

Economic and Social Commission for Western Asia

E- ACCESSIBILITY NATIONAL TECHNICAL GUIDELINES FOR THE ARAB REGION

The Arab Digital Inclusion Platform (ADIP)



UNITED NATIONS

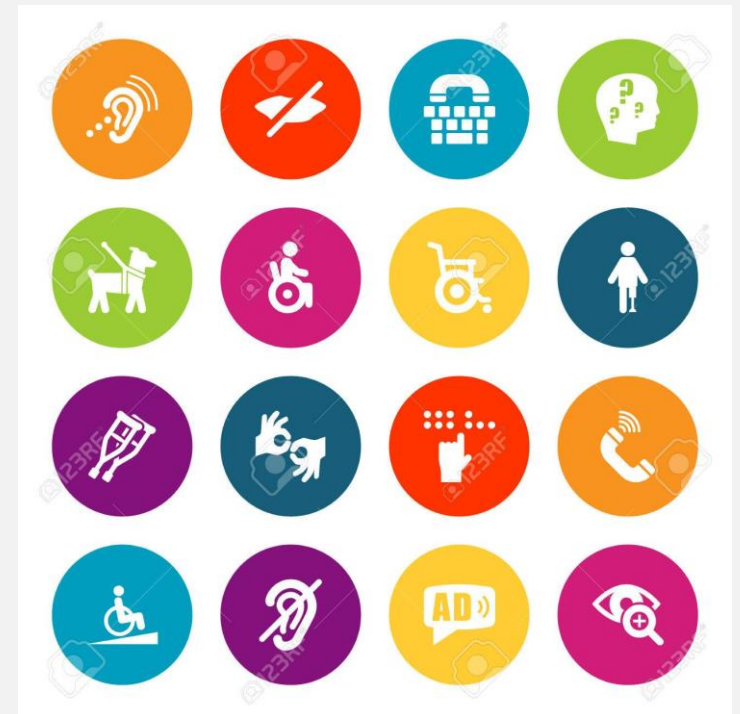
الاسواق
ESCWA

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E- ACCESSIBILITY NATIONAL TECHNICAL GUIDELINES FOR THE ARAB REGION

- **Goals**
- Develop an ESCWA Template on e-Accessibility Technical Guidelines for the Arab Region
- To support policy makers develop their national guidelines for enhanced e-Accessibility.
- Help to bridge the digital divide and enable all society members to access and use ICT.



Initiatives to promote the inclusion of persons with disabilities

◦ ITU



◦ UNSECO



◦ ESCWA



◦ WHO



◦ W3C



Drivers of Change

- The 2030 Sustainable Development Initiative



- The Convention for the Rights of Persons with Disability (CRPD)



