to inform debates regarding the outcomes and/or benefits of inclusive ICT provision in line with all other policy objectives. ▶ Collecting innovative examples of impact of the use of inclusive ICTs in inclusive education as inspiration for educational organisations and professionals.
Monitoring	<ul style="list-style-type: none"> ▶ Establishing procedures and timelines for collecting and reviewing stakeholders' feedback on the transparency and usefulness of the quantitative and qualitative data collected for policy monitoring and evaluation purposes. ▶ Ensuring all data collection activities are in compliance with UNCRPD data collection requirements. ▶ Monitoring of all data collection and using relevant information to promote improvement in future policy action implementation.

4.3 Monitoring the Completion of Policy Actions Across Phases of Implementation

The Lead Ministry is responsible for ensuring all mandatory Policy Actions are satisfactorily implemented. It is therefore necessary to initially benchmark and then monitor on an on-going basis the successful completion of these actions across the different phases of policy implementation.

A sample template for benchmarking and monitoring the completion of all Policy Actions in relation to one policy implementation phase – Audit Actions – is presented below.

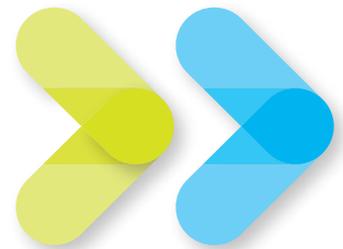
Audit Actions		Degree of completion		
Policy Objectives	Policy Actions	None	Partial	Fully
Inclusive ICTs are used as a key tool for supporting learners with disabilities to participate in inclusive education and personalised learning opportunities.	Identifying the barriers to the use of inclusive ICTs - gender, social or geographic isolation and/or socio-economic factors – within local level situations and their potential impact on learners with disabilities.			
Inclusive ICTs are available to support learners with disabilities from education across different educational and lifelong learning settings.	Carrying out local level situation analyses on the availability of inclusive education opportunities for learners with disabilities in different sectors of pre-school, basic, post compulsory, higher and adult education and lifelong learning opportunities.			
	Carrying out local level situation analyses on the availability of inclusive ICTs in different educational settings.			
	Carrying out local level situation analyses on the availability of training for professionals working in different educational settings in using inclusive ICTs.			
Educational organisations and all professionals working with them are effectively supported to use inclusive ICTs to widen participation and increase learning opportunities for learners with disabilities.	Involving all professionals working in educational settings in identifying priorities for capacity building, including agreeing professional standards, training priorities and effective support mechanisms for themselves.			
Inclusive ICTs are seen as a tool to widen participation and increase educational opportunities and inclusion for learners with disabilities.	Undertaking regional and local level audits to identify priority areas for capacity building in relation to the training of all educational professionals.			
An effective infrastructure for the use of inclusive ICTs is implemented in all education settings.	Cross referencing all policy actions and initiatives to wider, mainstream ICTs in education policies such as the development of high-speed broadband connections in all education settings.			
There is effective dialogue and consultation involving learners with disabilities from education, their parents and representatives; representatives of the inclusive ICTs eco-system.	Undertaking regional and local level situation analyses to identify main stakeholders from education and the ICT eco-system to be involved in local, regional and/or national level dialogue.			
Research and development initiatives that take ‘user involved’ as well as ‘user centred’ approaches are supported.	Undertaking regional and local level audits to identify priority areas for research, as well as gaps in capacity for conducting the required research.			
Data is collected for policy benchmarking, monitoring and evaluation.	Cross referencing specific data collection relating to inclusive ICTs to existing national and/or international data collection procedures in order to avoid overlap of efforts.			
	Identifying existing, relevant data for benchmarking purposes, as well as gaps and missing information to be collected in the future.			

In Annex 3, templates for benchmarking and monitoring the completion of all Policy Actions in relation to the other three phases of policy implementation are presented.

The Lead Ministry will develop procedures for benchmarking and monitoring the implementation of Policy Actions linked to the phases of Implementation within **to be completed** months of the publication of this policy.

The Policy Objectives and Policy Actions can also be considered in light of policy questions that have to be answered and potential policy constraints that have to be addressed. These are presented in Annex 4 and form the basis for a *Policy Agenda* that can be used as the basis for on-going discussions with representatives of key stakeholder groups. The Policy Agenda suggested in Annex 4 should be adapted to specific national and local contexts as is required.

Developing a National Implementation Strategy



The Inclusive ICTs in Education policy must be linked to a clear national *Implementation Strategy* that provides a detailed roadmap for achieving the Policy Objectives and completing all mandatory Policy Actions at national, regional and local levels. The development of an Implementation Strategy is a mandatory step and the responsibility of the Lead Ministry.

As a key task within the Implementation Strategy, the Lead Ministry will co-ordinate work with all other ministries, governmental, non-governmental bodies and key stakeholder groups to ensure their initial and on-going input to the effective implementation of the policy (see figure 3).

The Lead Ministry will develop an overall Implementation Strategy within to be completed months of the publication of this policy.

Figure 3: Implementation Strategies

Implementation Strategies → requiring effective co-ordination between all ministries and partners

Prioritising Policy Actions → based on a shared, multi-stakeholder understanding of national, regional and local level needs; the current infrastructures for inclusive education and inclusive ICTs; the identification of the specific actions that will act as levers and have the most impact in terms of promoting desired change

Developing Strategic Actions Plans → That are innovative, inclusive and will have impact

5.1 Prioritising Policy Actions within the National Context

The Policy Actions outlined in section 4 are applicable to any national context. However, the Policy Actions cannot and will not all be implemented at the same time. In addition to the Policy Actions being linked to phases of implementation (as presented in section 5), it is necessary that specific national priorities for actions are clearly identified and agreed upon with all key stakeholders involved in the Inclusive ICTs in Education policy governance.

The specific circumstances with regards to inclusive education and inclusive ICTs at national, regional and local levels will result in the necessary prioritisation of Policy Actions for implementation. The identification of these priorities for implementation will be made based on a shared, multi-stakeholder understanding of:

- I. National, regional and local level needs;
- II. The current infrastructures for inclusive education and inclusive ICTs;
- III. The identification of the specific actions that will act as levers and have the most impact in terms of promoting desired change.

A number of steps must be followed in order to identify priority actions for initial implementation. The order of the steps to be taken may change in given national situations, but all steps must be taken for effective prioritisation to be achieved.

Step	Focus	Activity
1	Gap analysis	Benchmarking current achievements in relation to the policy actions outlined in section 4
2	Mapping key achievements	In collaboration with main stakeholders, identifying strengths and weaknesses in the current infrastructure for inclusive ICTs in education
3	Identifying potential barriers	In collaboration with main stakeholders, reflecting on possible "bottlenecks" that needs to be addressed and identifying strategies to overcome them
4	Identifying opportunities	Highlighting key strengths of the inclusive ICTs infrastructure that can be built upon
5	Identifying priorities	Agreeing upon a small number of priority key policy actions that are likely to have maximal impact
6	Identifying key partners	Agreeing with main stakeholders who needs to be involved in developing, implementing and evaluating the implementation of the priority actions
7	Identifying objectives and milestones for achievements	Identifying the targets to be achieved in the short, mid and long term, as well as the relevant achievement indicators for their completion
8	Learning from others	Finding out how other countries / regions have addressed such priorities in order to identify apparently successful implementation strategies
9	Identifying all resources	Agreeing with all stakeholders how to make use of all possible resources within the inclusive ICTs infrastructure
10	Designing a strategy	Making formal plans for implementing and monitoring the implementation of the priority actions

Once identified and agreed upon with key stakeholder groups, the priority Policy Actions for implementation must be further broken down into more concrete plans for action. The Implementation Strategy requires

that all Policy Actions be translated into operational strategic *Action Plans* that present clear sequential plans, timeframes and targets for implementation.

5.2 Strategic Action Plans

Action Plans are required in order to identify the specific methods and processes to be used to effectively implement one or more of the Policy Actions detailed in section 4.

It is the responsibility of the Lead Ministry to develop Action Plans, supported by any advisory bodies established for policy implementation monitoring purposes (see section 2.4) and working in collaboration with all relevant stakeholders, including learners with disabilities, their families and/or representatives.

Effective Action Plans:

- ▶ Are developed on the basis of widespread stakeholder consultation and input;
- ▶ Are aligned with national reporting mechanisms that monitor the implementation of the UNCRPD at national level;
- ▶ Focus upon priorities for action based on benchmarking data that clearly identifies national and local level needs;
- ▶ Take a system-wide view, while supporting local level, sector-based activities;
- ▶ Outline progressive action across different phases of policy implementation;
- ▶ Focus upon a limited number of the stated policy objectives and a limited number of associated policy actions;
- ▶ Provide timelines for action and achievement of policy objectives;
- ▶ Identify the stakeholder groups who will implement actions and act as key change agents;
- ▶ Are based on a clear change strategy, prioritising key levers within the national regional and local contexts that promote systemic change in relation

to the procurement and use of inclusive ICTs in education;

- ▶ Identify milestones for the collection of information and feedback on progress to guide further implementation;
- ▶ Clarify roles and responsibilities in relation to implementation, monitoring and reporting for government entities, civil society partners, educational providers and organisations, researchers and industry;
- ▶ Devolve responsibility to key organisations working at local level within a national framework of agreed accountability for the achievement of policy objectives and targets;

- ▶ Specify actions and responsible parties for organisational, regional and national level monitoring and follow-up.

The Lead Ministry will ensure that any Action Plans developed for the Inclusive ICTs in Education policy demonstrate all of the factors listed above.

