From Exclusion to Empowerment

Promoting e-Accessibility for Persons with Disabilities: ITU Activities

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International Telecommunication Union

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Agenda

- ICT Development Trends

- ICT Accessibility Context

- ITU- G3 ICT Accessibility Report

- ICT Accessibility Projects in Asia-Pacific

- Recommendations

ITU: A brief overview

193 Member States

567 Sector Members

159 Associates

60 Academia

Headquartered in Geneva,

4 Regional Offices

7 Area Offices.

ITU-R: ITU's Radio-communication Sector globally manages radio-frequency spectrum and satellite orbits that ensure safety of life on land, at sea and in the skies.

ITU-T: ITU's Telecommunication Standardization Sector enables global communications by ensuring that countries' ICT networks and devices are speaking the same language.

ITU-D: ITU's Development Sector fosters international cooperation and solidarity in the delivery of technical assistance and in the creation, development and improvement of telecommunication/ICT equipment and networks in developing countries.

ICT Development Trends

A day in the [digital] world

1994 ──────────────────────→ **2014**

3000
petabytes of IP traffic

1/2b
photos uploaded

22
months
of video on the
internet per
second

1.5m
people start
using mobile
for the 1st time

1st

5-10h
use of multiple
screens

183b
emails sent

1b+
people on
social media
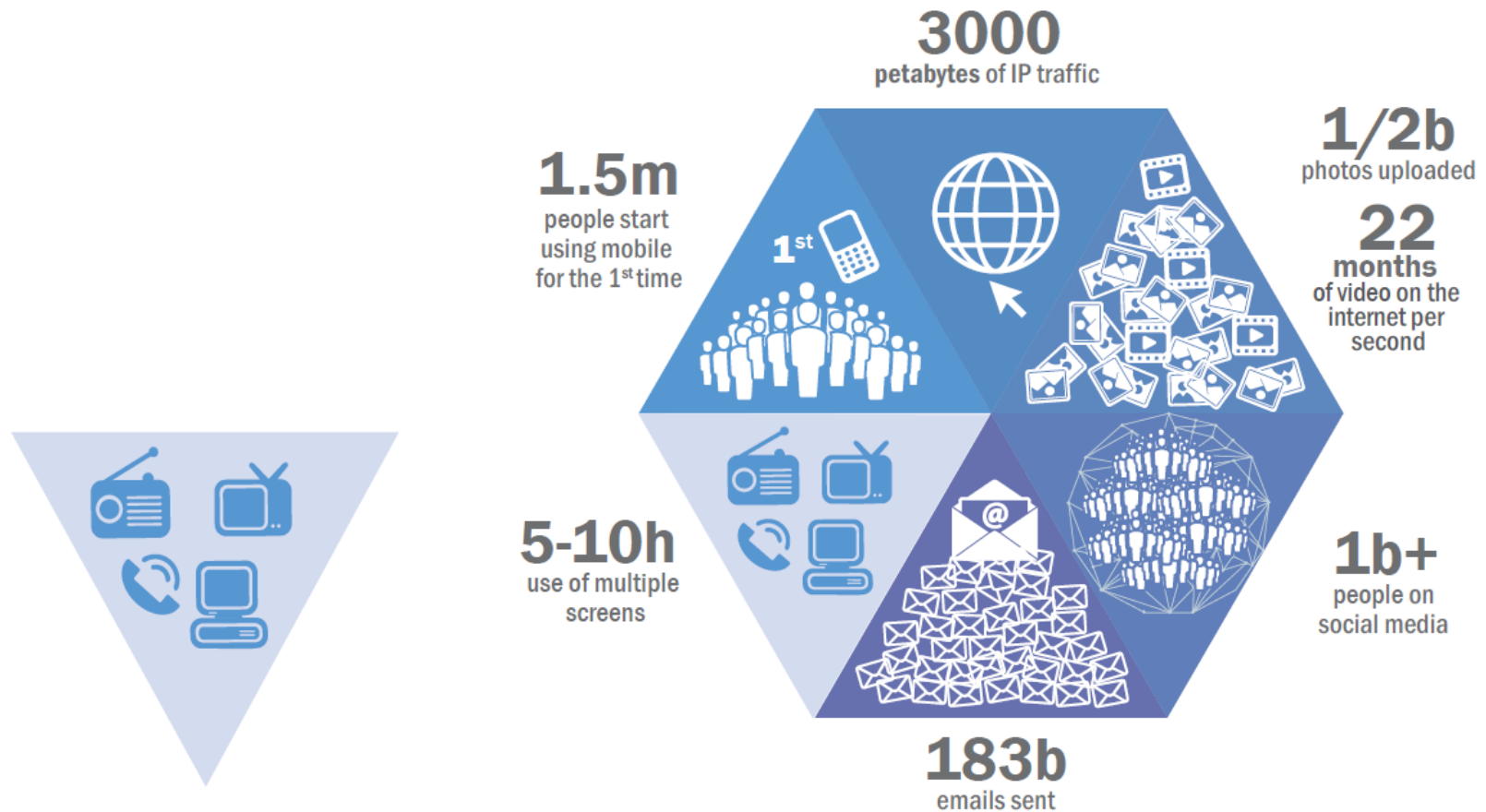
Emergency

Education

Health

Agriculture

Governance

Investment

Applications

Policy & Regulation

Capacity Building

Transport

Sensor Networks

Universal Broadband

Green ICT & E-Waste

Measurements

Electricity

Privacy & Security

Infrastructure Security

Water

SMART SUSTAINABLE CITIES
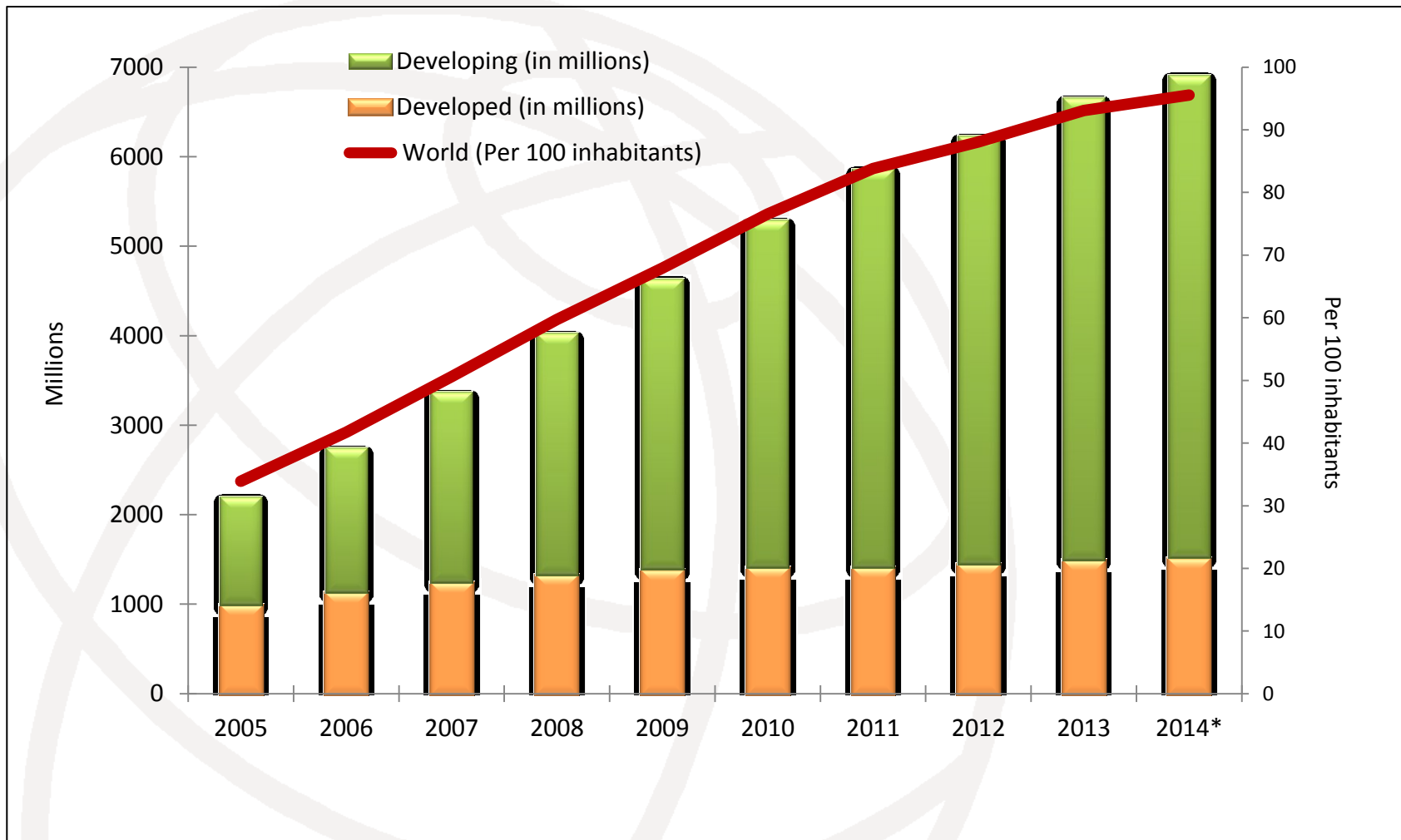
Digital Inclusion

Standards, Conformity & Interoperability
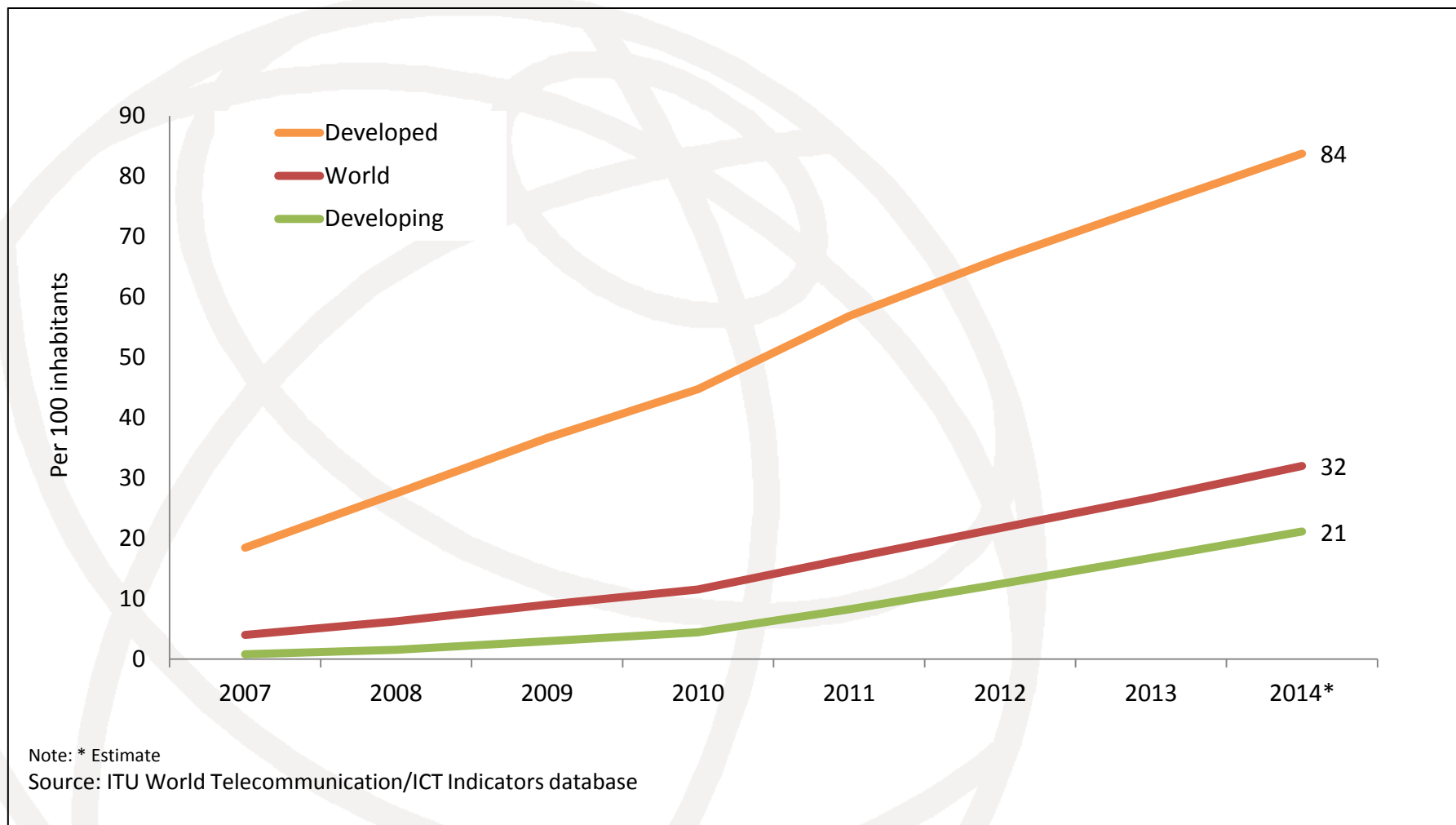
Spectrum Management