- Marrakesh Treaty



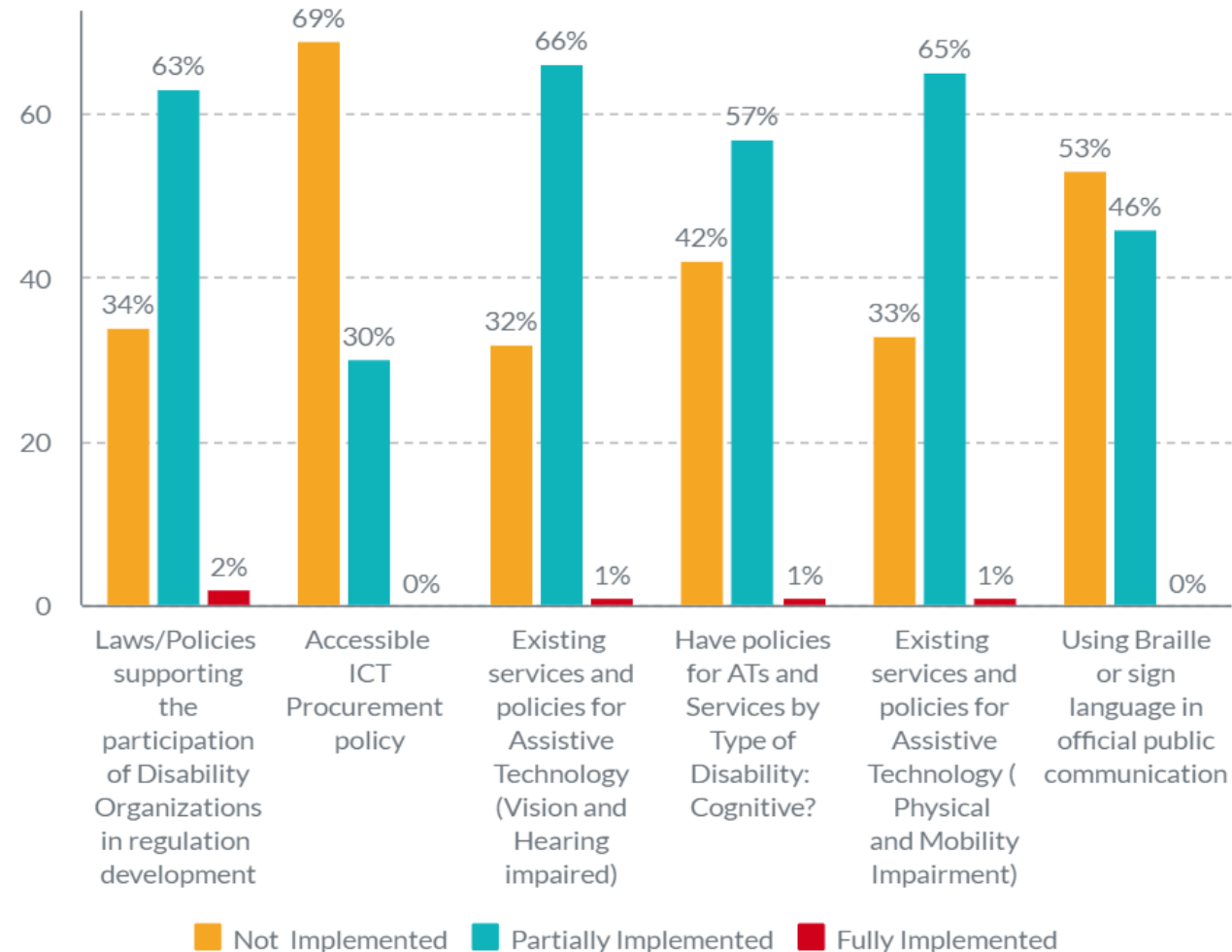


