ANNEX I ACCESSIBILITY REQUIREMENTS OF PRODUCTS AND SERVICES

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# Tagged and supplemented with examples

This version of the accessibility requirements in Annex I of the EAA is arranged with different heading levels. The aim with this is to facilitate the overview and enable a greater appreciation for the requirements, for example it is possible to generate a table of contents.

The descriptions in Heading 1 has been added as well as the new Heading 3. These texts do not change the meaning, or the content. Instead the overview is facilitated. Everything else is word forword copied from the EAA. The examples from Annex 2 in the EAA is written together with the corresponding requirementss.These examples are listed under heading 3 and are marked with s“Example”(in heading 4). Important to note that not all requirements in the EAA have examples.

# Section I – Accessibility requirements on products

General accessibility requirements related to all products covered by this directive in accordance with Article 2.1

Products must be designed and produced in such a way as to maximise their foreseeable use by persons with disabilities and shall be accompanied where possible in or on the product by accessible information on their functioning and on their accessibility features.

## Requirements on the provision of information:

### Information on the use of the product provided on the product itself

1. the information on the use of the product provided on the product itself (labelling, instructions and warning) shall be:
2. made available via more than one sensory channel;

Exempel: Providing visual and tactile information or visual and auditory information indicating the place where to introduce a card in a self-service terminal so that blind persons and deaf persons can use the terminal.

1. presented in an understandable way;

Exempel: Using the same words in a consistent manner, or in a clear and logical structure, so that persons with intellectual disabilities can better understand it.

1. presented to users in ways they can perceive;

Example: Providing tactile relief format or sound in addition to a text warning so that blind persons can perceive it.

presented in fonts of adequate size and suitable shape, taking into account foreseeable conditions of use, and using sufficient contrast, as well as adjustable spacing between letters, lines and paragraphs;

Example: Allowing that text can be read by persons who are visually impaired.

### Information on website etc. about the product and its accessibility functions

1. the instructions for use of a product, where not provided on the product itself but made available through the use of the product or through other means such as a website, including the accessibility functions of the product, how to activate them and their interoperability with assistive solutions shall be publicly available when the product is placed on the market and shall:
2. be made available via more than one sensory channel;

Example: Providing electronic files which can be read by a computer using screen readers so that blind persons can use the information.

1. presented in an understandable way;

Example: Using the same words in a consistent manner, or in a clear and logical structure, so that persons with intellectual disabilities can better understand them.

1. presented to users in ways they can perceive;

Example: Providing subtitles when video instructions are provided.

1. be presented in fonts of adequate size and suitable shape, taking into account foreseeable conditions of use and using sufficient contrast, as well as adjustable spacing between letters, lines and paragraphs;

Example: Allowing that the text can be read by persons who are visually impaired.

1. with regard to content, be made available in text formats that can be used for generating alternative assistive formats to be presented in different ways and via more than one sensory channel;

Example: Printing in Braille, so that a blind person can use them.

1. be accompanied by an alternative presentation of any non-textual content;

Example: Accompanying a diagram with a text description identifying the main elements or describing key actions.

1. include a description of the user interface of the product (handling, control and feedback, input and output) which is provided in accordance with point 2; the description shall indicate for each of the points in point 2 whether the product provides those features,
2. include a description of the functionality of the product which is provided by functions aiming to address the needs of persons with disabilities in accordance with point 2; the description shall indicate for each of the points in point 2 whether the product provides those features,
3. include a description of the software and hardware interfacing of the product with assistive devices; the description shall include a list of those assistive devices which have been tested together with the product;

Example: Including a socket and software in automated teller machines which will allow the plugging of a headphone which will receive the text on the screen in the form of sound.

## User interface and functionality design:

The product, including its user interface, shall contain features, elements and functions, that allow persons with disabilities to access, perceive, operate, understand and control the product by ensuring that:

### Functional interface, information for more than one sensory channel, alternatives to speech, visual flexibility, alternatives to audio, motoric skills, integrity etc.

1. when the product provides for communication, including interpersonal communication, operation, information, control and orientation, it shall do so via more than one sensory channel; this shall include providing alternatives to vision, auditory, speech and tactile elements;

Example: Providing instructions in the form of voice and text, or by incorporating tactile signs in a keypad, so that persons who are blind or hard of hearing can interact with the product.

1. when the product uses speech it shall provide alternatives to speech and vocal input for communication, operation control and orientation;

Example: Offering in a self-service terminal in addition to the spoken instructions, for example, instructions in the form of text or images so that deaf persons can also perform the action required.

