

The Protocol

The intended use of this document , otherwise known as ‘Protocol’ is to assist Technical Bodies¹ to decide if accessibility following a Design for All² approach should be addressed when reviewing an existing, or developing a new, standardization deliverable.

The following sections present a series of steps that will help a Technical Body to decide if, and how, accessibility following a DfA approach should be addressed.

Follow the steps and complete the accompanying sections of the Form (for Reporting the Outcome of the Protocol). Once completed, the responses will lead to one of two possible outcomes:

- **Yes**, accessibility following a DfA approach is relevant to the standard.
- **No**, accessibility following a DfA approach is not relevant to the standard

Step 1: Establish if people will access and use a product, good or service

This first step will help to determine if people will use the product, good or service described in the standard.

When a person interacts with a product, good or service it typically requires “a cycle where the user perceives, thinks and acts; where for the most part, perceiving requires sensory capability, thinking requires cognitive capability, and acting requires motor capability”.³

When using products, goods and services people therefore use a complex combination of:

- Sensory processes (e.g. vision, hearing, touch, balance),
- Physical processes (e.g. dexterity, manipulation, movement, strength)
- Cognitive processes (e.g. language, thinking, perceiving, attention, memory)

When one or a combination of these processes is used to interact with a product, good or service, this is called direct user contact, and the product, good or service will most likely require consideration of accessibility following a DfA approach.

Not every product, good or service requires direct interaction with users. However many of these products or services do interact with (or are accessed by) *another* product, good or service that does require direct user contact. In this situation there is indirect user contact, and accessibility following a DfA approach is likely to be relevant⁴.

In some cases accessibility for particular groups of persons to a product, good or service, can best be achieved in combination with assistive products or assistive technologies.

¹ Technical Bodies (TB) is a generic term designating the CEN/CENELEC Technical Committees, Working Groups, Subcommittees, and Task Forces of the CEN and CENELEC Technical Board

² Otherwise referred to as DfA

³ Keates, S & Clarkson, J 2003, Countering design exclusion. An introduction to inclusive design, Springer.

⁴ For further information refer to “Direct and Indirect relevance in Standardisation” Document

Compatibility is a property referring to the ability of two or more systems, sub-systems, components or products to connect, exchange information and work together in an integrated manner. It requires consideration of the physical/technical and semantic level. In the IT domain this is often referred to as interoperability with assistive technology. For example, a common way to make a web site accessible to blind people is to provide for interoperability with screen readers⁵. In these cases the assistive product or technology is regarded as a necessary extension of the product, good or service in question and the user interacts directly with the extended solution.

The term '**user**' should be interpreted to include direct, indirect and collateral users.

It should be noted that the full scope of potential users of a product, good or service may not be initially obvious (for example, the user could be an employee, maintenance personnel or a service provider)⁶.

Once this section has been read, Step 1 of the Form⁷ should be completed.

It is recommended that the Technical Body reads through and discuss Step 2, even if the answer to all questions in Step 1 is 'No'. This may assist the Technical Body to better understand accessibility following a DfA approach.

Step 2: Understand the people who will access and use the product, good or service

Now that Step 1 is completed and it has been established whether people will use the product, good or service described in the standard (either directly or indirectly), the next step is to understand who those people are and what their needs will be. By doing so, it can be determined whether accessibility following a DfA approach should be considered in the development of the standard.

The ability of a person to access, understand and use a product, good or service is influenced by a number of factors:

- The abilities and characteristics of that person (for example: their physical, sensory and cognitive capabilities; the presence of one or more disabilities, whether temporary or permanent; or the person's prior knowledge or experience of the product, good or service; and so on)
- The environment in which that person is using the product, good or service (for example: indoors; outdoors; lighting and darkness, ambient noise and temperature levels; and so on)

⁵ See also CEN-CENELEC Guide 6:2014 'Guide for addressing Accessibility in standards' identical to ISO/IEC Guide 71:2014

⁶ For further information refer to "Direct and Indirect relevance in Standardisation" "Document

⁷ Refers to "The form for Reporting the outcome of the Protocol"

- The context in which that person is using the product, good or service (for example: while moving, in a busy work environment, while in a seated position, while carrying out multiple tasks simultaneously; and so on)

Keeping these points in mind, the ability of a person to access, understand and use a product, good or service can also be hindered by many factors:

- Every person experiences some form of disability or disabling condition – temporary or permanent – at some point in life. It may be related to injury, illness, pregnancy, mental health, the natural aging process, among many other things. Disabling conditions can have a profound effect on a person’s ability to use a product, good or service.
- Environmental conditions can be disabling. For example, every user of a product, good or service will struggle to hear in a noisy environment; will have limited movement and loss of feeling in fingers when the weather is very cold; or will have reduced vision in very sunny weather due to glare.
- The context in which a product, good or service is used can be disabling. For example, when a person is in a foreign country and does not understand the signage; a passenger trying to read text while travelling in a bus driving over a bumpy road; a driver trying to access controls while simultaneously watching the road.
- Lack of compatibility with other systems, sub-systems, components or products (including assistive products and assistive technology) can inhibit usage.