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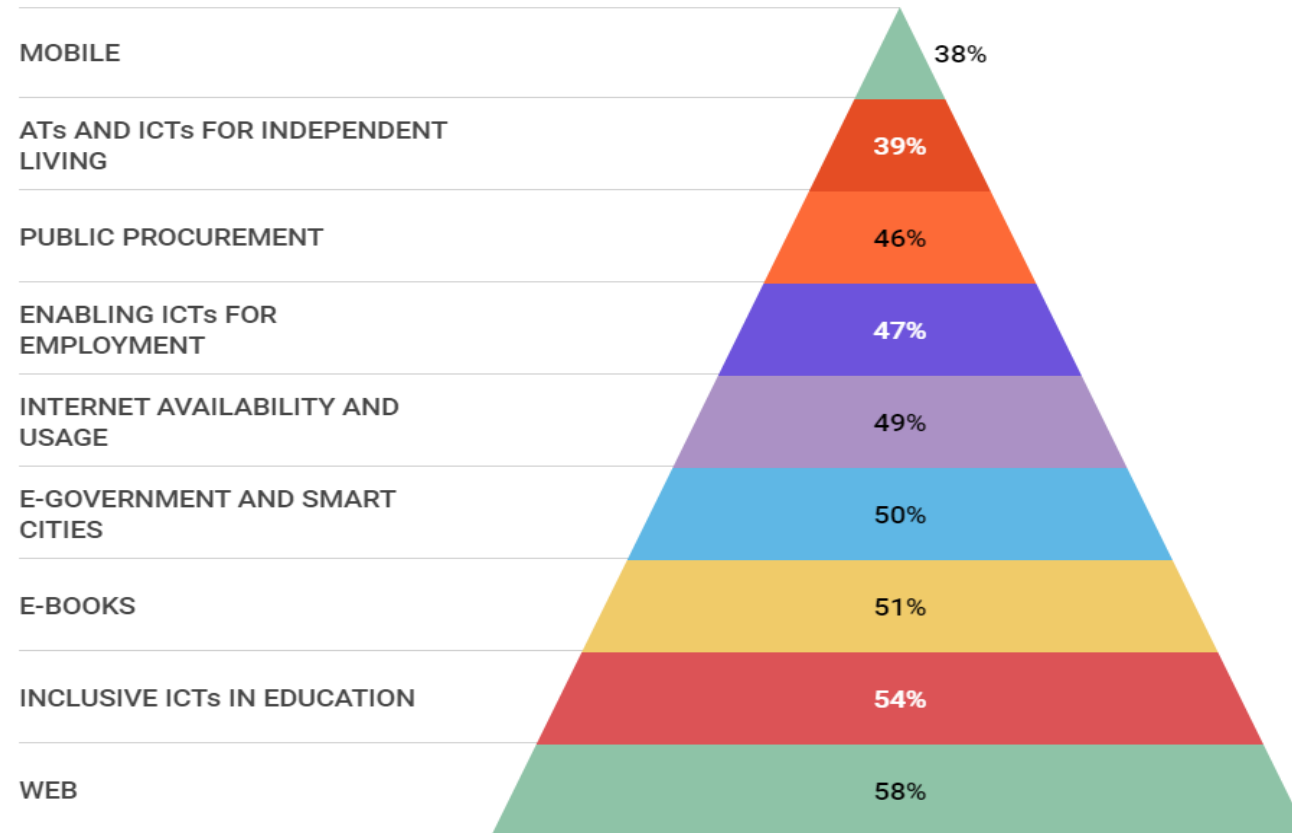