The Lead Ministry working in collaboration with all relevant stakeholders has the responsibility for developing Action Plans linked to the identified priorities for action. The Lead Ministry will develop Strategic Action Plans linked to the identified priorities for implementation within to be completed months of the publication of this policy.

5.3 A Template for Action Plans

Action Plans will be linked to a single policy objective, but may cover one or more Policy Actions. For each Policy Action a number of processes and factors in relation to implementation – as listed in section 5.2 above – must be specified.

A sample template for an Action Plan is presented below.

Policy Objective:

.....

Insert Policy Objective title

.....

Policy Actions	Methods and processes	Responsible organisation	Start date	End date	Implementation Milestones	Achievement indicator	Reporting mechanisms
[Insert policy action title]							
[Insert policy priority title]							

5.4 Principles Guiding the Development of Action Plans

The work of the Lead Ministry in developing the Action Plans for the Inclusive ICTs in Education policy will be guided by three principles:

Innovation – Action Plans propose a new way of working at national, local and organisational levels that is open, transparent and affordable;

Inclusivity – Action Plans focus upon the rights of learners with disabilities, whilst respecting all forms of diversity and supporting participation by all learners, their families and the professionals that support them.

Impact – Action Plans lead to positive, sustainable impact for individual learners with disabilities, as well as the other members of their educational communities.



Budget and Financing



The implementation of the Inclusive ICTs in Education policy must be underpinned by a coherent and effective financing mechanism.

The financing mechanism for the policy is linked to the objectives for the policy (see section 3) based on the following principles:

- ▶ Budget monitoring and policy efficiency measures are related to effectiveness in promoting and supporting inclusion and reducing educational exclusion;
- ▶ Predictable funding leads to better planning in the education sector and the implementation of programmes that can reach learners with disabilities;
- ▶ Including learners with disabilities, or their representatives, in the process of setting priorities for policy and budgeting has benefits in terms of reducing inequalities;
- ▶ The overall costs of providing inclusive ICTs for use in the home or in education or workplace situations might be shared across a number of responsible authorities and so effective, long term co-ordination and collaboration is necessary to ensure coherent funding streams;
- ▶ Fully funded strategic action plans are integrated into the relevant national budgets.

The **to be specified here based on the relevant national information** will act as Lead Ministry and is responsible for managing the primary budget lines in line with these principles.

Budget management centres upon the following actions:

- I. Securing and effectively co-ordinating inclusive ICT-related funding from different ministerial budgets (information society, social affairs, health, education, etc.);
- II. Defining the roles and responsibilities of all main stakeholders at the national, regional and organisational levels in relation to the budget implementation strategy;
- III. Ensuring effective budget planning, application and monitoring of cost effectiveness across the education sector and other social sectors;
- IV. Developing a procurement framework agreement at national level that specifies accessibility as a requirement in the tendering process and identifying a responsible lead body for procurement that has the necessary technical and knowledge capacity to effectively implement national level procurement agreements at regional and local levels;
- V. Decentralising the use of funds within the education system that allow flexibility in supporting the use of inclusive ICTs in education.

6.1 Categories of Budget Expenditure

A range of costs must be accounted for in relation to the implementation of Inclusive ICTs in Education policy. As a first step in ensuring effective planning and budgeting, the Lead Ministry will conduct an audit and involve all relevant government entities and stakeholders in discussions regarding the required budget.

Five main budget categories will be considered for budget auditing and planning purposes:

- I. Provision of inclusive ICTs (mainstream and assistive technology) – costs related to procurement, distribution, running and maintenance;
- II. Provision of specialist support personnel – costs of suitably qualified personnel able to support learners with disabilities and their teachers in applying inclusive ICTs to learning and whose availability is ensured across all sectors of education and lifelong learning;
- III. Initial and on-going training of educational personnel – costs of training across all sectors of education and lifelong learning covering: teachers, leaders, parents, librarians, administrators and educational and technical support personnel;
- IV. Support for research and development – costs of research and development that takes a ‘user involved’ as well as ‘user centred’ approach and is transparent and results-oriented;
- V. Generic policy implementation activities – costs relating to establishing and maintaining dialogue with stakeholders, data collection, monitoring and evaluation and co-ordination activities.

6.2 Sources of Funding and Support

The inclusive ICTs in education cannot effectively develop without public funding and subsidy. However, other funding streams will be explored by the Lead Ministry to supplement **to be specified here based on the relevant national information funds**.

At the **local level**, funding sources from regional or local governments, community groups, NGOs, charitable foundations, companies / enterprises and educational institutions themselves will be explored.

At the **national level**, in addition to the education sector, government entities covering the health, social and employment sectors, the information society, information and communication ministries and others who contribute to Knowledge Societies will be consulted. Funding streams that support people with disabilities or the use of ICTs in wider society will be explored for their potential application to inclusive ICTs in education.

At the **international level**, potential funding from International Development Agencies, bi-lateral and multi-lateral co-operation initiatives and international civil society resources will be explored.

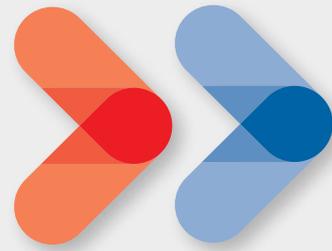
Wherever possible, **public-private partnerships** to support specific initiatives (for example research and development activities) will be promoted.

In alignment with criteria for accessing additional funding streams, key ICT infrastructure initiatives that will potentially reduce costs will be actively explored. For example:

- ▶ Any government sponsored ICT procurement programmes – such as one laptop per learner initiatives – will include the mandatory requirement for equipment to have specified accessibility features as standard;
- ▶ Facilitation of ‘Bring Your Own Device’ initiatives where learners can bring and use their own mobile devices equipped with educational applications that support their access to learning opportunities;
- ▶ Support for Cloud based solutions on a school or educational organisation’s own networks;
- ▶ Create and optimise educational content for use on mobile devices, ensuring the development of strategies to provide equal access for all using mobile devices;
- ▶ Support for open source and open licence initiatives that lead to widely available software and educational resources.



Glossary and Annexes



Glossary

Abbreviations

ICT/ICTs – Information and Communication Technologies

UNCRPD – United Nations Convention on the Rights of Persons with Disabilities

UNESCO – United Nations Educational, Scientific and Cultural Organization

Definitions

Within the Preamble of the model policy document, terms included in this glossary are underlined the first time they are used.

Accessibility – Article 9 of the UNCRPD states: ‘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 is one of the general principles within Article 3 of the UNCRPD.

Accessible electronic and information technology is suggested by technology that can be used by people of all ages and abilities. Access-IT (The National Center on Accessible Information Technology in Education, USA) suggests: ‘Accessible electronic and information technology:

- ▶ It incorporates the principles of universal design;
- ▶ Each user is able to interact with the technology in ways that work best for him or her;
- ▶ Accessible technology is either directly accessible – in other words, it is usable without assistive technology – or it is compatible with standard assistive technology.’

(<http://www.washington.edu/accessit/articles?110>)

e-Accessibility describes the need to remove barriers in accessing and using ICT products, services and

applications, as well as access to information and knowledge. The 2008 European Council Conclusions on the accessible information society states that: ‘E-accessibility is a necessary prerequisite for a widespread use of ICT, and its cost can be greatly reduced through ‘design for all’ approaches and better interoperability between services and devices.’

Assistive Technologies (AT) – BATA (2011) suggests that: ‘AT is any item, equipment, hardware, software, product or service which maintains, increases or improves the functional capabilities of individuals of any age, especially those with disabilities, and enables them more easily to communicate, learn, enjoy and live better, more independent lives’ (British Assistive Technology Association (BATA), 2011. <http://www.bataonline.org/assistive-technology-definition>)

Assistive technology services can be defined as any service that directly assists an older adult or individual with a disability in the selection, acquisition, or use of an assistive technology device. This includes: evaluation, acquisition, adaptation/modification, coordination of therapies, training of end users, families and professionals, provision, maintenance, repair and replacement of accessible information technology. (From the US Assistive Technology Act of 1998, as amended).

Digital Divide – refers to ‘the gap between those who can benefit from digital technology and those who cannot [for reasons relating to gender, age, disability, skills or knowledge gaps]’. ‘Closing the digital divide therefore means more than just giving the poor the same technologies already received by the rich’. Closing the Divide involves restructuring the provision of ICT services and sectors so that their respective benefits can

be for everyone. (Digital Divide Institute: <http://www.digitaldivide.org/digital-divide/digitaldividedefined/digitaldivide.html>)

Digital inclusion relates to the level of access and digital availability of a specific community or group. Digital inclusion will shift over time with new groups of people becoming digitally excluded whilst others become included as technology changes and develops over time.

Disability – the preamble of the UNCRPD recognises that: ‘disability is an evolving concept and that disability results from the interaction between persons with impairments and attitudinal and environmental barriers that hinder their full and effective participation in society on an equal basis with others.’

Article 1 states that: ‘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.’

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.’

Inclusive Education – UNESCO (2009) states: ‘Inclusive education is a process of strengthening the capacity of the education system to reach out to all learners ... As an overall principle, it should guide all education policies and practices, starting from the fact that education is a basic human right and the foundation for a more just and equal society.’ (p. 8).

Inclusive education does not mean that the person with disabilities adapts him/herself to the environment, but implies that adaptations are made to the environment to suit the person with disabilities (in line with the principles of Universal Design as described in Article 2 of the UNCRPD). (UNESCO, 2009. Policy Guidelines on Inclusion in Education, Paris: UNESCO).