1. when the product uses visual elements it shall provide for flexible magnification, brightness and contrast for communication, information and operation, as well as ensure interoperability with programmes and assistive devices to navigate the interface;

Example: Allowing users to enlarge a text, to zoom in on a particular pictogram or to increase the contrast, so that persons who are visually impaired can perceive the information.

1. when the product uses colour to convey information, indicate an action, require a response or identify elements, it shall provide an alternative to colour;

Example: In addition of giving a choice to press the green or the red button for selecting an option, providing in written on the buttons what the options are, in order to allow person who are colour blind to make the choice.

1. when the product uses audible signals to convey information, indicate an action, require a response or identify elements, it shall provide an alternative to audible signals;

Example: When a computer gives an error signal, providing a written text or an image indicating the error, so as to allow deaf persons to apprehend that an error is occurring.

1. when the product uses visual elements it shall provide for flexible ways of improving vision clarity;

Example: Allowing for additional contrast in foreground images so that persons who have low vision can see them.

1. when the product uses audio it shall provide for user control of volume and speed, and enhanced audio features including the reduction of interfering audio signals from surrounding products and audio clarity;

Example: Allowing the user of a telephone to select the volume of the sound and reduce the interference with hearing aids so that persons who are hard of hearing can use the telephone.

1. when the product requires manual operation and control, it shall provide for sequential control and alternatives to fine motor control, avoiding the need for simultaneous controls for manipulation, and shall use tactile discernible parts;

Example: Making touch screen buttons bigger and well separated so that persons with tremor can press them.

1. the product shall avoid modes of operation requiring extensive reach and great strength;

Example: Ensuring that buttons to be pressed do not require much force so that persons who have motor impairments can use them.

1. the product shall avoid triggering photosensitive seizures;

Example: Avoiding flickering images so that persons who get seizures are not at risk.

1. the product shall protect the user’s privacy when he or she uses the accessibility features;

Example: Allowing the use of headphones when spoken information is provided by automated teller machines.

1. the product shall provide an alternative to biometrics identification and control;

Example: As an alternative to fingerprint recognition, allowing users who cannot use their hands to select a password for locking and unlocking a phone.

1. the product shall ensure the consistency of the functionality and shall provide enough, and flexible amounts of, time for interaction;

Example: Ensuring that the software reacts in a predictable way when a particular action is performed and providing enough time to enter a password so that is easy to use for persons with intellectual disabilities.

1. the product shall provide software and hardware for interfacing with the assistive technologies;

Example: Offering a connection with a refreshable Braille display so that blind persons can use the computer.

### Sector-specific requirements for consumer use of self-service terminals, e-readers and terminal equipment

1. the product shall comply with the following sector-specific requirements:
* self-service terminals,
* shall provide for text-to-speech technology,
* shall allow for the use of personal headsets,
* where a timed response is required, shall alert the user via more than one sensory channel,
* shall give the possibility to extend the time given,
* shall have an adequate contrast and tactilely discernible keys and controls when keys and controls are available,
* shall not require an accessibility feature to be activated in order to enable a user who needs the feature to turn it on,
* when the product uses audio or audible signals, it shall be compatible with assistive devices and technologies available at Union level, including hearing technologies such as hearing aids, telecoils, cochlear implants and assistive listening devices.
1. e-readers shall provide for text-to-speech technology,
	* + consumer terminal equipment with interactive computing capability, used for the provision of electronic communications services,
		+ shall, when such products have text capability in addition to voice, provide for the handling of real time text and support high fidelity audio;

Example: Providing that a mobile phone should be able to handle real time text conversations so that persons who are hard of hearing can exchange information in an interactive way.

* + - shall, when they have video capabilities in addition to or in combination with text and voice, provide for the handling of total conversation including synchronised voice, real time text, and video with a resolution enabling sign language communication,
		- shall ensure effective wireless coupling to hearing technologies,
		- shall avoid interferences with assistive devices;

Example: Allowing the simultaneous use of video to display sign language and text to write a message, so that two deaf persons can communicate with each other or with a hearing person.

1. consumer terminal equipment with interactive computing capability, used for accessing audio visual media services shall make available to persons with disabilities the accessibility components provided by the audiovisual media service provider, for user access, selection, control, and personalisation and for transmission to assistive devices;

Example: Ensuring that subtitles are transmitted through the set top box for their use by deaf persons.