E-accessibility Status on the Global Level

Laws, Guidelines, Policies and Regulations



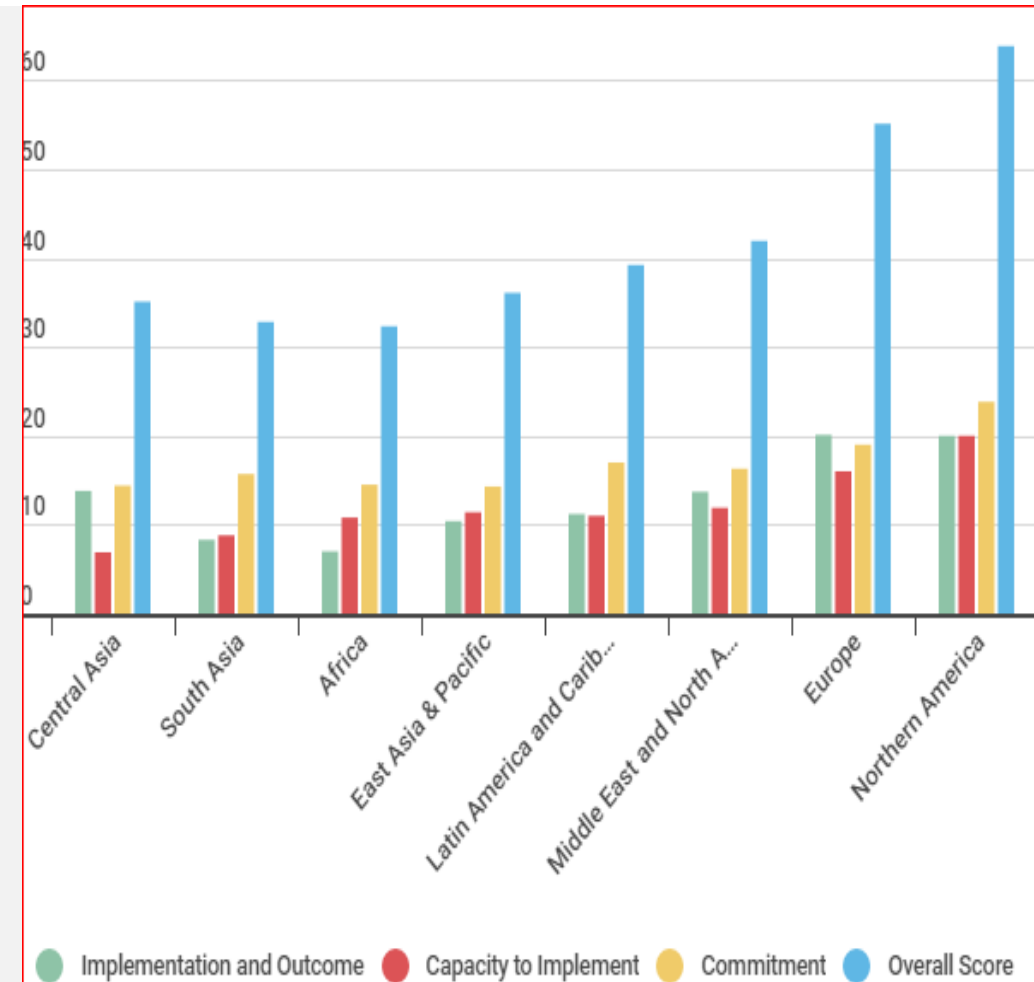
Global Levels of Implementation and Outcomes of Accessibility Areas



Source: DARE Index 2020: Global Progress by CRPD States Parties

Region Rankings

Region	Implementation and Outcome	Capacity to Implement	Commitment	Overall Score
Central Asia	13.8	6.9	14.4	35.1
South Asia	8.3	8.8	15.7	32.8
Africa	7	10.8	14.5	32.3
East Asia & Pacific	10.4	11.4	14.3	36.1
Latin America and Caribbean	11.2	11	17	39.2
Middle East and North Africa	13.7	11.9	16.3	41.9
Europe	20.1	16	19	55.1
Northern America	20	20	23.8	63.8





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E-Accessibility Standards



Web Content Accessibility Guidelines (WCAG) standards



W3C®

- 1- W3C Recommendation: "Web Content Accessibility Guidelines (WCAG) 2.0" . The main Web content accessibility standard. (/ISO/IEC 40500:2012) (Arabic Translation)
- 2- W3C Recommendation (June 2018): "Web Content Accessibility Guidelines (WCAG) 2.1" . Extends WCAG 2.0.
- 3- W3C Guidelines "Web Content Accessibility Guidelines (WCAG) 2.2" . Extended additional criteria to all compliance levels WCAG 2.1.

Main Standards and Guidelines and recommendations for digital Accessibility



- ITU-T Recommendation F.790 . General guidelines to standardize telecommunications equipment, associated software and services for persons with disabilities.