Information and Communication Technology – or “ICT”, refers to equipment and services related to broadcasting, computing, and telecommunications, all of which process, store and transmit information through computer and communications systems.

Knowledge Societies – Knowledge societies according to UNESCO means societies in which people have the capabilities not just to acquire information but also to transform it into knowledge and understanding, which empowers them to enhance their livelihoods and contribute to the social and economic development of their societies. UNESCO (2010). Towards Inclusive Knowledge Societies. A Review of UNESCO’s action in implementing the WSIS outcomes. p. 11. <http://unesdoc.unesco.org/images/0018/001878/187832e.pdf>

Lifelong learning – The UNESCO Recommendation on the development of adult education (1976) defines lifelong learning as: ‘*life-long education and learning*, for its part, denotes an overall scheme aimed both at restructuring the existing education system and at developing the entire educational potential outside the education system; creating an understanding of and respect for the diversity of customs and cultures, on both the national and the international planes; in such a scheme men and women are the agents of their own education, through continual interaction between their thoughts’ and actions; education and learning, far from being limited to the period of attendance at school, should extend throughout life, include all skills and branches of knowledge, use all possible means, and give the opportunity to all people for full development of the personality; the educational and learning processes in which children, young people and adults of all ages are involved in the course of their lives, in whatever form, should be considered as a whole’. http://portal.unesco.org/en/ev.php-URL_ID=13096&URL_DO=DO_TOPIC&URL_SECTION=201.html

Personalised learning – aims to promote learner focussed educational opportunities through learner self-regulation, meta-cognitive strategies and learner-teacher discourse. The voice of the learner is critical in shaping all teaching strategies. Personalisation also involves working more closely with parents and families to address any support requirements in a more holistic way and constructively engages teachers and learners in goal-oriented assessment.

Personalisation is not ‘individualisation of learning’, which is essentially a teacher driven action. Learner participation and involvement in decision-making is crucial to distinguishing between the two approaches. (EADSNE, 2012. Raising Achievement for All Learners: Quality in Inclusive Education. Odense: European Agency for Development in Special Needs Education).

Reasonable Accommodation – Article 2 of the UNCRPD states: ‘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.’

Article 5. 3 states: ‘In order to promote equality and eliminate discrimination, States Parties shall take all appropriate steps to ensure that reasonable accommodation is provided.’

Within Article 1 of the UNCRPD it is stated that: ‘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.’

Self-Accommodation – learners self-accommodate by learning the computer features that best suit their needs. ‘The ability to personalise technology to suit ones preferences and needs is a life-skill that will benefit learners as they progress through the educational system.’ (UNESCO, 2012. Accessible ICTs and Personalized Learning for Students with Disabilities: A Dialogue among Educators, Industry, Government and Civil Society. Paris: UNESCO).

Social Inclusion – Social inclusion is a process which ensures that those at risk of poverty and social exclusion gain the opportunities and resources necessary to participate fully in economic, social and cultural life and to enjoy a standard of living and well-being that is considered normal in the society in which they live. It ensures that they have greater participation in decision-making that affects their lives and access to their fundamental rights (Charter of the Fundamental Rights of the European Union. European Union, 2007. (2007/C 303/01)).

Universal Design – Article 2 of UNCRPD states that 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.’

Universal Design for Learning is an approach to addressing the diversity of learner needs by suggesting flexible goals, methods, materials, and assessment processes that support educators to meet varied needs. Curricula created using UDL are designed from the outset to meet the needs of all learners. A UDL framework incorporates flexible design of learning situations with customizable options, which allow all learners to progress from their own, individual starting points.

Annex 1. Development of the Model Policy Document

The Model Policy for Inclusive Information and Communication Technologies (ICT) in Education for Persons with Disabilities has been developed based on inputs from over 25 experts in inclusive ICTs and/or education from across the globe.

An initial draft of the model policy was prepared by the European Agency for Special Needs and Inclusive Education lead by Amanda Watkins drawing on previous work from UNESCO and G3ict as well as information collected during the World Summit on the Information Society (WSIS)+10 Review Event, February 2013 (in particular the working group meetings *Towards WSIS+10 and Beyond: Inclusion of Persons with Disabilities in Knowledge Societies*, co-hosted by UNESCO and G3ict).

The draft document was then subject to a number of systematic review activities, each outlined in the sections below.

1.1 Experts' Review

The initial draft of the model policy document prepared by the European Agency was subject to the first review activity involving international experts for ICTs within inclusive education. Four experts considered the draft model policy document against current national and international policies and provided written contributions giving international perspectives on the implementation aspects of the model policy in countries with varying levels of human and economic development, as well as ICT infrastructure.

The experts contributing to this activity were:

- ▶ *Alex Corenthin*, Director of Information Systems – University Cheikh Anta Diop of Dakar (UCAD), Senegal;
- ▶ *Dave Edyburn*, Professor, Department of Exceptional Education, University of Wisconsin, USA;
- ▶ *Shilpi Kapoor*, Managing Director, BarrierBreak, Mumbai, India;
- ▶ *Kenneth Eklindh*, former Head of the Section for Inclusion and Quality Learning Enhancement at UNESCO.

Their contributions are gratefully acknowledged to this phase of the work.

Experts were asked to provide comments linked to four issues; a summary of the actionable points arising from their inputs is presented below. In the sections below, direct quotes from the experts' written contributions are provided. These quotes have been selected as being representative of main points made by one or more of the experts.

1.1.1 The coherence of the draft model policy document

The experts were asked to provide general comments on the overall approach taken within the draft document. Their comments were generally positive, with the following aspects of the overall structure being singled out as being of importance:

- ▶ 'The document addresses an important and timely topic. As a result, the completed work has the potential for global impact in improving the accessibility of technology in education.'
- ▶ 'The guidelines for the development and the implementation of the draft policy are relevant in regards to the discrimination against this specific population.'
- ▶ 'The principles highlighted in the first part of the draft, address the specific targets of the minimal requirements to establish an inclusive ICT policy at all levels, specifically at the educational domain for people living with disabilities.'
- ▶ 'The multi-stakeholder implementation model is crucial, and well described in the document, and is relevant to the need to ensure a lifelong learning and inclusive approach for this population at all levels of the educational framework.'

Also in relation to a multi-stakeholder approach: 'It also appears necessary, considering the target specificity and diversity of the actors involved in this process, to emphasize the need for a participatory and widest possible stakeholder approach in the definition, drafting and implementation of inclusive public policies in education.'

‘Overall the policy is a visionary document that would be ideal for Member States to adopt. The policy throws light on the objectives, priorities and actions but also emphasises the need for an implementation strategy along with the financial budgets to make this happen.’

In summary, it was felt the experts’ inputs supported the overall approach used for the model policy document and this was built on in subsequent drafts.

1.1.2 A consideration of whether the model policy document is in alignment with national and international policy documents used within their country

Three of the four experts gave specific input on how the model policy could be applicable to their country situations.

The expert from Senegal suggested that:

“Generally, Senegal has a law, consistent with the recommendations of the WSIS. The link between the requirements contained in the proposed Model policy and the legislation is yet to be perfected ... The proposed model seems consistent with the requirements identified in our analysis of the regulatory situation in Senegal, on the establishment of an inclusive education policy by the ICT’

The expert from the USA stated that: ‘Regarding the application of the policy framework for the United States, I believe the general framework is consistent with the previous and current work regarding accessible ICTs. In general, awareness in the United States educational systems about the need for accessible instructional materials and learning environments is quite high due to federal law in this area. As a result, the final policy document may not be utilized in the U.S. as much as other parts of the world.’

The expert from India said: ‘From an India Perspective, though we do have some Acts, Policies and Schemes, the implementation gap is high. In addition, these do not reflect at the different levels from System to Student level. The Model Policy for Accessible ICT can provide the framework for India to adopt Inclusive Technology.’

These positive assessments supported the decision to maintain the overall approach and structure of the draft model policy document within further versions.

1.1.3 The perceived relevance of the model policy document to policy and decision-makers’ work

In relation to this issue, the experts highlighted a number of issues that provided guidance for developments in the revised drafts.

Firstly, the need for a national level vision was highlighted: ‘The model policy should particularly emphasize the need to develop a broad vision at national level.’ Alongside this, the need for this national level vision to be translated into regional / local level policies was stressed: ‘In addition, even though we might have a National Level Policy, often the same has to be adopted at the State Level also.’

The issue of different levels of policies was linked to subsequent budget considerations: ‘In addition, the funding and budgetary implications are also often by either the national level or the state level authorities or from different Ministries or Departments.’

The importance of involving a wide range of stakeholders was repeatedly stressed: ‘It also appears necessary, considering the target specificity and diversity of the actors involved in this process, to emphasize the need for a participatory and widest possible stakeholder approach in the definition, drafting and implementation of inclusive public policies in education ...’ and: ‘... it is important for a Model Policy to [be] a part of implementation strategy and budgetary requirements, to outline all the key stakeholders at the National and the State Level and their roles and responsibilities at each stage.’

Linked to this, it was argued that: ‘The Policy Objectives have been drafted carefully. It is key to point out that to achieve this goal of ICT, all education organizations need to focus on this, all teachers need to be trained, and all ICT needs to be inclusive. Often this is treated as only the special schools or special educators need to be provided the training.’