Teleworking

Cellular Mobile– Subscriptions

Note: * Estimate

Source: ITU World Telecommunication/ICT Indicators database
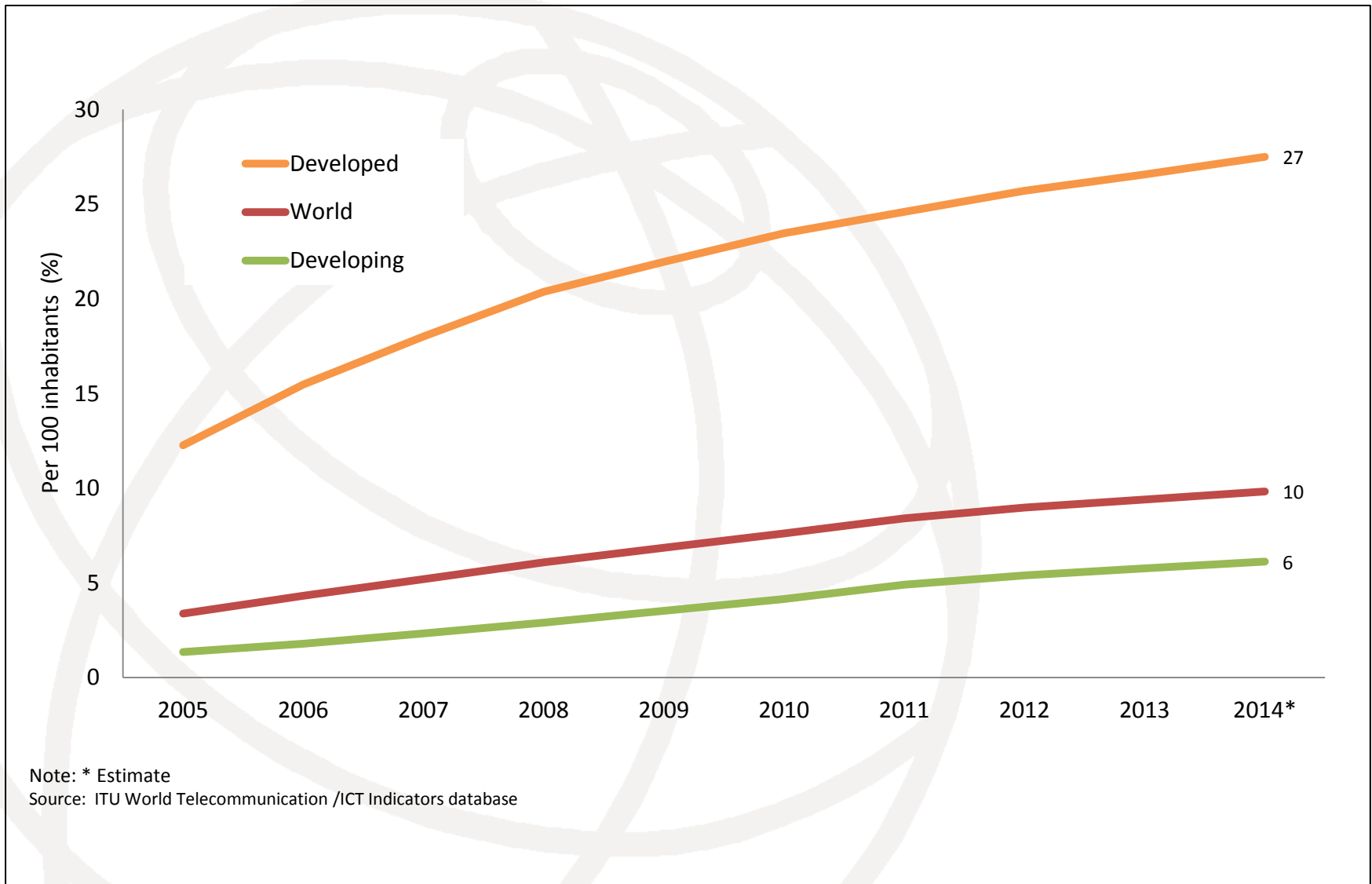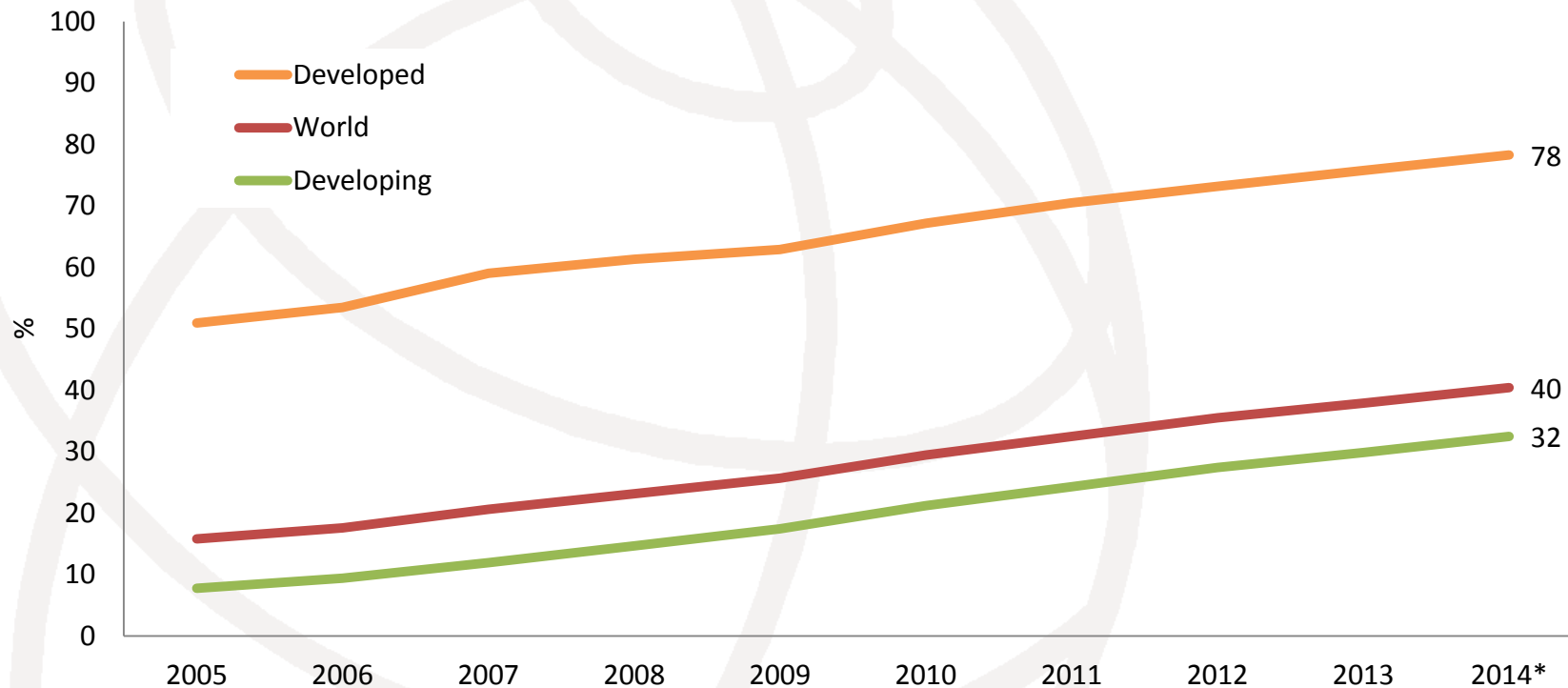
Mobile Broadband - Growth