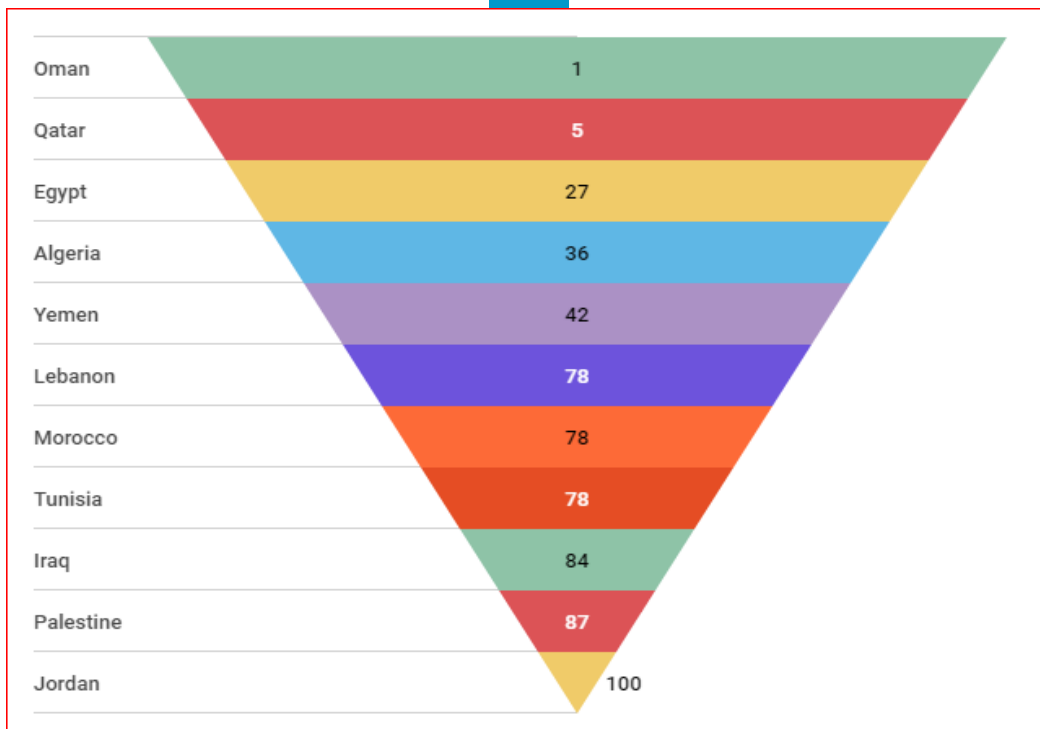
- Americans with Disabilities Act Accessibility Guidelines (ADAAG) Section 508 Standards . It ensures accessible ICT infrastructure, equipment and services for persons with disabilities.



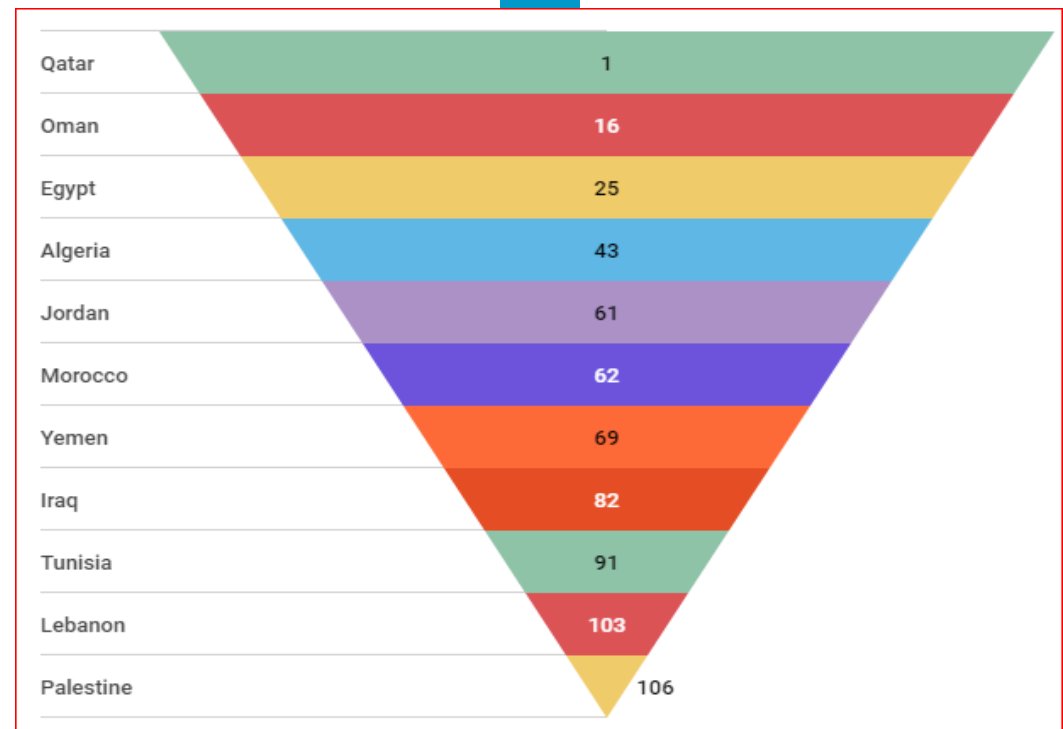
- EN 301 549 Standard . European Standard that covers functional performances for the diverse disabilities and generic e-accessibility requirements.