Specifically, the important role of a Lead Ministry in co-ordinating stakeholders' inputs was stressed: '... the Lead Ministry needs to bring about harmonization between the different Ministries, Departments & Stakeholders involved.' Another expert suggested that: 'The monitoring aspects must be clear – the achievement indicators are important to include but it must also be clear who will be responsible for reporting on them and to whom.'

The different levels of policy objectives and policy actions proposed in the model policy were considered as a positive thing: 'The focus of the Model Policy covers from the Student to the System Level; this is of primary importance since often it is implemented at only one or some of the levels.'

However, the need for more stress upon the monitoring of action at these levels was also highlighted: 'The implementation and monitoring should highlight that timelines be set at each of the levels.' Also: 'Emphasis should be put into the model, on the mechanisms for monitoring the implementation of these policies, as well as the establishment of a participatory and inclusive mechanism to develop national strategies for the implementation of the recommendations of the Convention for people with disabilities.'

The issue of potential policy monitoring mechanisms was emphasised, one expert specifically suggesting there was a need to include a specific action that would: 'establish an advisory board.'

The areas highlighted for emphasis and development in subsequent drafts of the model policy were not only all taken into careful account, but also gave rise to the idea that the model policy document could potentially fulfil two functions: the first as a template for a specific country policy in using inclusive ICTs in education; the second as an audit tool to map current actions and identify gaps and areas requiring developments.

Both of these possible functions were kept in mind in preparing subsequent drafts of the document.

1.1.4 Identification of specific areas for development and/or improvement to the model policy document

The four experts provided comprehensive and quite specific inputs that were all used in revising and developing the main content of the model policy. However, each of the experts in one-way or another stressed an issue that led to substantive structural revisions of the initial draft – that of needing to add guidelines in the model policy document regarding prioritisation of actions.

One expert suggested that: '... a discussion about policy issues is seldom enough to bring about change even if it is justified and supported by a Convention. The layout and content in this document provides rationality for different policy activities. This is good but the material easily becomes over-ambitious in the sense that it gets comprehensive and wishes to cover "everything" and all proposed activities give the impression that this should be accomplished at the same time.'

Overall, experts suggested a number of specific changes should be made:

- ▶ '... the need to add a paragraph that discusses the differences between countries and what those differences imply for the level where you need to start the development in the respective country.'
- ▶ provide more information on: 'how different levels of policy development need to be addressed at different stages of development and also to guide countries in making necessary priorities – no one can accomplish all these changes in a short time and there is always need and room for prioritizing. This must be stated clearly as to stimulate the development process.'
- ▶ re-work the relevant sections in order to: 'describe the whole process in several stages ...'
- ▶ '... it will be essential to provide a suggested priority order to assist and stimulate countries in need of a lot of actions to assist them in regarding the work as doable and possible to start without doing everything at once.'

- ▶ ‘in the “reviewing the current situation” [section], mention should be made of a minimum set of circumstances that need to be met in order for implementation to be possible. In other words ... make explicit that a situation analysis with regards to inclusive education and CRPD is necessary in order to develop an ICT strategy ...’
- ▶ ‘... define pre-conditions and sequences of action steps ...’

It was also suggested to: ‘develop simple metrics for each major pre-condition: “Yes” or “No”, or the degree to which each is met.’

The rationale behind the requirement for more information on prioritisation of policy actions was summarised by one expert as: ‘... It is better to have the process initiated through a focus on a few activities that may be achieved. Once this has proven possible this will be stimulating and rewarding enough to continue with more phases and plans. However if the plan is complicated and fails there will most certainly be no more plans made.’

The experts’ inputs were all used as the basis for comprehensively revising the initial draft of the model policy document.

1.2 Ministerial Review Activity

In addition, the initial draft of the model policy document was presented for comment at a meeting of representatives of government agencies and representatives of organisations of people with disabilities in Bogota, Columbia in April 2013. They provided feedback in the form of ratings of the perceived importance of the initial draft policy objectives and actions. Of the 58 policy actions described in the draft document, the representatives collectively rated the actions listed below to be of top priority.

In relation to the learner level:

- ▶ Develop structured ICT ‘needs assessment’ procedures in all educational sectors that identify individual students’ functional needs for particular inclusive ICTs.
- ▶ Promote parental engagement in their child’s education.
- ▶ Provide training for teachers and other educational professionals in maximising the use of accessibility features in mainstream ICTs.
- ▶ Improve assessment for learning through the use of inclusive ICTs that allow students to demonstrate and share their achievements.

In relation to organisational level:

- ▶ Identify minimum standards for the availability of ICT accessibility tools across all educational sectors.
- ▶ Ensure equitable access to inclusive ICTs across all educational settings.
- ▶ Provide training for teacher trainers in the use of inclusive ICTs.
- ▶ Provide clear and coherent guidelines on how to develop curricula materials that provide: physical access; sensory access; cognitive access for students with a wide range of needs.

In relation to system level:

- ▶ Ensure that the lead ministry takes the necessary steps to co-ordinate action across all government entities.
- ▶ Ensure that the agreed objectives and policy priorities relating to the use of inclusive ICTs in education are reflected in other policy directives (for general education, inclusive education and use of ICT in education) and the policy content is cross-referenced with all other relevant policies, in order to ensure coherent policy implementation.
- ▶ Identify minimum standards for the provision of ICT accessibility tools across all educational sectors to cover: universal design approaches, inter-operability guidelines, accessibility standards, procurement guidelines.

- ▶ Investigate and secure funding from national and/or international sources to support the research programme.

The perceived priorities were used as a guide for developing the final presentation of policy objectives and actions.

1.3 Peer Reviews

The final review activity involved a larger number of contributors representing a range of stakeholder groups via a peer review process. Representatives of international organisations as well as organisations of people with disabilities, decision-makers for ICT and/or education and researchers in ICT and/or education gave comments on the draft document. These inputs were mainly focussed upon the specific content of the model policy document.

The contributions of the following peer reviewers are also gratefully acknowledged within this second phase of the reviewing activities:

- ▶ *Stuart Aitken*, Communication and Assistive Technology for People with Disabilities (CALL) United Kingdom;
- ▶ *David Banes*, MADA Center, Qatar;
- ▶ *Ida Brandão*, Ministry of Education and Science, Portugal;
- ▶ *Jan de Creamer*, Ministry of Education, Flemish speaking community of Belgium;
- ▶ *Serge Ebersold*, INS HEA – French National Higher Education Institute for Special Needs Education, France;
- ▶ *Amy Goldman*, Institute on Disabilities at Temple University, USA;
- ▶ *Bernhard Heinser*, DAISY Consortium, Switzerland;
- ▶ *Paula Hunt*, UNICEF CEE-CIS Regional Office;
- ▶ *Mohamed Jemni*, LaTICE Research Laboratory, University of Tunis, Tunisia;
- ▶ *Janet Looney*, ICT policy advisor, France;
- ▶ *Klaus Miesenberger*, Institute for Integrated Studies, University of Linz, Austria;
- ▶ *Indumathi Rao*, education policy adviser, India;
- ▶ *Dónal Rice*, Centre for Disability Law and Policy, National University of Ireland, Ireland;
- ▶ *Natalia Tokareva*, UNESCO-IITE, Moscow, Russian Federation;
- ▶ *Terry Waller*, ICT Consultant, United Kingdom;
- ▶ *Marco Zocca*, National Institute for Curriculum Development (SLO), Netherlands.
- ▶ *Irmgarda Kasinskaite-Buddeberg*, *Maki Hayashikawa*, *Florence Migeon*, *Mariama Kitsiona* and *Diane Boulay* from UNESCO;
- ▶ *James Thurston*, International Accessibility Policy, Microsoft Corporation.

The peer review inputs were used as the basis for the final draft of the model policy document.

In addition to drafting and reviewing the model policy itself, all the activities also contributed to the identification of reference materials to support the implementation process of the model policy document (presented in Annex 1 to this document). The material in the Annex is an initial attempt to identify relevant resources to support policy implementation relevant to the area of inclusive ICTs in education.

Annex 2. Resources to Support Implementation

This Annex provides an initial bibliography of key references and on-line resources that consider different aspects of the use of Inclusive ICTs in Education.

2.1 Implementation of the UNCRPD

UN; OHCHR; IPU, 2007. *From Exclusion to Equality: Realising the Rights of Persons with Disabilities. Handbook for Parliamentarians*. Geneva: UN. <http://www.ohchr.org/Documents/Publications/training14en.pdf>

Global Thematic Consultation on the Post-2015 Development Agenda. *Addressing Inequalities: Synthesis Report of Global Public Consultation*, 2013. Co-led by UNICEF and UN Women, with support from the Government of Denmark and the Government of Ghana. <http://www.convergences2015.org/en/Article?id=854>

Making it Work: <http://www.makingitwork-crpd.org/>

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Annex 3. Templates for Benchmarking and Monitoring the Completion of Policy Actions

It is necessary to initially benchmark and then monitor on an on-going basis the successful completion of Policy Actions across the four phases of policy implementation.

A sample template for benchmarking and monitoring the completion of all Policy Actions in relation to one

policy implementation phase – Audit Actions – is presented in section 4.3 of the main model policy document.

Templates for the remaining three phases are presented below.