Users – of any product, good or service – are represented by a diverse population, with diverse needs, using products, goods and services in a variety of environments, conditions and contexts. Therefore users of all ages and abilities benefit from products, goods and services that have been designed to achieve accessibility following a DfA approach.

For additional information on how to determine when accessibility following a DfA approach is relevant, refer to the document “Understanding when accessibility following a DfA is relevant” .

Complete Step 2 of the Form.

Step 3: Establishing if the standard will include content on the design or development process of a product, good or service

Step 3 is relevant for those standards and guidelines that describe protocols, processes or frameworks that will form part of, or impact upon, a product, good or service that will be used by people.

There is a very high probability of accessibility following a DfA approach being relevant when a standard describes requirements, a protocol, a process, a framework or another form of specification in the creation of products or services that are intended for direct user contact.

There are many different practical tools and techniques that can be applied during the design and development process to promote accessibility following a DfA approach. The

TECHNICAL BODY should establish if such tools and techniques would be appropriate to describe in the process standard. For examples, refer to Annex A3, column 'How to apply accessibility following a DfA approach to the Product/Service Design Process'.

Complete Step 3 of the Form⁸.

Step 4: How to address accessibility following a DfA approach in standardisation

Now that it has been established that it *is* necessary to consider accessibility following a DfA approach in the development of the standardisation deliverable, it is important to identify what to do next. The outcome of this step can be recorded in Step 4 of the Form.

Understanding accessibility Following a DfA approach in the context of standardization

DfA as a goal is “design for human diversity, social inclusion and equality” (M/473). This means that products, goods and services are easy to access, understand and use by the widest range of people possible. The practice of DfA makes conscious use of the analysis of human needs and aspirations and requires the involvement of end users at every stage in the design process.

There are many different practical tools and techniques that work toward achieving this goal⁹.

In the context of standardization there are two ways to ensure that accessibility following a DfA approach is addressed within a standard:

- Direct User (or User Expert) involvement in the standardization process
- Consulting secondary sources of information

Direct User (or User Expert) involvement in the standardisation process

The most important part of addressing accessibility following a DfA approach in standardization is to ensure that there is appropriate expertise at the table throughout the entire development cycle. Consequently, the Technical Body should know where to find such expertise if and when it is required:

- Contact the Accessibility Helpdesk once established (or alternative within CEN-CENELEC Management Centre)
- Involve people with demonstrated accessibility and/or DfA knowledge
- Invite experts in accessibility and/or DfA where relevant
- Invite relevant stakeholders to join the TECHNICAL Body to represent diverse user needs

⁸ Refers to “The form for Reporting the outcome of the Protocol”

⁹ Refers to the document “Understanding when accessibility following a DfA is relevant” and specifically to the column ‘How to apply accessibility following a DfA approach to the Product/Service Design Process’.

- Consult with relevant end user organisations (for example disability organisations, organisations representing older people, consumer organisations) to provide expertise on user profiles and needs,

Consulting Secondary Sources of Information

Identify accessibility and/or DfA guidelines (and other sources of user information) that are specific to the subject area of the standard. The following is a (non-exhaustive) list of some helpful resources:

- CEN- CENELEC Guide 6 “Guide for addressing accessibility in standards”.
- ISO TR 22411 Ergonomics data and guidelines for the application of ISO/IEC Guide 71 to products, goods and services to address the needs of older persons and persons with disabilities
- ISO/IEC TR 29138-1 “ Information technology - Accessibility considerations for people with disabilities - Part 1: User needs summary”
- EG 202 116 Human Factors (HF); Guidelines for ICT products and services; "DfA"
- EN ISO 26800 Ergonomics -- General approach, principles and concepts
- ISO 17069 Accessible design -- Consideration and assistive products for accessible meetings
- ETSI EG 202 952 Human Factors (HF); Guidelines to identify "DfA" aspects in ETSI deliverables.

The following resources may help in the identification of existing standards in the relevant subject area:

- ISO/IEC TR 29138-2 Information technology - Accessibility considerations for people with disabilities - Part 2: Standards inventory
- Inventory of accessibility and accessibility-related standards and specifications. Prepared for ISO/IEC JTC1/Special Working Group on Accessibility.
- ETSI SR 001 996 Human Factors (HF); An annotated bibliography of documents dealing with Human Factors and disability

Step 5: Outcome of the Protocol

Step 5 concludes the results from Steps 1 to 4 and allows the Technical Body to record the final outcome of the Protocol. Complete Step 5 of the Form¹⁰.

If the answer to any of the question in Step 1, 2 and/or 3 is **'Yes'**, then accessibility following a DfA approach will be relevant.

If unable to answer a definite 'Yes' or 'No' in Step 1, 2 and/or 3, contact the CEN-CENELEC Accessibility Helpdesk for assistance, and/or make a request to the National Standards Body (NSB) or National for expertise in the field of accessibility. In this case, the outcome will be postponed and the Protocol should be revisited as soon as possible. An appropriate time for revisiting it should be entered in Step 5.

¹⁰ Refers to "The form for Reporting the outcome of the Protocol"