Active **Mobile-Broadband subscriptions** per 100 inhabitants
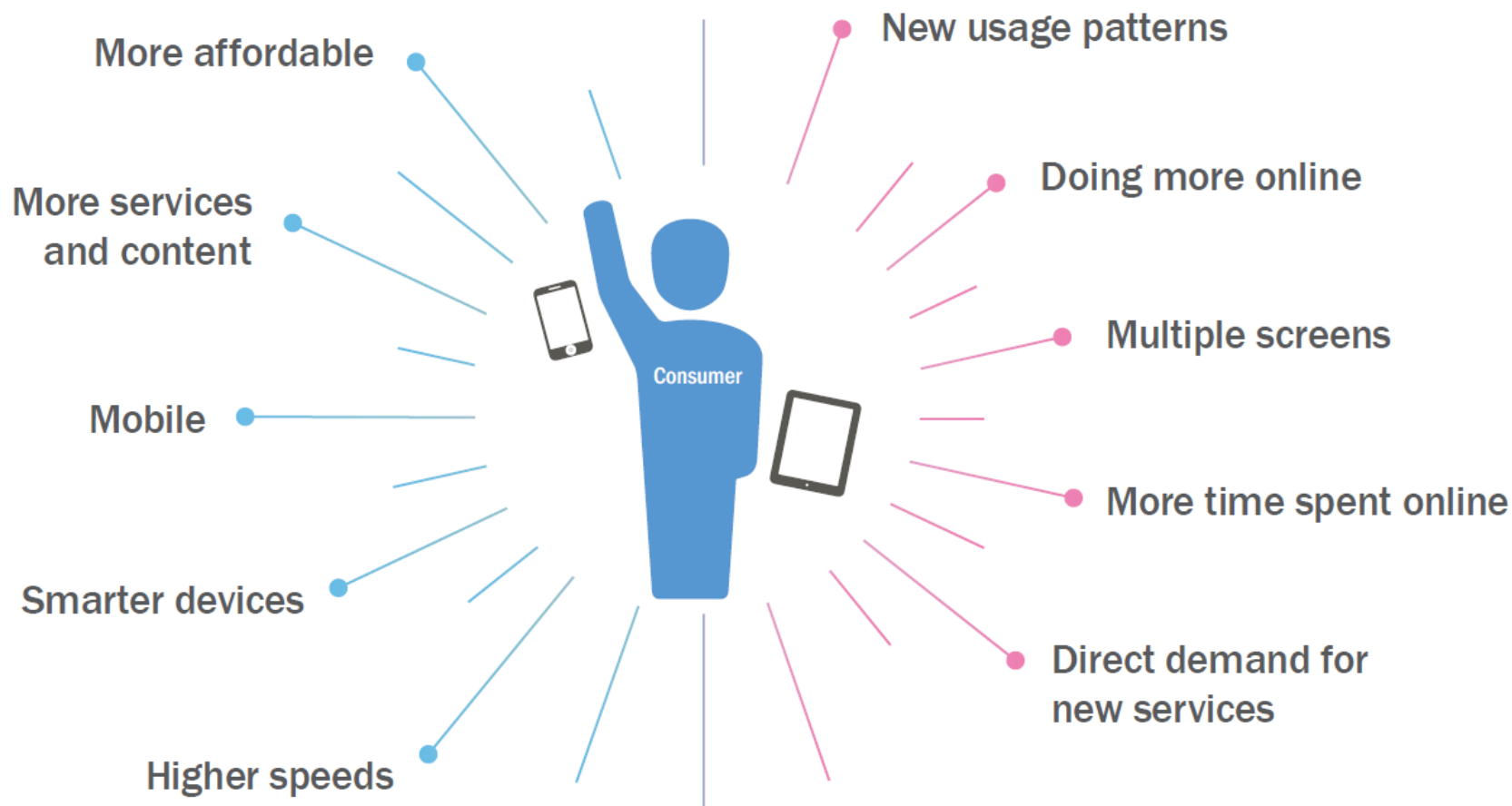2007-2014*

Fixed (wired) BB – Subscriptions

Note: * Estimate
Source: ITU World Telecommunication /ICT Indicators database

Individual Using Internet - Percentage

Note: * Estimate
Source: ITU World Telecommunication /ICT Indicators database

Who's got the power?