3.1 Pre-Requisite Actions

PRE-REQUISITE ACTIONS		Degree of completion		
Policy Objectives	Policy Actions	None	Partial	Fully
Inclusive ICTs are used as a key tool for supporting learners with disabilities to participate in inclusive education and personalised learning opportunities.	Developing action plans to address the identified barriers to the use of inclusive ICTs.			
	Providing all teachers working in all education sectors with initial and on-going training that adequately prepares and supports them to work in inclusive education settings.			
	Developing structured ICT 'needs assessment' procedures in all educational sectors that have a role in identifying individual learners' functional needs for particular inclusive ICTs.			
	Providing training for teachers and other educational professionals in maximising the use of accessibility features in mainstream ICTs.			
	Providing training for teachers and other educational professionals in identifying learners' ICT preferences and supporting learners' to self-assess and self-accommodate their ICT access preferences.			
Inclusive ICTs are available to support learners with disabilities from education across different educational and lifelong learning settings.	Identifying minimum standards for the availability of inclusive ICTs, ICT training and services across all educational sectors.			
	Identifying gaps in the provision of inclusive ICTs in different educational sectors and develop specific strategies to address the gaps.			

PRE-REQUISITE ACTIONS		Degree of completion		
Policy Objectives	Policy Actions	None	Partial	Fully
Educational organisations and all professionals working with them are effectively supported to use inclusive ICTs to widen participation and increase learning opportunities for learners with disabilities.	Implementing a coherent programme of training in using inclusive ICTs for all educational professionals that covers initial education as well as continuing professional development programmes.			
	Within all training programmes ensuring coherent links between specific training in the use of inclusive ICTs and general training in inclusive education.			
	Providing training for professional trainers in the use ICTs generally and inclusive ICTs specifically.			
	Providing educational leaders with training and support in enacting a vision for and managing the process of using inclusive ICTs in education.			
	Establishing links between the training of all educational professionals and the training of ICT accessibility specialists to ensure a shared approach that uses the same terminology and concepts.			
	Establishing inter-disciplinary support structures for all professionals working in educational settings to use inclusive ICTs in their work.			
Inclusive ICTs are seen as a tool to widen participation and increase educational opportunities and inclusion for learners with disabilities.	Mobilising opinion on the right to inclusive ICTs in education for all learners, as well as the added value of ICT accessibility for the wider population.			
	Developing widespread awareness raising campaigns that have the explicit aim of developing positive attitudes towards disability.			
An effective infrastructure for the use of inclusive ICTs is implemented in all education settings.	Establishing multi-stakeholder governing bodies to oversee the implementation of the policy objective and all related policy actions.			
	Identifying minimum standards for the provision of ICT accessibility tools across all educational sectors to cover: universal design approaches, inter-operability guidelines, accessibility standards and procurement guidelines.			
	Cross-reference national minimum standards with those outlined in international legislation, as well as those used in other country contexts.			
	Defining resource requirements, sources, possibilities and constraints. Identify civil society strengths and resources to be capitalised upon.			
	Establishing a procurement framework agreement at national level that is guided by universal design principles.			
	Identifying a responsible lead body for procurement that has the necessary technical and knowledge capacity to enforce the framework agreement.			
	Establishing a national resource database of inclusive ICT procurement possibilities (products, accredited vendors etc.).			

PRE-REQUISITE ACTIONS		Degree of completion		
Policy Objectives	Policy Actions	None	Partial	Fully
There is effective dialogue and consultation involving learners with disabilities from education, their parents and representatives; representatives of the inclusive ICTs eco-system.	Building shared approach around the concepts of inclusive education for learners with disabilities that uses the same terminology and leads to stakeholder consensus.			
	Developing and implementing a strategy to communicate the inclusive ICTs in education policy effectively to all stakeholders.			
	Agreeing upon with all stakeholders the systems of accountability that will be linked to the policy and its implementation.			
	Identifying with all stakeholders the milestones for policy implementation and the achievement indicators to be linked to monitoring and evaluation strategies.			
Research and development initiatives that take 'user involved' as well as 'user centred' approaches are supported.	Undertaking capacity building within the research community to ensure high quality research into the use of inclusive ICTs in inclusive education can be effectively undertaken at national and local levels.			
	Investigating and securing funding from national and/or international sources to support any agreed research programme.			
	Identifying minimum requirements for organisations wishing to access financial support for research.			
Data is collected for policy benchmarking, monitoring and evaluation.	Engaging relevant stakeholders in agreeing an action plan with milestones for data collection to be used for policy monitoring and evaluation.			
	Identifying main stakeholders and partners in data collection processes (organisations, researchers etc.).			
	Agreeing with key stakeholders the relevant foci of quantitative, input focussed data collection (e.g. application of accessibility standards; procurement figures etc.) for benchmarking, monitoring and evaluation purposes.			
	Agreeing with main stakeholders the relevant foci of qualitative, output focussed data collection, using a participatory approach and exploring process and outcome issues for benchmarking, monitoring and evaluation purposes.			
	Agreeing a multi-faceted dissemination strategy encompassing all stakeholders, including key decision makers in other policy arenas and civil society partners.			
	Identifying reporting mechanisms and strategies for sharing information on policy objectives, actions and their implementation with all interested parties.			

3.2 Implementation Actions

IMPLEMENTATION ACTIONS		Degree of completion		
Policy Objectives	Policy Actions	None	Partial	Fully
Inclusive ICTs are used as a key tool for supporting learners with disabilities to participate in inclusive education and personalised learning opportunities.	Improving assessment of and for learning through the use of inclusive ICTs that allow learners to identify and then communicate their needs, as well as demonstrate and share their achievements.			
	Supporting teachers in all educational contexts to take personalised learning approaches supported by the use of inclusive ICTs.			
	Ensuring access to curricula materials that are based on and encourage the use of personalised learning approaches and learners' self-accommodation in using inclusive ICTs.			
	Integrating the use of inclusive ICTs for learners into any individual education plan or similar individualised education planning document.			
Inclusive ICTs are available to support learners with disabilities from education across different educational and lifelong learning settings.	Developing and implementing inclusive ICT transition plans to support the availability of requisite inclusive ICTs for learners moving between educational settings.			
	Ensuring equitable access to and support in using inclusive ICTs in all educational contexts so that learners can progress from being enabled, to capable, to confident users of inclusive ICTs.			
Educational organisations and all professionals working with them are effectively supported to use inclusive ICTs to widen participation and increase learning opportunities for learners with disabilities.	Developing inclusive ICTs in Education policies and plans at organisational level that are in alignment with the national policy.			
	Ensuring that all educational organisations have access to different forms of digital curricular, content and materials, instructional delivery systems and educational software that can be modified to meet the demands presented by specific learning situations.			
	Providing clear and coherent guidelines on how to develop digital curricula materials that provide: physical access; sensory access and cognitive access for learners with a wide range of needs, so that all learning content is accessible.			
	Providing clear and coherent guidelines on how to ensure that standardised, high stakes assessment procedures (such as formal public examinations) can be made more inclusive through the use of inclusive ICTs.			
Inclusive ICTs are seen as a tool to widen participation and increase educational opportunities and inclusion for learners with disabilities.	Raising awareness of the wider societal benefits of inclusive ICTs, including better facilities for all learners – not just those with disabilities – and the social return on investment in terms of improved outcomes of the educational system.			
	Ensuring that the agreed policy objectives relating to the use of inclusive ICTs in education are reflected in other policy directives (for general education, inclusive education and use of ICT in education) and that the policy content is cross-referenced with all other relevant policies, in order to ensure coherent policy implementation.			

IMPLEMENTATION ACTIONS		Degree of completion		
Policy Objectives	Policy Actions	None	Partial	Fully
An effective infrastructure for the use of inclusive ICTs is implemented in all education settings.	Agreeing with all stakeholders the priority actions to be taken and identifying timeframes for implementing, evaluating and reviewing actions.			
	Promoting universal design principles in the education suppliers' eco-system.			
	Establishing links between the training of teachers and the training of librarians; media and information personnel; IT providers; IT professionals; web designers and administrators and assistive technology support personnel to ensure a shared approach that uses the same terminology and basic concepts.			
	Ensuring that service providers responsible for delivering educational and/or ICT related services are aware of their responsibilities and act in compliance with the Inclusive ICTs in Education policy.			
	Developing stakeholder led initiatives to support the sharing of assistive technology resources across different end user groups.			
	Developing stakeholder led initiatives to support the increased accessibility of community based, informal learning opportunities, including increased access to public learning resources and distance learning opportunities.			
There is effective dialogue and consultation involving learners with disabilities from education, their parents and representatives; representatives of the inclusive ICTs eco-system.	Identifying and supporting effective local level capacity-building initiatives to promote the development and use of inclusive ICTs in education.			
	Providing training in the use of inclusive ICTs for parents, families, caregivers or representatives of learners with disabilities that is in parallel with the training given to education professionals.			
	Supporting experienced inclusive ICT users to act as models of good practice for other learners, educators and ICT professionals.			
	Establishing widespread access to inclusive learning tools, content and support for learners, their families and representatives in all formal and informal learning situations.			
	Supporting educational organisations to be innovative in using inclusive technology to support participation and dialogue with different stakeholders in inclusive education.			
Research and development initiatives that take 'user involved' as well as 'user centred' approaches are supported.	In co-operation with all main stakeholders, developing a comprehensive research and development programme that considers all aspects of inclusive ICTs in education policy and their mid and long term impact.			
	Establishing a national open-access database / knowledge centre of research initiatives, findings and outcomes relating to the use of inclusive ICTs in different educational contexts.			