Country Rankings

○ 2018 Ranking



○ 2020 Ranking



Challenges In the Arab Region

- 1- In many countries, e-accessibility is either a part of a law or included in a policy/strategy which makes compliance voluntary rather than mandatory.
- 2- Narrow disability definition and disaggregation varies from one country to another which affects getting accurate and reliable disability statistics.
- 3- Lack of compliance with international standards/guidelines or even national ones by public and private sector including governments, universities, business and service providers despite the fact that all Arab states are signatories to the CRPD.
- 4- The high cost of assistive technologies and quality of services provided giving the economic situation in general for people with special needs particularly in poor and rural areas (Affordability).
- 5- Lack of awareness on the needs of persons with disabilities in general and accessibility issues when designing web based or mobile Apps or even government e-services.
- 6- Cultural issues including high illiteracy rate among persons with disabilities and high school dropout.

Challenges Continue

- 7- Different priorities for the care of persons with special needs, especially in countries experiencing conflicts, security and political instability.
- 8- The use of Arabic in technology-based applications and services are not fully developed in addition to the high cost, low quality and localization issues.
- 9- Shortage of designers/developers who are familiar with accessibility design and evaluation tools. This is a problem for people with cognitive impairment in particular those who require special and simplified language in all e-accessibility solutions.
- 10- Lack or hesitation of the private sector to adopt e-accessibility due to cost-benefit considerations.
- 11- Security and privacy issues.
- 12- Emerging Technologies challenges including IoT, Artificial Intelligence, Unmanned vehicles and Robotics, Wearable's, Virtual and Augmented reality.

Opportunities

- 1- An international and domestic supportive context mainly the CRPD and the Marrakesh Treaty.
- 2- Political will amongst all Arab countries which creates a supportive environment.
- 3- A young generation that embraces technology and is capable to make a technological momentum that will benefit everyone.
- 4- New emerging technologies that would positively reflect on new assistive technology for persons with disabilities.
- 5- Digital infrastructure that serves all societal sectors and the rural areas in particular.
- 6- High internet penetration and high number of smart mobile owners in many countries amongst youth in particular.



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E-accessibility Guidelines Template

Criteria Selection

- 1- All are level A criterion of the latest WCAG 2.2
- 2- Easy to implement in order to encourage all to adopt
- 3- They cover the principles of e-content POUR(Perceivable, Operable, Understandable, and Robust).
- 4- What to do and not how to do it.

Common to All (Recommended)

Guidelines Title (Arabic/English/French...)	<input type="checkbox"/>
Guidelines Version	<input type="checkbox"/>
Document Language	<input type="checkbox"/>
Date and Revisions / Date Approved	<input type="checkbox"/>
Organization Responsible for developing/Enforcing the Guidelines	<input type="checkbox"/>
Intended Entities for compliance with the Guidelines	<input type="checkbox"/>
Legal Disclaimer	<input type="checkbox"/>