More affordable

More services and content

Mobile

Smarter devices

Higher speeds

Consumer

New usage patterns

Doing more online

Multiple screens

More time spent online

Direct demand for new services

ICT Accessibility Context

UN Convention on the Rights of Persons with Disabilities
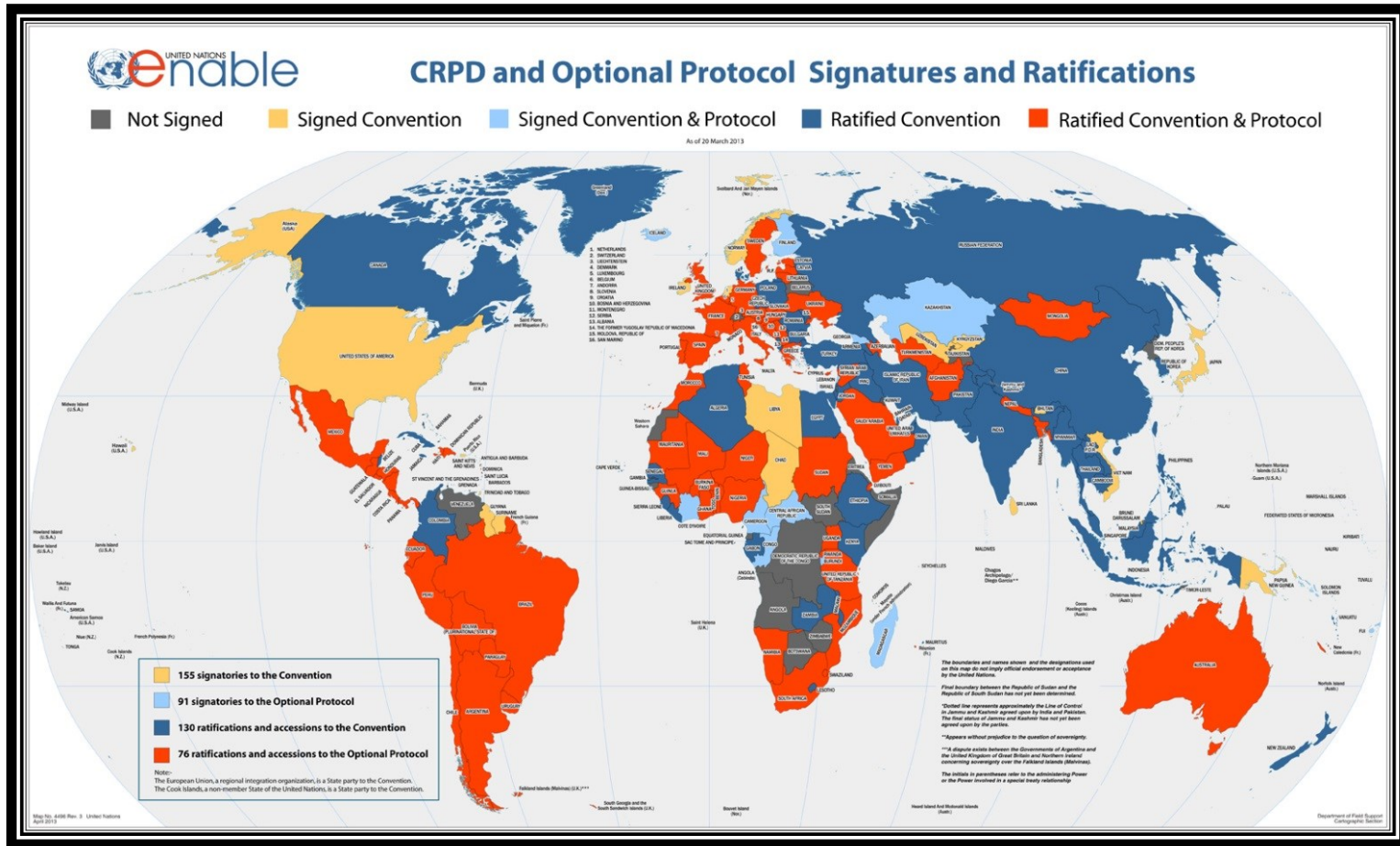
Source: UN Enable
158 signatories; 148 ratifications

ICT Accessibility in the United Nations Convention on the Rights of Persons with Disabilities - CRPD

- **Article 9** of the CRPD defines **ICT accessibility** as an integral part of accessibility rights, on par with transportation and the physical environment

- **Article 30** of the CRPD requires State Parties to "*take all appropriate measures to ensure that Persons with Disabilities . . . enjoy access to television programmes [and] films . . . in accessible formats*."

What are the barriers to promoting ICT accessibility? What can we do?

- The common barriers to promoting ICT accessibility:
  - Visual impairments (those who cannot see a typical screen need a way to understand what is displayed);
  - Hearing impairments (those who cannot hear the phone/TV need alternative means through which receive that information)
  - Dexterity impairments (those who cannot physically input a command on a device require alternative solutions)
  - Cognitive disabilities: Model policies and reports are also joint publications
- ITU-D Sector has focused on ensuring our Member States and Sector Members understand what we mean by ICT accessibility and how they can promote ICT accessibility.

ITU work on Accessibility

- General Secretariat: **ITU Accessibility Task Force**

- BDT: **Study Group Question 7/1** "Access to telecommunication/ICT services by persons with disabilities and with specific needs"

- TSB: **Study Group Question 26/16** "Accessibility to multimedia systems and services"

WTDC-14 and Accessibility

- **ITU-D Objective 4 as approved by WTDC-14** is to: "*Build human and institutional capacity, provide data and statistics, promote digital inclusion and provide concentrated assistance to countries in special need*"

- **Objective 4 includes 4 Outputs. Output 4.3** is "*Digital inclusion of people with specific needs*"

- WTDC-14 agreed that instead of referring to "people with special needs" the term "***people with specific needs***" would be used;

- As per Output 4.3, digital inclusion of people with specific needs, there will be three **Regional Initiatives on persons with disabilities: in the ARB, EUR and CIS regions**

ITU-D's Activities in Promoting Accessible ICTs

- ITU-G3ict e-accessibility tool-kit

- Making Mobile Phones and Services Accessible Report

- Making TV Accessible Report

- Model ICT Accessibility Policy Report

ITU-D's Activities in Promoting Accessible ICTs

- Meeting for Central and Eastern Europe on e-Accessibility in Television Broadcasting in December 2013, Zagreb

- Side event to the Human Rights Council HRC25 in March 2014 at Palais des Nations in Geneva

- Third Annual Conference on ICTs for Persons with Disabilities - Cairo, Egypt, May 2014, organized by Egyptian Ministry of Communications and Information Technology

- Informal working group meeting on accessibility issues by the US regulator, the Federal Communications Commission, during GSR14 June 2014

- M-Enabling Summit - Washington, DC on June 2014

- Regional Event in the Americas "Accessible Americas: Information and Communication for ALL" in São Paulo Brazil, 12th-14th November 2014

- Regional Initiatives on ICT accessibility

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Technology & Innovation : ITU-T and Accessibility

- ***New*** - [Joint ITU and IPC IPTV Application Challenge "Better Quality of Life with Global Standards: an Accessible World for All"](#) - a Call for interest and a Call for sponsors are now available. The Challenge wishes to raise awareness and increase media and audiovisual accessibility for persons with all abilities.

- [IRG-AVA - Intersector Rapporteur Group Audiovisual Media Accessibility](#) studies topics related to audiovisual media accessibility and aims at developing draft Recommendations for "Access Systems" that can be used for all media delivery systems, including broadcast, cable, Internet, and IPTV.

- [ITU-T Study Group 16 (Multimedia)](#) is the lead ITU study group on telecommunication/ICT accessibility for persons with disabilities and it works to mainstream the consideration of accessibility in the development of multimedia standards, technologies and services. SG16 organizes is accessibility work under [Question 26/16](#) "Accessibility to multimedia systems and services".

Technology & Innovation : ITU-T and Accessibility

"universal design" and to ensure that developments in telecommunication/ICT do not create new barriers to accessibility and usability. SG2 organizes its accessibility work under Question 4/2 "Human factors related issues for the improvement of the quality of life through international telecommunications".

- ITU-T Focus Group on Audiovisual Media Accessibility (FG AVA) worked to stimulate the development of international standards that improve the accessibility of audiovisual (AV) media to persons with disabilities. FG AVA enjoyed a strong relationship with its parent group, ITU-T Study Group 16, and particularly with its Question 26/16. It was successfully concluded in October 2013.