IMPLEMENTATION ACTIONS		Degree of completion		
Policy Objectives	Policy Actions	None	Partial	Fully
Data is collected for policy benchmarking, monitoring and evaluation.	Developing a framework of data collection procedures that examines learners' rights, as well as system effectiveness issues.			
	Collecting quantitative and qualitative data in line with the agreed framework that can be used for benchmarking purposes.			
	At specified time-periods, collecting quantitative and qualitative data for on-going monitoring purposes.			
	Within agreed timeframes, collecting quantitative and qualitative data for evaluation purposes.			
	Collecting on-going quantitative and qualitative data to inform debates regarding the outcomes and/or benefits of inclusive ICT provision in line with all other policy objectives.			
	Collecting innovative examples of impact of the use of inclusive ICTs in inclusive education as inspiration for educational organisations and professionals.			

3.3 Monitoring Actions

MONITORING ACTIONS		Degree of completion		
Policy Objectives	Policy Actions	None	Partial	Fully
Inclusive ICTs are used as a key tool for supporting learners with disabilities to participate in inclusive education and personalised learning opportunities.	In collaboration with educational organisations across all sectors, collecting agreed quantitative and qualitative data on learners' participation in and achievements and outcomes from inclusive education.			
Inclusive ICTs are available to support learners with disabilities from education across different educational and lifelong learning settings.	Monitoring cross sector co-operation and work to ensure on-going equitable access to inclusive ICTs across educational settings and learning opportunities.			
Educational organisations and all professionals working with them are effectively supported to use inclusive ICTs to widen participation and increase learning opportunities for learners with disabilities.	Supporting all educational organisations to benchmark their use of inclusive ICTs and then develop monitoring strategies for the effective use of inclusive ICTs to support all learners.			
	Ensuring that all educational organisations follow recognised minimum standards for topics such as web accessibility, learner e-safety and open access content.			
Inclusive ICTs are seen as a tool to widen participation and increase educational opportunities and inclusion for learners with disabilities.	In collaboration with stakeholders from across all sectors, collecting agreed feedback information on the effectiveness of the implementation actions in promoting positive attitudes and beliefs regarding the use of inclusive ICTs in inclusive education.			
An effective infrastructure for the use of inclusive ICTs is implemented in all education settings.	Collecting systematic data relating to compliance with the identified minimum standards for the provision of inclusive ICTs across all educational sectors.			

MONITORING ACTIONS		Degree of completion		
Policy Objectives	Policy Actions	None	Partial	Fully
There is effective dialogue and consultation involving learners with disabilities from education, their parents and representatives; representatives of the inclusive ICTs eco-system.	Establishing procedures and timelines for collecting and reviewing stakeholders' feedback on the relevance and usefulness of dialogue opportunities.			
Research and development initiatives that take 'user involved' as well as 'user centred' approaches are supported.	Developing structures that allow the Lead Ministry to act as an observatory for research initiatives conducted at the local, national and international levels.			
	Establishing procedures and timelines for collecting and reviewing stakeholders' feedback on the impact, relevance and applicability of research initiatives, programmes and outcomes.			
Data is collected for policy benchmarking, monitoring and evaluation.	Establishing procedures and timelines for collecting and reviewing stakeholders' feedback on the transparency and usefulness of the quantitative and qualitative data collected for policy monitoring and evaluation purposes.			
	Ensuring all data collection activities are in compliance with UNCRPD data collection requirements.			
	Monitoring of all data collection and using relevant information to promote improvement in future policy action implementation.			

Annex 4. Policy Agenda for Inclusive ICTs in Education

As well as being linked to the *Policy Actions* that have to be taken, the *Policy Objectives* identified in the model policy can be linked to:

- ▶ *Policy Questions* that have to be answered;
- ▶ Potential *Policy Constraints* that have to be addressed.

The inter-relation of these factors provides an overall *Policy Agenda* presented in tabular form below that requires discussion and elaboration. The headings used in the table have been adapted from the UNESCO *Policy Guidelines on Inclusion in Education*, 2009. Paris: UNESCO.

This Policy Agenda can be used as the basis for dialogue between key stakeholders in order for development and adaptation within specific national and/or local contexts.

The identified questions and policy constraints are not exhaustive. These can be added to in line with specific issues arising with a particular national and local level context.

4.1 Policy Agenda for the Learner Level

Policy Objectives	Policy Questions	Policy Constraints	Policy Actions
Inclusive ICTs are used as a key tool for supporting learners who are vulnerable to exclusion to participate in inclusive education and personalised learning opportunities	<ul style="list-style-type: none"> ▶ Are personalised learning approaches widespread across all educational sectors? ▶ Is the use of inclusive ICTs to support personalised learning approaches widespread across all educational sectors? ▶ Are all learners (including those who are vulnerable to exclusion) supported to use inclusive ICTs within their personalised learning approaches? ▶ Are teachers prepared and able to use inclusive ICTs to support personalised learning approaches? ▶ Are technology-based tools being used to improve assessment for learning? 	<ul style="list-style-type: none"> ▶ Learners vulnerable to exclusion from education cannot access learning opportunities, as they do not receive the services they need. ▶ Learners are unable to use personalised learning approaches. ▶ Teaching that is not learner-centred and teaching methods which are only appropriate for some learners. ▶ Un-equitable access to inclusive ICTs on the basis of: geography; gender; educational sector. ▶ Learners' experience of technology in formal education differs from that at home; learners' expectations of technology in education are not being met. ▶ Attitudinal barriers to the use of technology for inclusive education, in particular those of teachers who may struggle with modern ICTs. 	<p>Audit Actions</p> <ul style="list-style-type: none"> ▶ Identifying the barriers to the use of inclusive ICTs - gender, social or geographic isolation and/or socio-economic factors – within local level situations and their potential impact on learners with disabilities. <p>Prerequisite Actions</p> <ul style="list-style-type: none"> ▶ Developing action plans to address the identified barriers to the use of inclusive ICTs. ▶ Providing all teachers working in all education sectors with initial and on-going training that adequately prepares and supports them to work in inclusive education settings. ▶ Developing structured ICT 'needs assessment' procedures in all educational sectors that have a role in identifying individual learners' functional needs for particular inclusive ICTs. ▶ Providing training for teachers and other educational professionals in maximising the use of accessibility features in mainstream ICTs. ▶ Providing training for teachers and other educational professionals in identifying learners' ICT preferences and supporting learners' to self-assess and self-accommodate their ICT access preferences. <p>Implementation Actions</p> <ul style="list-style-type: none"> ▶ Improving assessment of and for learning through the use of inclusive ICTs that allow learners to identify and then communicate their needs, as well as demonstrate and share their achievements. ▶ Supporting teachers in all educational contexts to take personalised learning approaches supported by the use of inclusive ICTs. ▶ Ensuring access to curricula materials that are based on and encourage the use of personalised learning approaches and learners' self-accommodation in using inclusive ICTs.

Policy Objectives	Policy Questions	Policy Constraints	Policy Actions
<p>Inclusive ICTs are available to support learners vulnerable to exclusion from education across different educational and lifelong learning settings</p>	<ul style="list-style-type: none"> ▶ Is there clear information on the population of learners vulnerable to exclusion from education across all educational sectors? ▶ Is there clear information on the availability of inclusive ICTs to meet specific learning needs across all educational sectors? ▶ Is there seamless provision of inclusive ICTs across the educational sectors? 	<ul style="list-style-type: none"> ▶ The ICT access needs of learners vulnerable to exclusion from education are not identified or met. ▶ Assistive technologies available in one educational context are not available upon transition to other sectors. ▶ There is limited or no co-ordination between different government entities responsible for provision in different educational sectors. 	<ul style="list-style-type: none"> ▶ Integrating the use of inclusive ICTs for learners into any individual education plan or similar individualised education planning document. <p>Monitoring Actions</p> <ul style="list-style-type: none"> ▶ In collaboration with educational organisations across all sectors, collecting agreed quantitative and qualitative data on learners' participation in and achievements and outcomes from inclusive education. <hr/> <p>Audit Actions</p> <ul style="list-style-type: none"> ▶ Carrying out local level situation analyses on the availability of inclusive education opportunities for learners with disabilities in different sectors of pre-school, compulsory, post compulsory, higher and adult education and lifelong learning opportunities. ▶ Carrying out local level situation analyses on the availability of inclusive ICTs in different educational settings. ▶ Carrying out local level situation analyses on the availability of training for professionals working in different educational settings in using inclusive ICTs. <p>Prerequisite Actions</p> <ul style="list-style-type: none"> ▶ Identifying minimum standards for the availability of inclusive ICTs, ICT training and services across all educational sectors. ▶ Identifying gaps in the provision of inclusive ICTs in different educational sectors and develop specific strategies to address the gaps. <p>Implementation Actions</p> <ul style="list-style-type: none"> ▶ Developing and implementing inclusive ICT transition plans to support the availability of requisite inclusive ICTs for learners moving between educational settings. ▶ Ensuring equitable access to and support in using inclusive ICTs in all educational contexts so that learners can progress from being enabled, to capable, to confident users of inclusive ICTs.

Policy Objectives	Policy Questions	Policy Constraints	Policy Actions
			Monitoring Actions <ul style="list-style-type: none"> ▶ Monitoring cross sector co-operation and work to ensure on-going equitable access to inclusive ICTs across educational settings and learning opportunities.

