



EDF MANUAL FOR THE PROMOTION OF THE EN 301549, ACCESSIBILITY REQUIREMENTS FOR ICT PRODUCTS AND SERVICES

Technical specifications to make accessible websites, emails, documents, books, videos, communication devices, ATM's, self-service machines...

Introduction

Since 2005, EDF has been involved in the development of the European Commission Mandate 376¹ to CEN, CENELEC and ETSI (the three European Standardisation Organisations) in support of accessibility requirements for public procurement of products and services in the Information and Communication Technologies (ICT) domain. In February 2014 the work was over and the final outcomes of this Mandate were adopted and released by the European Standardisation Organisations.

The most important result is the European Standard (EN) 301549 “***Accessibility requirements suitable for public procurement of ICT products and services in Europe***”², the **first European Standard for accessible technologies**. It will be important for the Disability Movement, therefore, to take full advantage of it and promote its use among public procurers, policymakers, ICT companies, etc.

Apart from the EN, there were also other deliverables planned in this Mandate. Three Technical Reports complementary to this EN, and an online toolkit³ that has been launched recently by CEN and CENELEC.

Why is this European Standard important?

As mentioned, this standard is the first European Standard in support of accessible ICT. It is a set of technical requirements to ensure accessibility of a wide range of technologies such as websites, ticketing machines, computers, emails, digital documents, smartphones and other digital devices. **The purpose of this EN is to ensure equal access for persons with disabilities to ICT products and services directly or through compatibility with assistive technologies.**

It was initially intended to be used just by procurers. However, given its mainly technical approach, EDF and other partners involved in the Mandate pushed for a non-restrictive title that could address other possible users of the standard. Therefore, **EDF recommends its members to keep this standard in mind when promoting the use of accessible**

¹ The EC Mandate 376 is available at:

http://ec.europa.eu/enterprise/standards_policy/mandates/database/index.cfm?fuseaction=search_detail&id=333

² The EN 301549 is available at:

http://www.etsi.org/deliver/etsi_en/301500_301599/301549/01.01.01_60/en_301549v010101p.pdf

³ The online toolkit is available at: <http://mandate376.standards.eu/>



technology among policymakers, private companies dealing with ICT, and public procurers especially.

Furthermore, the recently adopted **Public Procurement Directive**⁴ requires in its **article 42** that the **technical specifications shall take into account accessibility criteria** for persons with disabilities.

“For all procurement which is intended for use by natural persons, whether general public or staff of the contracting authority, the technical specifications shall, except in duly justified cases, be drawn up so as to take into account accessibility criteria for persons with disabilities or design for all users.

Where mandatory accessibility requirements are adopted by a legal act of the Union, technical specifications shall, as far as accessibility criteria for persons with disabilities or design for all users are concerned, be defined by reference thereto”.

Therefore, **it will be important to refer to this EN when public bodies purchase ICT products or services.**

EDF also expects that this standard turns into a harmonised standard, meaning that it will be referenced in the Official Journal of the European Union as a way to prove conformity with EU legislation, in particular the proposed Directive on accessibility of public sector bodies' websites⁵. It could also be referred for the upcoming European Accessibility Act, since EDF expects that it will also include provisions for ICT products and services.

Who needs to know about this standard?

- In particular **public procurers**, but actually **any organisation purchasing ICT products or services**.
- **Suppliers of ICT services**, and **manufacturers of ICT products**.
- **Governments, policymakers** and **public agencies** responsible for procurement policies.
- **Accessibility advocates**.
- **Organisations representing persons with disabilities**, and other **consumer organisations** and **trade unions**.

⁴ The Public Procurement Directive is available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32014L0024>

⁵ The Proposal for a Directive on Accessibility of Public Sector Bodies' Websites is available at: <http://ec.europa.eu/digital-agenda/en/news/proposal-directive-european-parliament-and-council-accessibility-public-sector-bodies-websites>



What does this standard contain?

In a nutshell, the EN specifies the **functional accessibility requirements** for ICT products and services, together with a description of the **test procedures and evaluation methodology** for each accessibility requirement.

The EN is divided in chapters called clauses; the requirements are included from clause 5 to 13, and the evaluation methodology is explained in the Annex C.