- Joint Coordination Activity on Accessibility and Human Factors (JCA-AHF) acts as the first point of contact for those interested in ITU's accessibility-related activities, with its chief responsibility being the coordination of accessibility work undertaken within ITU (across ITU-D, ITU-R and ITU-T)

ITU- G3 ICT Accessibility Report
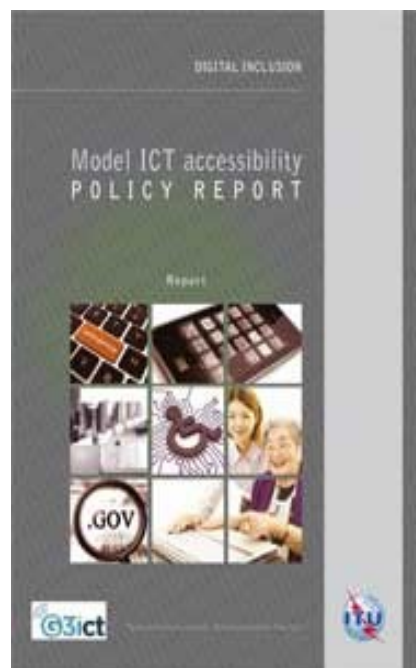
MODEL ICT ACCESSIBILITY POLICY CONTEXT

- Model Accessibility Policy Report was developed pursuant to

    - UN Convention on the Rights of Persons with Disabilities (successful achievement relies on adoption and early implementation of policies by countries)

    - ITU and G3ict ICT Accessibility Policy Toolkit www.e-accessibilitytoolkit.org

- A resource for ICT policy makers, regulators and other stakehodlers including NGOs, persons with disabilities and parliamentarians

- Designed to assist in policy making in public access, mobile communications, TV/video programming, web accessibility and public procurement

- Sets out principles for policy formulation and implementation through legilsation, regulations, standards and guidelines.

FROM COMMITMENTS TO ACTIONS (1)

- Transposing UNCRDP into Policy and Law

  – States Parties have ICT policies, legislation and regulations

  – These key legal instruments must be updated to achieve the goal of promoting ICT accessibility

  – States Parties Disability laws also have to be updated to promote ICT accessibility

  – Updating States Parties Public Procurement laws may be one of the most effective ways to ensure the availability of accessible ICTs

UNCRDP, MDGs, Other Global Commitments
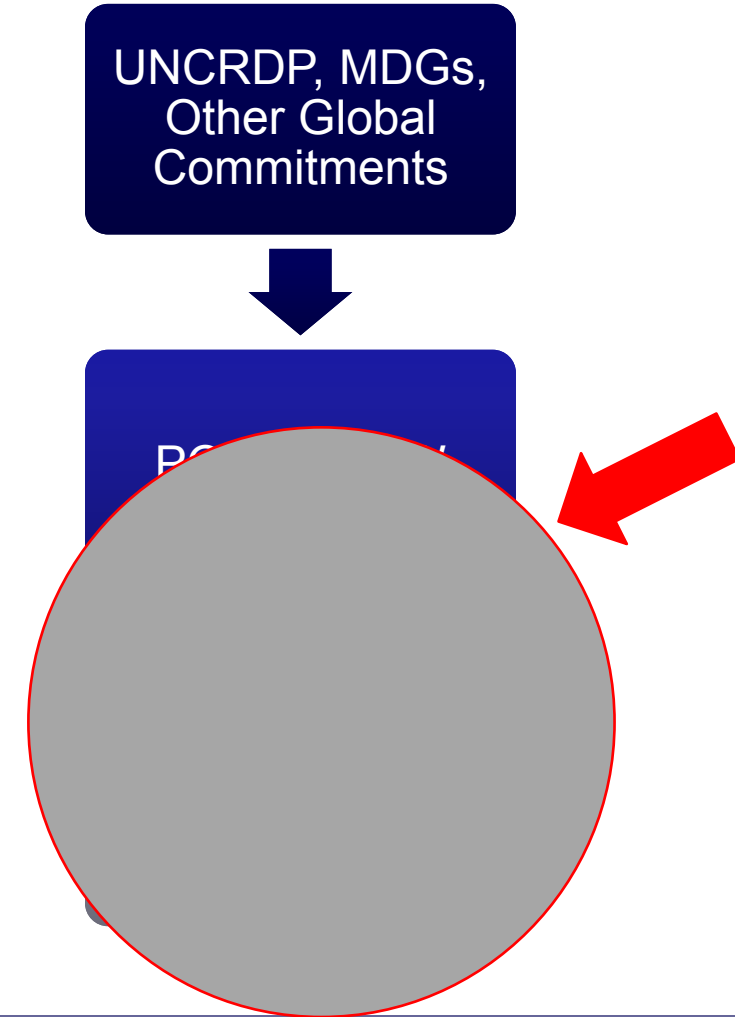
WHAT MORE CAN BE DONE?
FROM COMMITMENT TO ACTION (2)

- **Elements of an overall Accessible ICT framework:**
  - a combination of 'top-down' and 'bottom-up' legislation
  - an approach that first establishes the basic legislation, followed by detailed rule-making
  - a combination of vertical and horizontal approaches
  - effective use of public procurement
  - appropriate usage of soft law, with linkage to hard law
  - establishment of points of reference (including standards and codes of practice)
  - a range of other public measures (public assistive technology services, financial support for users/consumers, use of Funds and other incentives for industry).

But how do we translate theory into PRACTICE?

MODEL ICT ACCESSIBILITY POLICY REPORT

Modules

- **Module 1** - ICT Accessibility Legal, Policy and Regulatory Framework
- **Module 2** - ICT Accessibility Framework on Public Access
- **Module 3** - Mobile Accessibility Policy Framework
- **Module 4** – Television/Video Programming Accessibility Policy Framework
- **Module 5** - Web Accessibility Policy Framework
- **Module 6** - Accessible ICT Public Procurement Policy Framework

APPROACH TAKEN

- **Each module is designed and drafted on the basis of a similar approach**:

  o Explains the goals sought to be achieved and an overview of steps to be taken

  o Provides a generic approach and model text

  o Includes annotations to

  ❑ assist with the understanding of the basis for some proposed clauses

  ❑ Identify areas where country-specific issues must be taken into account (e.g population, literacy, institutional framework)

  o Includes appendices with supporting tools such as info for readers not familiar with ICT Accessibility policy, guidleines, checklists, etc

MODULE 2
PUBLIC ACCESS

Module 2 recognises that public access is provided:

(1) As a licence condition (regulatory requirement)

(2) Using public/ USAF funding, e.g. "telecentres" (funded)

(3) By SMEs and entrepreneurs, e.g. internet cafes (unregulated)

Provides an Accessibility Checklist for Public Access facilities that can be used in all scenarios

- **PHYSICAL ENVIRONMENTS AND AWARENESS**

  - Is it easy for public access facility visitors to know what assistive hardware and software is available in the public access facility?

  - Are parking areas, pathways, entrances to the building wheelchair-accessible and clearly marked?

  - Are there high-contrast, large-print signs to & throughout the public access facility?

  - Is at least part of a service counter or desk at a height accessible from a seated position/ accessible to persons in wheelchairs?