4.2 Policy Agenda for the Organisational Level

Policy Objective	Policy Questions	Policy Constraints	Policy Actions
Educational organisations and all professionals working with them are effectively supported to use inclusive ICTs to widen participation and increase learning opportunities for learners vulnerable to exclusion from education	<ul style="list-style-type: none"> ▶ Is appropriate training available for all teachers? ▶ Are curricular materials available to support teachers and learners with disabilities or learning difficulties? ▶ Is support from ICT accessibility specialists available? ▶ Are educational leaders supported to see the value of using inclusive ICTs to support inclusive education? ▶ Are educational organisations enabled to change the way they work in relation to inclusive education generally and using inclusive ICTs specifically? 	<ul style="list-style-type: none"> ▶ - Training is either unavailable, or does not meet teachers' needs. ▶ Teachers and educational leaders teachers do not understand their role in inclusive education. ▶ Teachers and educational leaders view diversity in the classroom as a problem, not an opportunity. ▶ Educational organisations do not view themselves as learning, or self-improving organisations. 	Audit Actions <ul style="list-style-type: none"> ▶ Involving all professionals working in educational settings in identifying priorities for capacity building, including agreeing professional standards, training priorities and effective support mechanisms. Pre-requisite Actions <ul style="list-style-type: none"> ▶ Implementing a coherent programme of training in using inclusive ICTs for all educational professionals that covers initial education as well as continuing professional development programmes. ▶ Within all training programmes ensuring coherent links between specific training in the use of inclusive ICTs and general training in inclusive education. ▶ Providing training for professional trainers in the use ICTs generally and inclusive ICTs specifically. ▶ Providing educational leaders with training and support in enacting a vision for and managing the process of using inclusive ICTs in inclusive education. ▶ Establishing links between the training of all educational professionals and the training of ICT accessibility specialists to ensure a shared approach that uses the same terminology and concepts. ▶ Establishing inter-disciplinary support structures for all professionals working in educational settings to use inclusive ICTs in their work.

Policy Objective	Policy Questions	Policy Constraints	Policy Actions
			<p>Implementation Actions</p> <ul style="list-style-type: none"> ▶ Developing Inclusive ICTs in Education policies and plans at organisational level that are in alignment with the national policy. ▶ Ensuring that all educational organisations have access to different forms of digital curricula, content and materials, instructional delivery systems and educational software that can be modified to meet the demands presented by specific learning situations. ▶ Providing clear and coherent guidelines on how to develop digital curricula materials that provide: physical access; sensory access and cognitive access for learners with a wide range of needs, so that all learning content is accessible. ▶ Providing clear and coherent guidelines on how to ensure that standardised, high stakes assessment procedures (such as formal public examinations) can be made more inclusive through the use of inclusive ICTs. <p>Monitoring Actions</p> <ul style="list-style-type: none"> ▶ Supporting all educational organisations to benchmark their use of inclusive ICTs and then develop monitoring strategies for the effective use of inclusive ICTs to support all learners. ▶ Ensuring that all educational organisations follow recognised minimum standards for topics such as web accessibility, learner e-safety and open access content.

4.3 Policy Agenda for the System level

Policy Objectives	Policy Questions	Policy Constraints	Policy Actions
Inclusive ICTs are seen as a tool to widen participation and increase educational opportunities and inclusion for learners vulnerable to exclusion from education	<ul style="list-style-type: none"> ▶ Is access to appropriate ICTs and ATs seen as a human rights issue? ▶ Is the potential value of inclusive ICTs for all learners understood by all relevant stakeholders? 	<ul style="list-style-type: none"> ▶ Negative attitudes towards: learners vulnerable to exclusion from education; inclusive education; the use of ICTs in education. ▶ A lack of a systematic approach to identifying barriers to providing inclusive ICTs. 	<p>Audit Actions</p> <ul style="list-style-type: none"> ▶ Undertaking regional and local level audits to identify priority areas for capacity building in relation to the training of all educational professionals. <p>Pre-requisite Actions</p> <ul style="list-style-type: none"> ▶ Mobilising opinion on the right to inclusive ICTs in education for all learners, as well as the added value of ICT accessibility for the wider population. ▶ Developing widespread awareness raising campaigns that have the explicit aim of developing positive attitudes towards disability. <p>Implementation Actions</p> <ul style="list-style-type: none"> ▶ Raising awareness of the wider societal benefits of inclusive ICTs, including better facilities for all learners - not just those with disabilities - and the social return on investment in terms of improved outcomes of the educational system. ▶ Ensuring that the agreed policy objectives relating to the use of inclusive ICTs in education are reflected in other policy directives (for general education, inclusive education and use of ICT in education) and that the policy content is cross-referenced with all other relevant policies, in order to ensure coherent policy implementation. <p>Monitoring Actions</p> <ul style="list-style-type: none"> ▶ In collaboration with stakeholders from across all sectors, collecting agreed feedback information on the effectiveness of the implementation actions in promoting positive attitudes and beliefs regarding the use of inclusive ICTs in education.

Policy Objectives	Policy Questions	Policy Constraints	Policy Actions
An effective infrastructure for the use of inclusive ICTs is implemented in all education settings	<ul style="list-style-type: none"> ▶ Is there shared understanding amongst key stakeholders regarding the required elements for an effective inclusive ICT infrastructure? ▶ Are the individual and collective responsibilities of stakeholders and participants clear, coherent and communicated to them in an effective way? ▶ Is there a seamless continuum of coherent and reliable services across all levels of education and lifelong learning opportunities? ▶ Is there access to wider learning resources in the community to support formal educational opportunities? ▶ Is the overall framework of system wide provision fit-for-purpose, affordable and sustainable in the long-term and an enabling infrastructure? 	<ul style="list-style-type: none"> ▶ There is varying support available in different educational sectors. ▶ Educational providers and organisations take different approaches in applying accessibility standards and procurement guidelines. ▶ Organisations and professionals are unclear or unwilling to accept their professional responsibilities in relation to the application of inclusive ICTs in inclusive education. ▶ Access to wider educational resources (such as libraries) non-existent or limited. ▶ Access to distance learning opportunities non-existent or limited. ▶ Educational suppliers do not understand or take a universal design approach. 	<p>Audit Actions</p> <ul style="list-style-type: none"> ▶ Cross referencing all inclusive ICTs in education policy actions and initiatives with wider, mainstream ICTs in education policies such as the development of high-speed broadband connections in all education settings. <p>Pre-requisite Actions</p> <ul style="list-style-type: none"> ▶ Establishing multi-stakeholder governing bodies to oversee the implementation of the policy objective and all related policy actions. ▶ Identifying minimum standards for the provision of ICT accessibility tools across all educational sectors to cover: universal design approaches, inter-operability guidelines, accessibility standards and procurement guidelines. ▶ Cross-reference national minimum standards with those outlined in international legislation, as well as those used in other country contexts. ▶ Defining resource requirements, sources, possibilities and constraints. ▶ Identify civil society strengths and resources to be capitalised upon. ▶ Establishing a procurement framework agreement at national level that is guided by universal design principles. ▶ Identifying a responsible lead body for procurement that has the necessary technical and knowledge capacity to enforce the framework agreement. ▶ Establishing a national resource database of inclusive ICT procurement possibilities (products, accredited vendors etc.). <p>Implementation Actions</p> <ul style="list-style-type: none"> ▶ Agreeing with all stakeholders the priority actions to be taken and identifying timeframes for implementing, evaluating and reviewing actions. ▶ Promoting universal design principles in the education suppliers' ecosystem.

Policy Objectives	Policy Questions	Policy Constraints	Policy Actions
			<ul style="list-style-type: none"> ▶ Establishing links between the training of teachers and the training of librarians; media and information personnel; IT providers; IT professionals; web designers and administrators and assistive technology support personnel to ensure a shared approach that uses the same terminology and basic concepts. ▶ Ensuring that service providers responsible for delivering educational and/or ICT related services are aware of their responsibilities and act in compliance with the Inclusive ICTs in Education policy. ▶ Developing stakeholder led initiatives to support the sharing of assistive technology resources across different end user groups. ▶ Developing stakeholder led initiatives to support the increased accessibility of community based, informal learning opportunities, including increased access to public learning resources and distance learning opportunities. <p>Monitoring Actions</p> <ul style="list-style-type: none"> ▶ Collecting systematic data relating to compliance with the identified minimum standards for the provision of inclusive ICTs across all educational sectors.
<p>There is effective dialogue and consultation involving learners vulnerable to exclusion from education, their parents and representatives; representatives of the inclusive ICTs eco-system</p>	<ul style="list-style-type: none"> ▶ Are there established mechanisms for learners with disabilities to have their voices heard within all educational contexts? ▶ Are there established mechanisms for learners vulnerable to exclusion from education, their parents and representative groups to contribute to policy related debates at local, regional and national levels? ▶ Is there a broad consensus between all stakeholders in a learner's education on the value of inclusive education generally and the use of inclusive ICTs specifically? 	<ul style="list-style-type: none"> ▶ Policies not being developed or understood by the people they impact upon. ▶ The voices of learners vulnerable to exclusion from education are not valued or taken into account. ▶ Educational professionals do not communicate with parents in an accessible way. ▶ The potential benefits of inclusive ICTs in supporting dialogue in flexible ways is not recognised or utilised. 	<p>Audit Actions</p> <ul style="list-style-type: none"> ▶ Undertaking regional and local level situation analyses to identify main stakeholders from education and the ICT eco-system to be involved in local, regional and/or national level dialogue. <p>Pre-requisite Actions</p> <ul style="list-style-type: none"> ▶ Building shared approach around the concepts of inclusive education for learners with disabilities that uses the same terminology and leads to stakeholder consensus. ▶ Developing and implementing a strategy to communicate the inclusive ICTs in education policy effectively to all stakeholders.