There are parts in the EN which are normative (the requirements), and others that are just informative. The following is a brief summary of the content of this standard. The full document is available at:

http://www.etsi.org/deliver/etsi_en/301500_301599/301549/01.01.01_60/en_301549v010101p.pdf

1. Scope: it is normative and it defines the purpose of the EN and recognises that in addition to public procurement the “document might be useful for other purposes such as procurement in the private sector”.

2. References: besides an extensive list of technical standards, there are four normative references. This means that to comply with the standard in some requirements a reference to another standard is made. The easier example is the requirements for Web: this standard has not invented new web accessibility guidelines, instead, there is a reference to the W3C Web Content Accessibility Guidelines (WCAG), the worldwide acknowledge tool to make websites accessible.

3. Definitions and abbreviations.

4. Functional performance (informative): this is an informative clause containing a list of user needs when accessing ICT and how the ICT can cover that need. For instance:

4.2.1 Usage without vision

Where ICT provides visual modes of operation, some users need ICT to provide at least one mode of operation that does not require vision.

NOTE: Audio and tactile user interfaces may contribute towards meeting this clause.

5. Generic requirements: this part contains nine sub-clauses addressing different aspects of technologies in general and how to ensure accessibility for persons with disabilities. It includes requirements for ICT with closed functionalities⁶; activation of accessibility features; preservation of accessibility information; operable parts, etc. Example:

⁶ ICT with closed functionalities means that the user cannot change this functionalities. For instance, computers that do not allow the user to change the settings or install new software have closed functionalities.



5.9 Simultaneous user actions

Where ICT uses simultaneous user actions for its operation, such ICT shall provide at least one mode of operation that does not require simultaneous user actions to operate the ICT.

NOTE: Having to use both hands to open the lid of a laptop, having to press two or more keys at the same time or having to touch a surface with more than one finger are examples of simultaneous user actions.

6. ICT with two-way voice communication: this clause includes technology aiming at communication between users through voice: telephones, for instance, fall into this category. It contains among others the recommendable audio bandwidth for speech; the requirements of Real Time Text communication (simultaneous text and voice on real time); alternatives for voice and video-based services, or video communication.

7. ICT with video capabilities: this clause covers aspects related to accessibility of videos: captions, audio description, and user controls of these.

8. Hardware: by hardware we mean the physical elements of the ICT. Although the Generic requirements also apply to this section, it contains requirements for colours –if these convey information–; connections (such as USB or Bluetooth); hardware with speech outputs like headsets; the recommendations for an accessible physical access to the ICT; operable parts like keys (numeric keypads for example), and tactile indications when speech mode is available, which is:

8.5 Tactile indication of speech mode

Where ICT is designed for shared use and speech output is available, a tactile indication of the means to initiate the speech mode of operation shall be provided.

NOTE: The tactile indication could include Braille instructions.

9. Web: this clause refers to W3C WCAG 2.0 Level AA, the most used web accessibility requirements.

10. Non-web documents: this means letters, spread-sheets, emails, books, pictures, presentations, and movies, etc. It covers all these documents which are not webpages and for which people need to access them through a specific programme such as document readers or media players.

11. Non-web software: by software we mean the programmes that operate the technologies to fulfil specific tasks. In this clause we can include the programs that make work ticketing machines or ATM's, for example. Software can include a user interface to enable the person to provide inputs to the technology (for instance, when we enter our PIN code at ATM's). In this clause, among other requirements, there are sub-clauses establishing requirements for interoperability with assistive technologies, user preferences and authoring tools (the software that allows users to create content).



12. Documentation and support services: includes product documentation (including information on the accessibility features), and support services (helpdesks, call centres, technical support, relay services and training services).

13. ICT providing relay or emergency services: relay services enable users of different modes of communication by text, sign language or speech through an ICT that allows two-way of communication and provides conversion between the modes of communication. For instance:

13.1.3 Sign relay services

Where ICT is intended to provide a sign relay service, the sign relay service shall enable sign language users and speech users to interact by providing conversion between the two modes of communication.

NOTE: Sign relay services are also sometimes referred to as sign language relay services or video relay services.

Annex A: is the attachment of W3C WCAG 2.0.

Annex B: is just informative and it shows the relationship between requirements (clauses 5 to 13) and functional performance statements (clause 4).