## Support services

### Accessible modes of communication for help-desks, support, etc.

Where available, support services (help desks, call centres, technical support, relay services and training services) shall provide information on the accessibility of the product and its compatibility with assistive technologies, in accessible modes of communication.

# Section II – Accessibility requirements for packaging and instructions

Accessibility requirements related to products in Article 2.1, except for the self-service terminals referred to in Article 2.1 b

In addition to the requirements of Section I, the packaging and instructions of products covered by this Section shall be made accessible, in order to maximise their foreseeable use by persons with disabilities. This means that:

### Packaging and information of the product

1. the packaging of the product including the information provided in it (e.g. about opening, closing, use, disposal), including, when provided, information about the accessibility characteristics of the product, shall be made accessible; and, when feasible, that accessible information shall be provided on the package;

Example: Indicating in the packaging that the phone contains accessibility features for persons with disabilities.

### Instructions for the installation and maintenance, storage and disposal of the product and other means f.ex. website

1. the instructions for the installation and maintenance, storage and disposal of the product not provided on the product itself but made available through other means, such as a website, shall be publicly available when the product is placed on the market and shall comply with the following requirements:
2. Be available via more than one sensory channel;

Example: Providing electronic files which can be read by a computer using screen readers so that blind persons can use the information.

1. Be presented in an understandable way;

Example: Using the same words in a consistent manner, or in a clear and logical structure, so that persons with intellectual disabilities can better understand it.

1. Be presented to users in ways they can perceive;

Example: Providing tactile relief format or sound when a text warning is present so that blind persons receive the warning.

1. Be presented in fonts of adequate size and suitable shape, taking into account foreseeable conditions of use, and using sufficient contrast, as well as adjustable spacing between letters, lines and paragraphs;

Example: Providing that the text can be read by persons who are visually impaired.

1. Content of instructions shall be made available in text formats that can be used for generating alternative assistive formats to be presented in different ways and via more than one sensory channel;

Example: Printing in Braille, so that a blind person can read it.

1. Instructions containing any non-textual content shall be accompanied by an alternative presentation of that content;

Example: Supplementing a diagram with a text description identifying the main elements or describing key actions.

# Section III – Accessibility requirements for services

General accessibility requirements related to all services covered by this directive in accordance with Article 2.2

The provision of services in order to maximise their foreseeable use by persons with disabilities, shall be achieved by:

### Products within services shall comply with the requirements for products

1. ensuring the accessibility of the products used in the provision of the service, in accordance with Section I of this Annex and, where applicable, Section II thereof;.

### Information on the service, use of products and interoperability

1. providing information about the functioning of the service, and where products are used in the provision of the service, its link to these products as well as information about their accessibility characteristics and interoperability with assistive devices and facilities:
2. making the information available via more than one sensory channel;

Example: Providing electronic files which can be read by a computer using screen readers so that blind persons can use the information.

1. presenting the information in an understandable way;

Example: Using the same words in a consistent manner or in a clear and logical structure so that persons with intellectual disabilities can better understand it.

1. presenting the information to users in ways they can perceive;

Example: Including subtitles when a video with instructions is provided.

1. making the information content available in text formats that can be used to generate alternative assistive formats to be presented in different ways by the users and via more than one sensory channel;

Example: Providing that a blind person can use a file by printing it in Braille.

1. presenting in fonts of adequate size and suitable shape, taking into account foreseeable conditions of use and using sufficient contrast, as well as adjustable spacing between letters, lines and paragraphs;

Example: Providing that the text can be read by persons who are visually impaired.

1. supplementing any non-textual content with an alternative presentation of that content;

Example: Supplementing a diagram with a text description identifying the main elements or describing key actions.

1. providing electronic information needed in the provision of the service in a consistent and adequate way by making it perceivable, operable, understandable and robust;

Example: When a service provider offers a USB-key containing information about the service, providing that information is accessible.

### The accessibility of websites and mobile applications

1. making websites, including the related online applications, and mobile device-based services, including mobile applications, accessible in a consistent and adequate way by making them perceivable, operable, understandable and robust;

Exempel: Providing text description of pictures, making all functionality available from a keyboard, giving users enough time to read, making content appear and operate in a predictable way, and providing compatibility with assistive technologies, so that persons with diverse disabilities can read and interact with a website.

### Accessibity of communication of help desks, support etc

1. where available, support services (help desks, call centres, technical support, relay services and training services) providing information on the accessibility of the service and its compatibility with assistive technologies, in accessible modes of communication.