Template 1

Common recommended guidelines among all levels for websites in Arabic

Web page first loads in Arabic unless other language is intended	<input type="checkbox"/>
Action Icons to perform	
Clear action icons to perform Switch-language, Resize fonts and contrast adjustment (Action Icon/ or Text) (E, F, غ) with direction adjustment	<input type="checkbox"/>
A clear Accessibility Statement (Arabic/English or French) on main page	<input type="checkbox"/>
Each page has a clear simple path with/without extension	<input type="checkbox"/>
Website Discoverable for search engines.	<input type="checkbox"/>
The government entity should have a clear Arabic domain URL(Optional)	<input type="checkbox"/>

Template 1

Websites Minimum Critical Criteria Template

WCAG #	Criterion	Description	FDI*
1.1.1	Non-text content	Images and non-textual content must be provided with alternative text in Arabic or intended language	1,2,4,5,9
1.2.1	Audio-only and Video-only (Prerecorded)	Provide equivalent alternative information for audiovisual content, depending on impairment	1,2,4,5,9
1.2.2	Captions (Prerecorded)	In a pre-recorded Audio or video, Captions are provided in preferred language (Arabic is default language)	4,5,9
1.3.3	Sensory Characteristics	Instructions should not depend on a single sensory channel (Appropriate text in Arabic, Brail or preferred language must be provided)	1,2,4,5,9
1.3.4	Orientation	Choice of selecting Portrait or landscape orientation of view.	1-9
1.4.1	Use of Color	Use color for decoration and to convey information	1,2,3,9
1.4.2	Audio Control	Ability to control the audio if it runs more than 3 seconds (Stop, pause, and volume controls)	1,5,9
1.4.3	Contrast (Minimum)	Minimum of 4.5:1 contrast is provided for Viewable text elements(text and images of text)	2,3
1.4.4	Resize Text	Ability zoom up to 200% where appropriate, without any information loss	2
1.4.11	Non-text Contrast	For UI components and graphics	2
2.1.1	Keyboard	Ability to navigate a page using keyboard	1,2,7
2.1.2	Keyboard Trap	Never lock a keyboard on any part of a page (Navigate-in navigate-out)	1,2,7
2.2.1	Timing Adjustable	Users can adjust time limits or alerted to do so using speech, text, or sound	1,2,7,9
2.2.2	Pause, Stop, Hide.	Ability to stop, pause or hide moving, blinking or scrolling content	9

Template 2

Mobile accessibility

WCAG section	criterion *	Description	
1.1	Text Alternatives	Images and non-text content must be provided with alternative text in Arabic or intended language	<input type="checkbox"/>
1.2	Time-based Media	It includes 9 success criterions To provide alternatives for audiovisual content	<input type="checkbox"/>
1.3	Adaptable	Includes 6 success criterions to have an adaptable content and layout with no information loss	<input type="checkbox"/>
1.4	Distinguishable	Includes 13 success criterion. All are important to be able to see and hear content in different situations	<input type="checkbox"/>
2.1	Keyboard Accessible	Includes 4 criterion. All important to access all feature by keyboard	<input type="checkbox"/>
2.2	Enough Time	Includes 6 criterion. Users can extend or adjust any time limit in accessing the content	<input type="checkbox"/>
2.3	Seizures	Includes 3 criterion. NO content that causes seizures or physical reactions.	<input type="checkbox"/>
2.4	Navigable	Includes 13 criterion. Different methods and way to navigate content	<input type="checkbox"/>
3.1	Readable	Includes 6 criterion for textual content readability and understandability	<input type="checkbox"/>