Annex C: this is a key element of the standard, since it lays down the way to determine compliance with the requirements. Given certain pre-conditions, the user has to follow a procedure and check the results to assess whether the requirement has been met (it passes), or not (it fails).

Let's take the same requirement "8.5 on tactile indication of speech mode" as above, and let's think of a ticketing machine in a metro station that has the possibility to read out loud what appears in the screen. In this case people with visual impairments need a tactile indication to activate the audio. After checking the pre-conditions and follow the procedure, In this case, if the result is true the requirement has been met:

C.8.5 Tactile indication of speech mode

<i>Type of compliance</i>	<i>Inspection and measurement</i>
<i>Pre-conditions</i>	<i>1. The ICT is designed for shared use. 2. Speech output is available.</i>
<i>Procedure</i>	<i>1. Check that a tactile indication of the means to initiate the speech mode of operation is provided.</i>
<i>Result</i>	<i>Pass: Check 1 is true Fail: Check 1 is false</i>



Important! There are some problems...

During the last stage of the development process of the EN, some members of the working group in charge of drafting the standard introduced various **changes that lowered and damaged the accessibility requirements of some clauses**. EDF strongly opposed, but could not avoid these changes, as we had no voting rights. Consequently, EDF denounced this situation and prepared our **technical comments addressing these problems**. You can find them at: <http://bit.ly/1e0l15b> (EDF website - Library - 2014). Before promoting this EN, EDF recommends its members to review these technical comments and combine both documents if necessary.

Online toolkit

CEN, CENELEC and ETSI have recently launched the last deliverable of the Mandate: an online toolkit, which is available at:

<http://mandate376.standards.eu/>

This toolkit is intended to be useful mainly for public procurers, but it can also help ICT suppliers, accessibility experts, policymakers and accessibility advocates. For procurers **it provides guidance on how to consider accessibility in the four stages of the procurement process**: writing a call for tenders, evaluating tenders, evaluating deliverables and managing contracts.

The toolkit also includes an **Automatic Requirements Generator**, to help procurers to draft the technical specifications of the product or service that they want to buy. In the homepage there are some specific examples of commonly procured ICT, such as websites, self-service terminals, smartphones, etc. Hence, within just a click, the procurers will have the list of requirements that these specific technologies need to meet to be accessible. The generator also allows to go through the list of requirements and to choose the ones that are needed.

EDF recommendations to its members:

- **Take a look** at the [EN 301549](#) and the [online toolkit](#).
- **Encourage the translation to your language**: each national standards body must translate the EN into the official language of the Member State. Unfortunately these versions are not for free, although they may have special offers for societal stakeholders. When you promote this standard, you can attach the document in English and the link to get the EN in your national language. The list of national members is available at:
<http://standards.cen.eu/dyn/www/f?p=CENWEB:5:0::NO>.



- **Promote the use of the standard with additional comments.** If you receive a request for information concerning accessible technology: first check where the requirements for that technology are in the standard, and if these are mentioned in the EDF technical comments available here: <http://bit.ly/1e0l15b>. In that case, **please complement the information from the EN with EDF comments.**
- **Establish contact with public procurers.** It is important to mention **article 42 of the [Public Procurement Directive](#)**: they are obliged to take accessibility into account when drafting the technical specifications of their calls. Then, if the procurers are purchasing ICT products and services, you can provide them with the link to the [EN 301549](#), along with the [online toolkit](#) to facilitate their work, and **recommend them to require a trustworthy evidence of compliance with the standard⁷.**
- **Make improvements.** The Spanish Standards Organisation AENOR was the secretariat of Mandate 376. Therefore, if you find any **mistake** in the EN or in the online toolkit, or you have **suggestions** to improve them, please **write an email to accessibility@aenor.es putting EDF contact person in copy.**
- **Share your experience.** EDF Secretariat would be grateful if you could share your experiences concerning this standard, **as well as the feedback you receive** about it from procurers, ICT companies, authorities, societal organisations, etc.

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⁷ There are different ways to prove conformity with the characteristics of the technical specifications, from trusting in the tenderer's own statement, to requiring a third party to verify it. You can find more information about these methods at: <http://mandate376.standards.eu/planning-procurement/conformity-assessment-and-attestations>