# Section IV – Additional accessibility requirements related to specific services

The provision of services in order to maximise their foreseeable use by persons with disabilities, shall be achieved by including functions, practices, policies and procedures and alterations in the operation of the service targeted to address the needs of persons with disabilities and ensure interoperability with assistive technologies:

### Electronic communications services

1. Electronic communications services, including emergency communications referred to in Article 109(2) of Directive (EU) 2018/1972::
2. Providing real time text in addition to voice communication;

Example: Providing that persons who are hard of hearing could write and receive text in an interactive manner and in real time.

1. Providing total conversation where video is provided in addition to voice communication;

Example: Providing that deaf persons can use sign language to communicate among themselves.

1. ensuring that emergency communications using voice, text (including real time text) is synchronised and where video is provided is also synchronised as total conversation and is transmitted by the electronic communications service providers to the most appropriate PSAP;

Exemple: Providing that a person who has speech and hearing impairments and chooses to use a combination of text, voice and video, knows that the communication is transmitted through the network to an emergency service.

### Access to audiovisual media services

1. Services providing access to audiovisual media services:
2. providing electronic programme guides (EPGs) which are perceivable, operable, understandable and robust and provide information about the availability of accessibility;.

Exemple: Providing that a blind person can select programmes on the television.

1. ensuring that the accessibility components (access services) of the audiovisual media services such as subtitles for the deaf and hard of hearing, audio description, spoken subtitles and sign language interpretation are fully transmitted with adequate quality for accurate display, and synchronised with sound and video, while allowing for user control of their display and use.

Exemple: Supporting the possibility to select, personalise and display ‘access services’ such as subtitles for deaf persons or persons who are hard of hearing, audio description, spoken subtitles and sign language interpretation, by providing means for effective wireless coupling to hearing technologies or by providing user controls to activate ‘access services’ for audiovisual media services at the same level of prominence as the primary media controls.

### Transports

1. Air, bus, rail and waterborne passenger transport services except for urban and suburban transport services and regional transport services:
2. ensuring the provision of information on the accessibility of vehicles, the surrounding infrastructure and the built environment and on assistance for persons with disabilities;
3. ensuring the provision of information about smart ticketing (electronic reservation, booking of tickets, etc.), real- time travel information (timetables, information about traffic disruptions, connecting services, onwards travel with other transport modes, etc.), and additional service information (e.g. staffing of stations, lifts that are out of order or services that are temporarily unavailable).

### Urban and suburban transport services and regional transport services

1. Urban and suburban transport services and regional transport services: ensuring the accessibility of self-service terminals used in the provision of the service in accordance with Section I of this Annex.

### Banking services

1. Consumer banking services:
2. providing identification methods, electronic signatures, security, and payment services which are perceivable, operable, understandable and robust.

Exemple: Making the identification dialogues on a screen readable by screen readers so that blind persons can use them.

1. ensuring that the information is understandable, without exceeding a level of complexity superior to level B2 (upper intermediate) of the Council of Europe’s Common European Framework of Reference for Languages

### E-books

1. E-books
2. ensuring that, when an e-book contains audio in addition to text, it then provides synchronised text and audio;

Example: Providing that a person with dyslexia can read and hear the text at the same time.

1. ensuring that e-book digital files do not prevent assistive technology from operating properly;

Example: Enabling synchronized text and audio output or by enabling a refreshable Braille transcript.

1. ensuring access to the content, the navigation of the file content and layout including dynamic layout, the provision of the structure, flexibility and choice in the presentation of the content;

Example: Providing that a blind person can access the index or change chapters.

1. allowing alternative renditions of the content and its interoperability with a variety of assistive technologies, in such a way that it is perceivable, understandable, operable and robust.
2. making them discoverable by providing information through metadata about their accessibility features;

Example: Ensuring that information on their accessibility features is available in the electronic file so that persons with disabilities can be informed.

1. ensuring that digital rights management measures do not block accessibility features;

Example: Ensuring that there is no blocking, for example that technical protection measures, rights management information or interoperability issues do not prevent the text from being read aloud by the assistive devices, so that blind users can read the book.

### E-Commerce

1. E-Commerce services
2. providing the information concerning accessibility of the products and services being sold when this information is provided by the responsible economic operator;

Example: Ensuring that available information on the accessibility features of a product is not deleted.