PUBLIC ACCESS – ACCESSIBILITY CHECKLIST (2)

STRATEGY, PLANNING, POLICIES, AND EVALUATION

•Are people with disabilities included in planning and evaluating public access facility products and services?

PUBLIC ACCESS FACILITY STAFF TRAINING

•Are staff members familiar with the availability and use of accessible ICT features, assistive technology and alternate document formats?

•Have staff members received sensitivity training and training on use of ICTs by persons with disabilities?

HARDWARE

•Is at least one large monitor available so that a larger amount of screen can be viewed while magnified?

•Is equipment marked with large-print and/or Braille labels?

•Do you provide alternate hardware to replace the standard mouse and/or keyboard (e.g., a trackball, joystick, mini-keyboard, one-handed keyboard)?

SOFTWARE

•Do you provide special software that is beneficial to persons with disabilities (e.g., screen readers)

•Do electronic resources, including web pages, adhere to accessibility guidelines or standards? (Refer to Web Accessibility Module)

MOBILE ACCESSIBILITY

Availability

o provide customers a range of accessible products, services and devices meeting the requirements of various types of disabilities

Affordability

ooffer special and/or discounted rates and plans for users with disabilities – i.e. text only plans for the deaf

Awareness

otrain staff on accessible products and services

Practical Tools:

Mobile Accessibility Policy

Code of Conduct (for mobile industry)

Regulations (for regulators)

TV/VIDEO PROGRAMING ACCESSIBILITY

- Licensed service providers are required to deliver

  - **closed captioning**

  - **sign language,** and

  - **audio description**

  across specified programmes in order to ensure access by persons with disabilities

- The NRA can mandate the above accessibility measures through **regulations, licence conditions, accessibility targets and codes of good practice,** and other relevant measures.

- Calls for **awareness raising** so users are aware that accessible broadcasting services exist

- Recognizes the opportunities presented by **digital migration**

TV/VIDEO PROGRAMING ACCESSIBILITY (2)

- The NRA (with stakeholders) defines an implementation roadmap which prioritises the implementation of access services for different types of programmes, including **news, live, emergency communications and pre-recorded programmes.**

- The targets set might differ for different categories of licensed service providers.

  - For example, public service broadcasters may have greater responsibilities than commercial service providers, especially where they receive public funds for content development.

WEB ACCESSIBILITY

- Defines how to make web content more accessible to persons with a wide range of disabilities, and to older persons with changing abilities due to ageing

- **No need to reinvent the wheel!** Based on Web Content Accessibility Guidelines (WCAG 2.0)- (ISO/IEC 40500:2012)

- Focus is on public sector websites

- Suggestion that industry professional associations issue voluntary codes of conduct reflecting conformance objectives and timelines similar to those for public sector sites

MODULE 5
WEB ACCESSIBILITY (2)

Examples of Impairment or Disability addressed by the Four Principles and 12 Guidelines of WCAG 2.0	Sight	Physical	Hearing	Cognitive	Speech	Neurological	Language	Learning
Perceivable								
Provide text alternatives for non-text content.	X		X	X			X	X
Provide captions and audio descriptions for videos and other alternatives for multimedia.	X		X	X		X	X	X
Make it easier for users to see and hear content including separating foreground from background.	X		X			X		X
Operable								
Make all functionality available from a keyboard.	X	X			X	X	X	X
Provide users enough time to read and use content.	X	X	X	X	X	X	X	X
Do not design content in a way that causes seizures.				X		X		
Help users navigate and find content.	X	X	X	X		X		X
Understandable								
Make web pages appear and operate in predictable ways.	X	X		X			X	X
Help users avoid and correct mistakes.				X		X	X	X
Maximize compatibility with current and future user tools, including assistive technologies.	X	X	X	X	X	X	X	X

ICT Accessibility Projects in Asia-Pacific

ITU Project on accessibility of mobile phones in India

Report for DoT, India with objective to:

i. Facilitate access and participation for persons with disabilities in the Information Society in India, and

ii. Promote implementation of the UNCRPD.

- Challenges and Opportunities for Service Providers and manufacturers to Implement Available Solutions;

- Examples of special services such as digital libraries for visual or reading-impaired users, Global Positioning System (GPS), relay Services, customer care services, and features and services supporting independent Living and emergency response;

- International Best Practices in policy and the market;

- Legislative and regulatory scenario in India and identified gap areas for different agencies to work on;

- Key policy recommendations including accessible ICTs within the funding purview of the USOF, including accessibility within the licensing framework

ITU accessible ICT project for Nepal and Afghanistan

- Project to promote ICT and mobile usage for persons with disabilities in Nepal and Afghanistan

- Detailed report for NTA and ATRA on making ICTs and telecommunications accessible for persons with disabilities in November 2012, which:

➢ Examined the prevailing level of ICT and telecom access for persons with disabilities in Nepal and Afghanistan

➢ Covered ICT and telecom accessibility for persons with disabilities in all domains of life

➢ Drew attention to the UNCRPD and its relevant dispositions and showcased examples of good policy and program initiatives in the area of ICT accessibility.

➢ A code of good practice for accessibility of telecommunications was formulated and presented to NTA.

AFGHANISTAN

Making ICT and
MOBILE PHONES ACCESSIBLE FOR
PERSONS WITH DISABILITIES
IN AFGHANISTAN

Report

JANUARY 2014
Telecommunication Development Sector
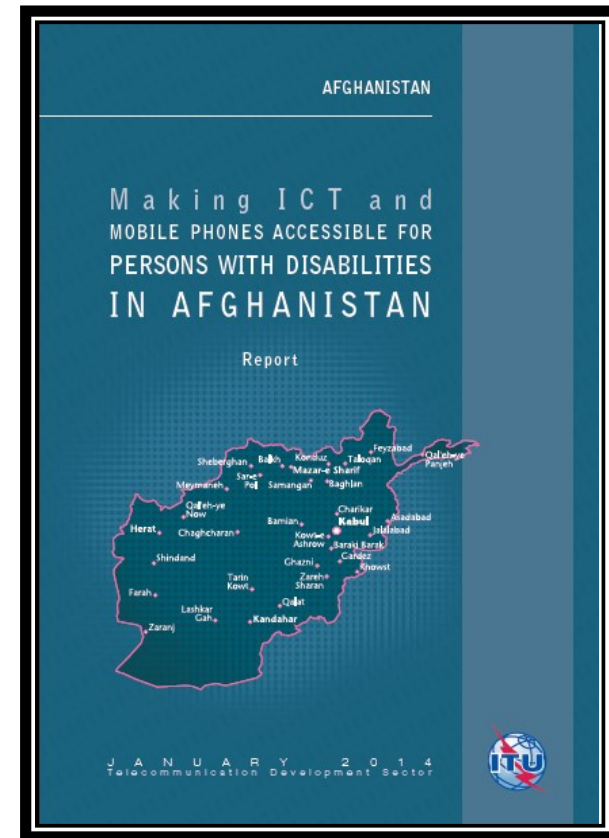
http://www.itu.int/ITU-D/asp/CMS/Docs/Accessible_ICT_Afghanistan.pdf

International Telecommunication Union

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Mongolian TTS engine for Blind

❖ Implementation

- International Telecommunication Union (ITU)
- National Information Technology Park of Mongolia (NITP)
- National University of Mongolia
- National Electronic and Computer Technology Center of Thailand (NECTEC)

❖ Supporters

- COMMS Australia
- AMD Corp.

