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**Dostopni sistemi za samostojno življenje - Zahteve in priporočila**

Accessible systems for living independently - Requirements and recommendations

Barrierefreie Systeme für ein selbstständiges Leben - Anforderungen und Empfehlungen

Systèmes accessibles permettant une vie autonome - Exigences et recommandations

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**ICS:**

11.180.01	Pripomočki za onesposobljene in hendikepirane osebe na splošno	Aids for disabled and handicapped persons in general
97.180	Razna oprema za dom in trgovino	Miscellaneous domestic and commercial equipment

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English Version

## Accessible systems for living independently - Requirements and recommendations

Barrierefreie Systeme für ein selbstständiges Leben -  
Anforderungen und Empfehlungen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 293.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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## **European foreword**

This document (prEN 17999:2023) has been prepared by Technical Committee CEN/TC 293 “Assistive products and accessibility”, the secretariat of which is held by SIS.

This document is currently submitted to the CEN Enquiry.

# **iTeh Standards (<https://standards.iteh.ai>) Document Preview**

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**prEN 17999:2023 (E)****Introduction**

Accessible systems for living independently (ASLI) can enable all users to control individual situations or surroundings and engage in social activities inside and outside the home. Accessibility refers to making systems for living independently accessible by adapting the design and functionality of products, and the design and deployment of services, treated as a whole system. This is done to allow ease of use by any user, regardless of characteristics, capabilities, preferences and accessibility needs or circumstances in diverse contexts of use.

ASLI elements cover the products itself, services for installation and maintenance and accessible information.

The objective of this document is to enhance the quality of life for everyone by ensuring satisfactory accessibility of systems in everyday life and by improving both independence and full participation in society. Accessible design is a sign of the times. This document can be used as a tool for accessible design for ASLI.

Users normally move between different places, different rooms, the home, the car, public transport, the workplace or educational places, shops and outdoor activities during a day. This requires interoperability between mainstream solutions and ASLI products and services. See Annex B for more information.

Systems for living independently include solutions related to security, comfort, care, and for the control of surroundings.

The focus of this document is on:

- ASLI products and ASLI services;
- ASLI that requires interoperability with mainstream systems;
- Accessible user information, instructions and support for ASLI;
- Services for ASLI for installation and maintenance.

Easily accessible ASLI will benefit all users and other stakeholders like family members, caregivers and service providers.

The target groups of this document are:

- users;
- manufacturers and suppliers;
- developers, technologists and engineers;
- designers;
- regulators (authorities);
- procurers and distributors;
- insurance companies, public authorities and others financing ASLI;
- installation services, service providers;
- health professionals and providers (therapists);
- professional caregivers, informal carers and care assistants.

## 1 Scope

This document specifies requirements, recommendations, and guidance on aspects of accessible systems for living independently (ASLI) in relation to technical solutions, service design, provision, and information. This includes adapting design and functionality of systems, to allow ease of use by any user, regardless of their abilities.

This document does not cover system-to-system communication.

This standard is not applicable to household and similar electrical appliances covered by EN IEC 63008 [8].

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 17161:2019, *Design for All — Accessibility following a Design for All approach in products, goods and services — Extending the range of users*

EN 301 549:2021, *Accessibility requirements for ICT products and services (This standard is freely, available*

[https://www.etsi.org/deliver/etsi\\_en/301500\\_301599/301549/03.02.01\\_60/en\\_301549v030201p.pdf](https://www.etsi.org/deliver/etsi_en/301500_301599/301549/03.02.01_60/en_301549v030201p.pdf)

ISO/IEC 20071-5, *Information technology — User interface component accessibility — Part 5: Accessible user interfaces for accessibility settings on information devices*

ISO 20282-1, *Ease of operation of everyday products — Part 1: Design requirements for context of use and user characteristics*

CEN ISO/TR 22411:2021, *Ergonomics data for use in the application of ISO/IEC Guide 71:2014 (ISO/TR 22411:2021)*

ISO 24495-1:2023, *Plain language — Part 1: Governing principles and guidelines*

## 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 <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://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* (3.7)

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

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Note 2 to entry: The context in which the ASLI is used may affect its overall accessibility. This context could include other products and services with which the ASLI may interact.

[SOURCE: EN ISO 9241-112:2017, definition 3.15 – Modified: Added Note 2 to entry from EN 301 549:2021, 3.1 definition “Accessibility” Note 1, modified.]