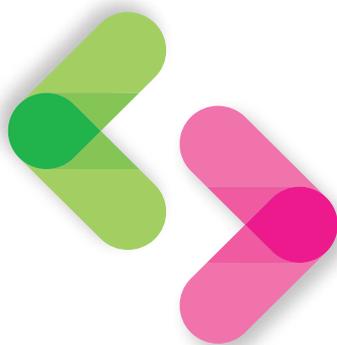
Policy Objectives	Policy Questions	Policy Constraints	Policy Actions
			<ul style="list-style-type: none"> ▶ Agreeing upon with all stakeholders the systems of accountability that will be linked to the policy and its implementation. ▶ Identifying with all stakeholders the milestones for policy implementation and the achievement indicators to be linked to monitoring and evaluation strategies. <p>Implementation Actions</p> <ul style="list-style-type: none"> ▶ Identifying and supporting effective local level capacity-building initiatives to promote the development and use of inclusive ICTs in education. ▶ Providing training in the use of inclusive ICTs for parents, families, caregivers or representatives of learners with disabilities that is in parallel with the training given to education professionals. ▶ Supporting experienced inclusive ICT users to act as models of good practice for other learners, educators and ICT professionals. ▶ Establishing widespread access to inclusive learning tools, content and support for learners, their families and representatives in all formal and informal learning situations. ▶ Supporting educational organisations to be innovative in using inclusive technology to support participation and dialogue with different stakeholders in inclusive education. <p>Monitoring Actions</p> <ul style="list-style-type: none"> ▶ Establishing procedures and timelines for collecting and reviewing stakeholders' feedback on the relevance and usefulness of dialogue opportunities.

Policy Objectives	Policy Questions	Policy Constraints	Policy Actions
<p>Research and development initiatives that take 'user involved' as well as 'user centred' approaches are supported</p>	<ul style="list-style-type: none"> ▶ Does research and development work on the use of inclusive ICTs for learners with disabilities or learning difficulties involve these learners and their representatives? ▶ Are systematic explorations of new ways of using inclusive ICTs, or developing new ICT accessibility tools supported by government entities? ▶ Are key partners in research and development – industry, community representatives – engaged with the research community? 	<ul style="list-style-type: none"> ▶ There is no systematic evaluation of the effects of inclusive ICTs and/or inclusive education policies. ▶ There are discrepancies between the definitions of key concepts (such as inclusive ICTs or inclusive education) held by policy makers, researchers and users. ▶ Research does not directly involve users – learners vulnerable to exclusion from education or their families. ▶ Research focuses upon the development of technology, but not its application to personalised learning in inclusive education. ▶ Research is limited to particular educational sectors (e.g. schools) and does not account for lifelong learning contexts. 	<p>Audit Actions</p> <ul style="list-style-type: none"> ▶ Undertaking regional and local level audits to identify priority areas for research, as well as gaps in capacity for conducting the required research. <p>Pre-requisite Actions</p> <ul style="list-style-type: none"> ▶ Undertaking capacity building within the research community to ensure high quality research into the use of inclusive ICTs in inclusive education can be effectively undertaken at national and local levels. ▶ Investigating and securing funding from national and/or international sources to support any agreed research programme. ▶ Identifying minimum requirements for organisations wishing to access financial support for research. <p>Implementation Actions</p> <ul style="list-style-type: none"> ▶ In co-operation with all main stakeholders, developing a comprehensive research and development programme that considers all aspects of inclusive ICTs in education policy and their mid and long term impact. ▶ Establishing a national open-access database / knowledge centre of research initiatives, findings and outcomes relating to the use of inclusive ICTs in different educational contexts. <p>Monitoring Actions</p> <ul style="list-style-type: none"> ▶ Developing structures that allow the Lead Ministry to act as an observatory for research initiatives conducted at the local, national and international levels. ▶ Establishing procedures and timelines for collecting and reviewing stakeholders' feedback on the impact, relevance and applicability of research initiatives, programmes and outcomes.

Policy Objectives	Policy Questions	Policy Constraints	Policy Actions
Data is collected for policy benchmarking monitoring and evaluation	<ul style="list-style-type: none"> ▶ Is data collection for monitoring based upon qualitative as well as quantitative data? ▶ Does data collection consider input, process and outcomes information? ▶ Are there mechanisms to measure the impact of inclusive ICTs in inclusive education? ▶ Are participatory data collection procedures involving learners, their families and representatives used? 	<ul style="list-style-type: none"> ▶ No or limited data on the population of learners vulnerable to exclusion from education or their experiences in inclusive education generally. ▶ No or limited data is available to inform policy review in the short, mid or long-term. ▶ Policies are not developed using information gathered through participatory processes. ▶ Data is limited to simple quantitative measures that do not inform policy evaluation. ▶ Data is only available on inputs, and not on processes or outcomes relating to the use of inclusive ICTs. 	<p>Audit Actions</p> <ul style="list-style-type: none"> ▶ Cross referencing specific data collection relating to inclusive ICTs to existing national and/or international data collection procedures in order to avoid overlap of efforts. ▶ Identifying existing, relevant data for benchmarking purposes, as well as gaps and missing information to be collected in the future. <p>Pre-requisite Actions</p> <ul style="list-style-type: none"> ▶ Engaging relevant stakeholders in agreeing an action plan with milestones for data collection to be used for policy monitoring and evaluation. ▶ Identifying main stakeholders and partners in data collection processes (organisations, researchers etc.). ▶ Agreeing with key stakeholders the relevant foci of quantitative, input focussed data collection (e.g. application of accessibility standards; procurement figures etc.) for benchmarking, monitoring and evaluation purposes. ▶ Agreeing with main stakeholders the relevant foci of qualitative, output focussed data collection, using a participatory approach and exploring process and outcome issues for benchmarking, monitoring and evaluation purposes. ▶ Agreeing a multi-faceted dissemination strategy encompassing all stakeholders, including key decision makers in other policy arenas and civil society partners. ▶ Identifying reporting mechanisms and strategies for sharing information on policy objectives, actions and their implementation with all interested parties.

Policy Objectives	Policy Questions	Policy Constraints	Policy Actions
			<p>Implementation Actions</p> <ul style="list-style-type: none"> ▶ Developing a framework of data collection procedures that examines learners' rights, as well as system effectiveness issues. ▶ Collecting quantitative and qualitative data in line with the agreed framework that can be used for benchmarking purposes. ▶ At specified time-periods, collecting quantitative and qualitative data for on-going monitoring purposes. ▶ Within agreed timeframes, collecting quantitative and qualitative data for evaluation purposes. ▶ Collecting on-going quantitative and qualitative data to inform debates regarding the outcomes and/or benefits of inclusive ICT provision in line with all other policy objectives. <p>Monitoring Actions</p> <ul style="list-style-type: none"> ▶ Establishing procedures and timelines for collecting and reviewing stakeholders' feedback on the transparency and usefulness of the quantitative and qualitative data collected for policy monitoring and evaluation purposes. ▶ Ensuring all data collection activities are in compliance with UNCRPD data collection requirements. ▶ Monitoring of all data collection and using relevant information to promote improvement in future policy action implementation.

About



UNESCO

UNESCO is the only United Nations specialized agency for education, science, culture, communication and information since its creation in 1945. UNESCO works towards creating the conditions for peace and dialogue among civilizations, cultures and peoples, based upon respect for commonly shared human values. The access to information and knowledge for marginalized social groups, including persons with disabilities, is fully incorporated in the UNESCO's strategic documents. UNESCO believes that the promotion and recognition of universal human rights and providing access to information and knowledge, particularly through innovative use of media and ICT, are conducive to ensure that every citizen, including persons with disabilities, could better contribute to social and economic development. <http://www.unesco.org/new/en/communication-and-information/access-to-knowledge/access-for-people-with-disabilities>

G3ict

G3ict – the Global Initiative for Inclusive Information and Communication Technologies – is an advocacy initiative launched in December 2006 in cooperation with the Secretariat for the Convention on the Rights of Persons with Disabilities at UNDESA, the Information Technology Industry and Organizations of Persons with Disabilities. Its mission is to facilitate and support the implementation of the dispositions of the Convention on the Rights of Persons with Disabilities (CRPD) promoting digital accessibility and Assistive Technologies (www.g3ict.org). G3ict gratefully acknowledge the generous grant received from the Microsoft Corporation to develop the present publication.

European Agency for Special Needs and Inclusive Education

The European Agency for Special Needs and Inclusive Education is an independent organisation that acts as a platform for collaboration among its 28 member countries in the field of special needs and inclusive education. Its aim is to improve educational policy and practice for learners with disabilities and special educational needs. Agency work focuses on country priorities that are in line with European Union strategic objectives, as identified in the Education and Training. 2020 strategy, and in accordance with international agreements, such as the UN Convention on the Rights of Persons with Disabilities and the Convention on the Rights of the Child. The Agency was established in 1996 and is maintained by ministries of education in member countries and also supported by the European Institutions. <http://www.european-agency.org> > www.european-agency.org



This publication presents a Model Policy for Inclusive Information and Communication Technologies (ICTs) in Education for Persons with Disabilities. The focus is upon the use of ICTs to support the implementation of the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD, 2006), specifically:

- ▶ Article 9: Accessibility;
- ▶ Article 21: Freedom of Expression and Opinion, and Access to Information;
- ▶ Article 24: Inclusive Education.

As such, the model policy may serve as a resource for developing the contents of new national policy documents, complement existing policy documents, or individual sections or annexes could be used as resources for auditing or implementing existing policies. The model policy may also be used as a platform to raise awareness and engage in national level dialogue with multiple stakeholders.

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