❖ User & Tester

- Mongolian National Federation of the Blinds (MNFB)
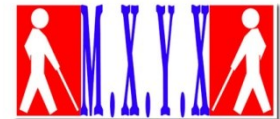
ASEAN-ITU Seminar on ICT Accessibility and Assistive Technologies for Equity in Society, 25-26 August 2014, Bangkok, Thailand

❑ Jointly organised by ITU, Ministry of ICT Thailand, and ASEAN
❑ 46 participants from 7 ASEAN countries
❑ Pacific Disability Forum invited

Topics included:
- Model ICT Accessibility Policy
- TV accessibility
- Emergency services for PwDs
- Assistive technologies

Recommendations

- **Mainstreaming ICT Accessibility** through inclusive language, definitions, and provisions in policies, laws & regulations

- **Identifying key steps** to promote ICT Accessibility, such as making accessible devices available, in the case of public and mobile phones and TV sets

- **Awareness raising among key stakeholders** – creating awareness about the need to promote ICT Accessibility

- **Consultation with persons with disabilities** through creating a committee on persons with disabilities and embracing the principle of 'nothing about us without us'

- **Promoting the setting of clear targets, and periodic monitoring and evaluation**

- **Encouraging training, capacity building and educational programs** on disability awareness

- **Promoting localization,** for example of voice recognition and text-to speech interfaces – to ensure local relevance and uptake

- **Consensus building and inclusive policy-making** through encouraging national debate and discourse

Reference Additional Slides

Making TV Accessible Report
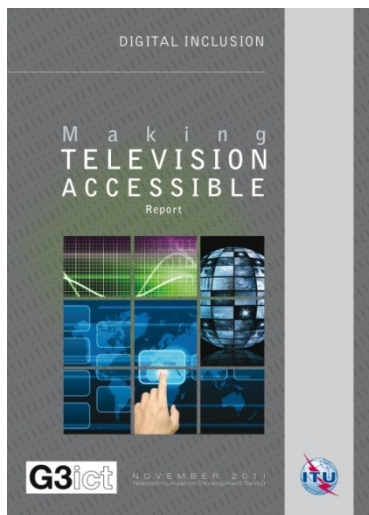
- Identifies ways in which TV can be made more accessible
- Timely given the transition from analogue to digital TV
- Prepared by Peter Looms, Chairman of ITU-T Focus Group on Audiovisual Media Accessibility

Making Mobile Phones and Services Accessible Report
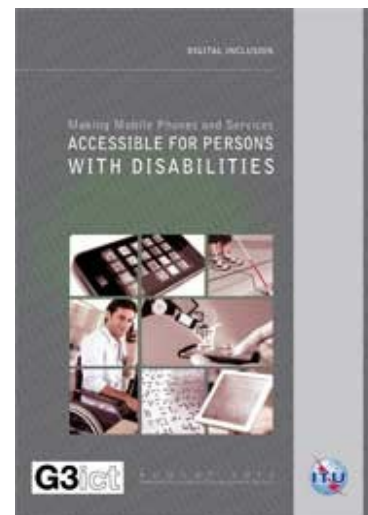
- Explains, in concrete terms, what we mean by accessible mobile phones
- Developments in accessible mobile apps
- Business opportunities and case studies
- Policy guidelines

http://www.itu.int/ITU-D/sis/PwDs/index.phtml

e-Accessibility Policy Toolkit for Persons with Disabilities

A Joint ITU/G3ict Toolkit for Policy Makers Implementing the Convention on the Rights of Persons with Disabilities

Home | Toolkit Contents | Technology Areas | Policy Guides | Assessment Framework

Search the Toolkit:

Google™ Custom Search [Search]

Guides by Policy Area

- **Telecom/broadcasting**
- **Education**
- **Labor/social affairs**
- **Interior/homeland**
- **Health**
- **Transportation**
- **e-Government services**
- **Local government**
- **International cooperation**
- **Public procurement**

Tools for Policy Makers

- **Why a Toolkit?**
- **Introduction to e-accessibility**
- **Examples of accessible ICTs**
- **Who benefits?**
- **ICT in the Convention**
- **Assessment Framework**
- **Full text of the Convention**
- **Tips on conducting accessible meetings**

UN Secretary-General Ban Ki-moon on e-Accessibility

Partners

UN Enable

ITU-T (Standardization)

ITU-D (Development)

G3ict

e-Accessibility Initiatives

- ITU Accessibility (JCA-AHF)
- Web Accessibility Initiative W3C
- Global Partnership for Disability and Development
- Dynamic Coalition on Accessibility and Disability
- ICT for Information Accessibility in Learning (ICT4IAL)

Toolkit Contents	Meet our Editors	G3ict Resource Center
UN Convention	E-mail our editor with comments and suggestions:	**Search case studies by:**
Who benefits?		Type of disability
e-Accessibility basics	**Dónal Rice, Toolkit Editor** Centre for Excellence in Universal Design, CEUD/NDA Ireland	Domain of application
Technology areas		Technology
Product development and design		Country
Public procurement	Editorial team and contributors	
Promoting assistive technologies		**Highlights**
International cooperation	**Francesca Cesa Bianchi** G3ict Toolkit Editorial Coordinator	CRPD 2013 ICT Accessibility Progress Report
Local government		Banking Accessibility Survey
Developing policy		e-Accessibility Policy Handbook
Guides by policy area		Country Profiles
Annexes		Publications & Reports
		Global ICT Accessibility Events
		ICT accessibility Company Profiles

M-Enabling Summit: Addressing the Mobile Opportunity for Persons with Disabilities

❖ **Exclusively dedicated to accessible and assistive mobile solutions for Seniors and Persons with Disabilities**

- ❖ **Promotes innovation**
- ❖ **Showcases solutions that work**
- ❖ **Fosters dialogue among all stakeholders: Mobile industry, innovators, policy makers, advocates, CIOs**
- ❖ **Facilitates networking among global mobile accessibility stakeholders and sharing of experience**
- ❖ **540 participants in 2014 from 32 countries**

Organized by G3ict in Cooperation with ITU and the FCC 4th edition - June 1-2, 2015, Washington, D.C.