### 3.2 system

product, service, or any combination of them with which the user interacts

[SOURCE: CEN-CENELEC Guide 6:2014, definition, 2.1 – Modified: Built environment is excluded in the definition as it is not included in ASLI.]

### 3.3 accessible system for living independently ASLI

product or service designed to meet multiple user needs in an interconnected way, in identified *contexts of use* (3.7), that facilitates the performance of activities for users

Note 1 to entry: ASLI also refers to design of accessible service environments. This includes accessing, interacting and using information about ASLI, as well as the ASLI itself.

Note 2 to entry: ASLI are not *assistive technology* (3.4) and not *assistive products* (3.5) but support interoperability with them.

Note 3 to entry: ASLI are accessible if they are detectable, accessible and usable for persons with disabilities in the usual way, without particular difficulties, and, as a rule, without help from others. An ASLI can be used with assistive technologies.

### 3.4 assistive technology AT

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

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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.

Note 3 to entry: Where ICT does not support directly connected assistive technology, but which can be operated by a system connected over a network or other remote connection, such a separate system (with any included assistive technology) can also be considered assistive technology.

[SOURCE: EN 17161:2019, definition 3.2 – Modified: Note 3 to entry is added and copied from EN 301 549:2021, 3.1 definition “Assistive Technologies” note 3.]

### 3.5 assistive product AP

product which optimizes a person’s functioning and reduces disability

Note 1 to entry: Assistive products include devices, instruments, equipment, and software.

Note 2 to entry: Assistive products can be especially produced or generally available items.



[SOURCE: EN ISO 9999:2022, definition 3.3 – Modified: Original Note 1 to entry is omitted.]

### 3.6

#### **plain language**

communication in which wording, structure and design are so clear that intended readers can easily

— find what they need,

— understand what they find, and

— use that information

[SOURCE: ISO 24495-1:2023, definition 3.1]

### 3.7

#### **context of use**

physical and social environments in which a system is used, including users, tasks, equipment and materials

[SOURCE: CEN-CENELEC Guide 6:2014, definition 2.7]

### 3.8

#### **interoperability**

ability of two or more systems or components to exchange information and to use the information that has been exchanged

[SOURCE: ISO/TS 27790:2009, definition 3.39]

### 3.9

#### **equal access**

principle to ensure that users can access and interact with a system using different methods and on equal terms

Note 1 to entry: The system can be used by all users with different modalities, according to their individual preference.

### 3.10

#### **user interaction**

##### **user-system interaction**

exchange of information between a *user* (3.11) and an interactive system via the user interface to complete the intended task

Note 1 to entry: User-system interaction represents a subset of human-system interaction that only focusses on intended users and not other humans who can be affected by the interactive system.

[SOURCE: EN ISO 9241-110:2020, definition 3.11]

### 3.11

#### **user of ASLI**

person who uses and interacts with an *accessible system for living independently* (ASLI) (3.3)

[SOURCE: EN 17161:2019, definition 3.12 – Modified by adding ASLI to the term.]

**prEN 17999:2023 (E)****3.12****carer  
caregiver**

person who provides care for other persons

Note 1 to entry: A carer can be a healthcare professional or an *informal carer* (3.13).

[SOURCE: EN ISO 13131:2022, definition 3.2.1]

**3.13****informal carer**

individual such as a family member, friend or other significant person who is giving assistance to a person who is dependent on assistance

Note 1 to entry: This term defines carers who are not professional or hired to provide care. Hence it does not include trained care providers affiliated with home care agencies or municipalities.

**4 Symbols and abbreviations**

For the purpose of this document, the following symbols and abbreviations apply.

ICT	information and communication technologies
ASLI	Accessible System for Living Independently

**5 Accessible System for Living Independently (ASLI)****5.1 Users of ASLI**

Systems and technologies that should be made accessible for living independently, include but are not limited to:

- Emergency warning or security systems (alarms etc.);
- Robot technology;
- Smart home technology (remote control for light and curtains etc.);
- Interactive systems;
- Domestic appliances;

EXAMPLES: Multifunctional bathroom storage system and shower rail.

- Technical solutions.

An ASLI strengthens a user's independence, gives them more control of their surroundings and increases their ability to engage in social activities. It is independent of age and abilities. The term includes i.e.: security technology, comfort related technology, technology for social interaction and for control of surroundings and care technology. System for living independently will benefit all.

Accessibility in this document refers to adapting the design and functionality of products and services, and the design and deployment of related information and services to enable living independently.

This will provide ease of use to any user, from a population with the widest range of user needs, characteristics and capabilities to achieve identified goals in identified contexts of use.