



BSI Standards Publication

**Design for All – Accessibility following a  
Design for All approach in products, goods  
and services – Extending the range of users**

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## National foreword

This British Standard is the UK implementation of EN 17161:2019.

The UK participation in its preparation was entrusted to Technical Committee DES/1, Design for All.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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## Design for All - Accessibility following a Design for All approach in products, goods and services - Extending the range of users

Conception pour tous - Accessibilité selon une approche Conception pour tous des produits, des biens et des services - Élargissement de l'éventail d'utilisateurs

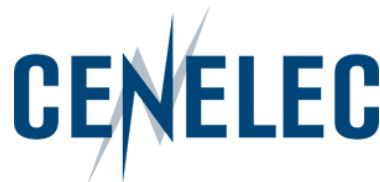
Barrierefreiheit von Produkten, Waren und Dienstleistungen nach einem "Design für alle"-Ansatz - Erweiterung des Nutzerkreises

This European Standard was approved by CEN on 26 November 2018.

CEN and CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN and CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN and CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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## European foreword

This document (EN 17161:2019) has been prepared by Technical Committee CEN/CLC/JTC 12 “Design for All”, the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2019, and conflicting national standards shall be withdrawn at the latest by September 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under standardization request M/473, given to CEN and CENELEC by the European Commission, to include accessibility following a ‘Design for All’ approach in relevant standardization activities for products, goods and services.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## Introduction

A Design for All approach takes account of human diversity to extend the range of users. This approach inspires innovation in organisations so that management value an inclusive and non-stigmatizing mind-set and supports a culture, which prioritises people. The Design for All approach and innovation ensure optimal practices and activities, so that operations have the best tools and resources in place to enable them to achieve accessible products, goods and services, i.e. what this document refers to as 'accessibility outcomes'.

Accessibility seeks to prevent and remove barriers, ensuring that persons with disabilities have access to products, goods and services on an equal basis with others.

Accessibility as an outcome from integrating a Design for All approach throughout the whole organization can maximize the range of potential users of products, goods and services. Extending the range of users can increase markets. It can also increase the proportion of the population, including persons with disabilities, able to participate fully and independently in society. The accessibility of products, goods and services realized by Design for All can benefit all users. Every organization can benefit from this approach.

NOTE 1 Terms such as “Design for All”, “Universal Design”, “accessible design”, “barrier-free design”, “inclusive design” and “transgenerational design” are often used interchangeably with the same meaning.

NOTE 2 The approach defined in this document covers all products, goods and services. To keep the text easy to read, the rest of this document will sometimes use the shorter phrase “products and services”. Wherever “products and services” is used, it is equivalent to, and should be interpreted as, “products, goods and services”.

Each individual user has their own profile of needs, characteristics, capabilities, and preferences, and this fact needs to be recognized when developing mainstream products and services. For most people their profile of capabilities changes substantially throughout the course of their life, as they advance from childhood to adulthood and then into old age. In addition, changing circumstances, accidents, disease and other life-changing events may lead to a significant change in needs, characteristics, sets of capabilities and preferences. Furthermore, the context of use of products, goods and services can influence users' needs, characteristics, capabilities, and preferences, and hence the degree of accessibility and usability. A Design for All approach acknowledges all these variations and circumstances and aims at meeting their requirements to the greatest extent possible.

This document describes the adoption, throughout the whole organization, of a process-driven Design for All approach in relation to all aspects of design, development, and manufacturing. Involvement of users, including persons with disabilities, all the way through is a central part of this approach. Accessible products and services are amongst the key outcomes.

The requirements and recommendations in this document can complement existing organisational management and operational processes in order to achieve accessibility outcomes. The product design and development process is usually part of a management system, such as EN ISO 9001, into which accessibility following a Design for All approach can be integrated.

This document defines the requirements in an order that is consistent with organisational planning and process management, i.e.:

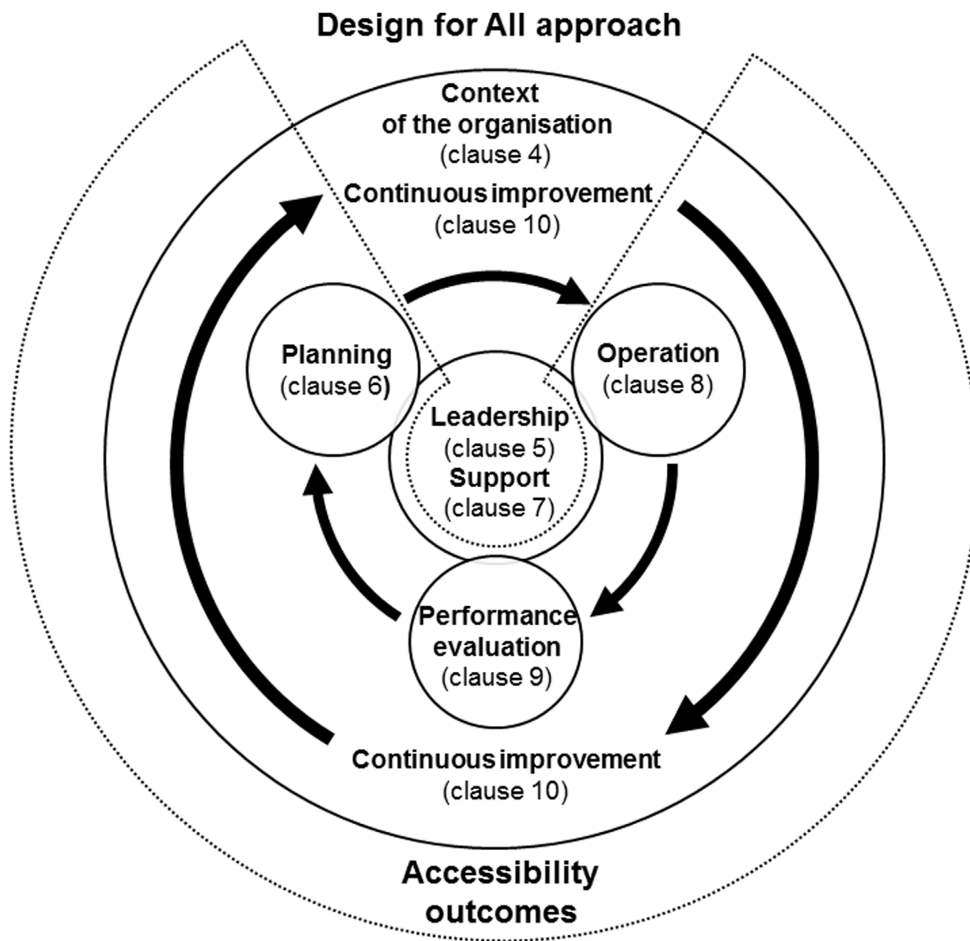
- Understanding the context of the organization, the needs and expectations of interested parties, including people with disabilities, the integration of a Design for All approach within established systems and processes (Clause 4);
- Leadership, policy and responsibilities in support of a Design for All approach and the achievement of accessibility outcomes (Clause 5);
- The planning of Design for All objectives and how to achieve them (Clause 6);



- Organizing the support and other resources, including people and information needed to realize a Design for All approach and the delivery of accessibility outcomes (Clause 7);
- Operational processes related to meeting users' requirements, including persons with disabilities, and developing products and services across the entire end-to-end chain, in accordance with the Design for All approach (Clause 8);
- Processes to monitor, measure, analyse and evaluate the effectiveness and correctness of the Design for All approach and its accessibility outcomes (Clause 9);
- The continuous improvement of the Design for All approach (Clause 10).

Management of the processes and the approach as a whole can be achieved using "Plan-Do-Check-Act" (PDCA) or similar methodology. The normative clauses of this document broadly reflect the widely-used PDCA model. The PDCA cycle is a way to achieve continuous improvement in business, development and manufacturing processes. In the same way that a circle has no start or end, the PDCA method is also constant and unbroken.

Figure 1 illustrates how the processes and requirements set out in Clauses 4 to 10 are related and interconnected and how continuous improvement is achieved through repeated cycles of design and implementation. The figure makes it clear that committed leadership as well as the provision of adequate support and resources are central to achieving the right outcomes.



**Figure 1 — Integrating a Design for All approach into the continuous processes for design, development and provision of products, goods and services**

NOTE 3 Figure 1 shows a diagram of the interrelations between the processes, procedures and activities in this standard to achieve Accessibility outcomes based on the application of a Design for All approach. It consists of concentric circles showing the various layers of these interrelating elements.

On top of the diagram there is the Design for All approach. From there, the viewer's eye is drawn to "Leadership" (Clause 5) and "Support" (Clause 7) in the centre. "Planning" (Clause 6), "Operation" (Clause 8) and "Performance evaluation" (Clause 9) are connected to and arranged in a circle around this centre. This cluster of elements is framed by an outer circle labelled "Continuous improvement" (Clause 10) and embedded in a layer labelled "Context of the organisation" (Clause 4). From the centre, where it has been absorbed, the Design for All approach is spread across all illustrated components to result in Accessibility outcomes at the bottom.

The Design for All approach described in this document does not imply uniformity of the design of products, goods, and services.

## 1 Scope

This document specifies requirements that enable an organization to design, develop and provide products, goods and services so that they can be accessed, understood and used by the widest range of users, including persons with disabilities.

This document specifies requirements and recommendations that enables an organization to extend their range of users by identifying diverse needs, characteristics, capabilities, and preferences, by directly or indirectly involving users, and by using knowledge about accessibility in its procedures and processes.

This document specifies requirements that can enable an organization to meet applicable statutory and regulatory requirements as related to the accessibility of its products, goods and services.

The requirements set out in this document are generic and are intended to be applicable to all relevant parts of all organisations, regardless of type, size or products, goods and services provided.

This document promotes accessibility following a Design for All approach in mainstream products goods and services and interoperability of these with assistive technologies.

This document does not provide technical design specifications and does not imply uniformity in design or functionality of products, goods and services.

## 2 Normative references

There are no normative references in this document.

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

### 3.1 accessibility

extent to which products, systems, services, environments and facilities can be used by people from a population with the widest range of user needs, characteristics and capabilities to achieve identified goals in identified contexts of use

Note 1 to entry: Context of use includes direct use or use supported by assistive technologies.

[SOURCE: EN ISO 9241-112:2017, 3.15 [5]]

### 3.2 assistive technology

equipment, product system, hardware, software or service that is used to increase, maintain or improve capabilities of individuals

Note 1 to entry: Assistive technology is an umbrella term that is broader than assistive products.

Note 2 to entry: Assistive technology can include assistive services, and professional services needed for assessment, recommendation and provision.

[SOURCE: CEN-CENELEC Guide 6:2014, 2.16 [13]]