Template 3

Public Access Terminals and Smart Cards Accessibility Guidelines Template

Criteria	Description
Reachability	All operable parts (screen, buttons or controls) are reachable by PWDs sitting or standing.
Controls Size and layout	Controls are grouped according to a set criteria (Logical or operational) easily accessed and well sized.
Operational Suitability	Can be operated with minimal strength and body movement or without being touched
Perceivable Output	All outputs perceived by users vision or hearing impairments
Language use/ Switchable	Users are able to switch between different languages. Use simple language to convey textual or audible information
Biometrics alternatives	Biometric devices are not the only mean of access. provide secure alternative
Three flashes or below threshold	avoid more than 3 in a second flashes for any content
Timing Adjustable	Users can adjust time limits or alerted to do so using speech, text, or sound
Roll back	Roll back any transaction and recover from errors or mistakes
Consistent Interface	Consistent Interface for multiple pages/services
Training	Provide audiovisual training and support for users.
Privacy and security	Provide privacy and security measures. Provide secure alternatives
Smart Cards	
Distinguishable	Can be easily distinguished from other cards. By Size, Texture or engraved characters.
Card Orientation	Can be determined without requiring vision. Or used in any orientation
Card authentication	Card authentication method is accessible for different disabilities with alternatives

Template 4

Template for procurement of ICT products and services

Criterion ref.	Sub Criteria	Description
Functional performance		
4.2 Functional Disabilities	4.2.1 Usage without vision 4.2.2 Usage with limited vision 4.2.3 Usage without perception of color 4.2.4 Usage without hearing 4.2.5 Usage with limited hearing 4.2.6 Usage without vocal capability 4.2.7 Usage with limited manipulation or strength 4.2.8 Usage with limited reach 4.2.9 Minimize photosensitive seizure triggers 4.2.10 Usage with limited cognition 4.2.11 Privacy	ICT products must provide access to information to persons with listed functional disabilities and provide adequate privacy.
ICT Products with closed functionality		
5.1 Closed Functionality	5.1.3 Non-visual access 5.1.4 Text enlargement 5.1.5 Visual output for auditory information 5.1.6 Operation without keyboard interface	ICT products must provide access alternatives when using closed or self-contained products with appropriate controls
5.2 Activation of accessibility features		ICT products must provide Access to features based on needs
5.3 Biometrics		ICT products must provide alternative biometric identification(voice, Retina, fingerprint)
5.4 Preservation of accessibility		ICT products must preserve

Procurement of ICT products and services Template- Part 2

ICT Products with closed functionality		
5.1 Closed Functionality	5.1.3 Non-visual access 5.1.4 Text enlargement 5.1.5 Visual output for auditory information 5.1.6 Operation without keyboard interface	ICT products must provide access alternatives when using closed or self-contained products with appropriate controls
5.2 Activation of accessibility features		ICT products must provide Access to features based on needs
5.3 Biometrics		ICT products must provide alternative biometric identification(voice, Retina, fingerprint)
5.4 Preservation of accessibility information during conversion		ICT products must preserve accessibility information
5.6.2 Visual status		
ICT with two-way voice communication		
6.2 Real-time text (RTT) functionality	6.2.2 Display of Real-time Text 6.2.3 Interoperability 6.2.4 Real-time text responsiveness	ICT products must provide Real-time text and voice, that responsive and interoperable
6.3 Caller ID		ICT products must provide Caller ID in multiple modalities
6.4 Alternatives to voice-based services		ICT products must provide voice mail or interactive voice response
6.5 Video communication	6.5.4 Synchronization between audio and video	ICT products must provide two-way synchronization between audio and video
ICT with video capabilities		
7.1 Caption processing technology	7.1.1 Captioning playback 7.1.2 Captioning synchronization 7.1.3 Preservation of captioning	ICT products must provide Ability to display caption information(timing, color and positioning) while preserving synchronization
7.2 Audio description technology	7.2.1 Audio description playback 7.2.2 Audio description synchronization 7.2.3 Preservation of audio description	ICT products must provide Playback Ability to audio description while preserving synchronization
7.3 User controls for captions and audio description		ICT products must provide



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What we can do next

- 1- Help countries to adopt and develop guidelines (Technical Help)
- 2- Gradual development of the Minimum Guidelines depending on progress to reach full AA within x # of years.
- 3- Evaluation of Maturity Level of e-accessibility
- 4- Annual Regional Ranking



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Thank You