1. ensuring the accessibility of the functionality for identification, security and payment when delivered as part of a service instead of a product by making it perceivable, operable, understandable and robust;

Example: Making the payment service user interface available by voice so that blind persons can make online purchases independently.

1. providing identification methods, electronic signatures, and payment services which are perceivable, operable, understandable and robust;

Example: Making the identification dialogues on a screen readable by screen readers so that blind persons can use them.

# Section V – Emergency communications

Specific accessibility requirements related to the answering of emergency communications to the single European emergency number ‘112’ by the most appropriate PSAP.

In order to maximise their foreseeable use by persons with disabilities, the answering of emergency communications to the single European emergency number ‘112’ by the most appropriate PSAP, shall be achieved by including functions, practices, policies and procedures and alterations targeted to address the needs of persons with disabilities.

Emergency communications to the single European emergency number ‘112’ shall be appropriately answered, in the manner best suited to the national organisation of emergency systems, by the most appropriate PSAP using the same communication means as received, namely by using synchronised voice and text (including real time text), or, where video is provided, voice, text (including real time text) and video synchronised as total conversation.

# Sections VI – Obligations in other Union acts

Accessibility requirements for features, elements or functions of products and services in accordance with Article 24 (2).

The presumption to fulfil the relevant obligations set out in other Union acts concerning features, elements or functions of products and services requires the following:

### Products:

1. Products:
2. the accessibility of the information concerning the functioning and accessibility features related to products complies with the corresponding elements set out in point 1 of Section I of this Annex, namely information on the use of the product provided on the product itself and the instructions for use of a product, not provided in the product itself but made available through the use of the product or other means such as a website;
3. the accessibility of features, elements and functions of the user interface and the functionality design of products complies with the corresponding accessibility requirements of such user interface or functionality design set out in point 2 of Section I of this Annex;
4. the accessibility of the packaging, including the information provided in it and instructions for the installation and maintenance, storage and disposal of the product not provided in the product itself but made available through other means such as a website, except for self-service terminals complies with the corresponding accessibility requirements set out in Section II of this Annex.

### Services:

1. Services

The accessibility of the features, elements and functions of services complies with the corresponding accessibility requirements for those features, elements and functions set out in the services-related Sections of this Annex.

# Section VII – Functional performance criteria

In order to maximise the foreseeable use by persons with disabilities, when the accessibility requirements, set out in Sections I to VI of this Annex, do not address one or more functions of the design and production of products or the provision of services those functions or means shall be accessible by complying with the related functional performance criteria.

Those functional performance criteria may only be used as an alternative to one or more specific technical requirements, when these are referred to in the accessibility requirements, if and only if the application of the relevant functional performance criteria complies with the accessibility requirements and it determines that the design and production of products and the provision of services results in equivalent or increased accessibility for the foreseable use by persons with disabilities.

### a) Usage without vision

Where the product or service provides visual modes of operation, it shall provide at least one mode of operation that does not require vision.

### b) Usage with limited vision

Where the product or service provides visual modes of operation, it shall provide at least one mode of operation that enables users to operate the product with limited vision.

### c) Usage without perception of colour

Where the product or service provides visual modes of operation, it shall provide at least one mode of operation that does not require user perception of colour.

### d) Usage without hearing

Where the product or service provides auditory modes of operation, it shall provide at least one mode of operation that does not require hearing.

### e) Usage with limited hearing

Where the product or service provides auditory modes of operation, it shall provide at least one mode of operation with enhanced audio features that enables users with limited hearing to operate the product.

### f) Usage without vocal capability

Where the product or service requires vocal input from users, it shall provide at least one mode of operation that does not require vocal input. Vocal input includes any orally-generated sounds like speech, whistles or clicks.

### g) Usage with limited manipulation or strength

Where the product or service requires manual actions, it shall provide at least one mode of operation that enables users to make use of the product through alternative actions not requiring fine motor control and manipulation, hand strength or operation of more than one control at the same time.

### h) Usage with limited reach

The operational elements of products shall be within reach of all users. Where the product or service provides a manual mode of operation, it shall provide at least one mode of operation that is operable with limited reach and limited strength.

### i) Minimising the risk of triggering photosensitive seizures

Where the product provides visual modes of operation, it shall avoid modes of operation that trigger photosensitive.

### j) Usage with limited cognition

The product or service shall provide at least one mode of operation incorporating features that make it simpler and easier to use.

### k) Privacy

Where the product or service incorporates features that are provided for accessibility, it shall provide at least one mode of operation that maintains privacy when using those features that are provided for accessibility.