Preface to:

**Guidance for the application of the Accessibility Standard EN 301 549 for procurers and suppliers of ICT in Sweden**
Preface to Guidance for the Accessibility Standard EN 301 549

PTS’s standardisation work for improving accessibility
The Swedish Post and Telecom Authority (PTS) wants there to be a wide range of products and services within the area of electronic communications. Everyone should be able to use these products and services, regardless of functional capacity. Well-reasoned, substantiated and agreed standards play an essential role in enabling these products and services to reach as many users as possible in Sweden.

As a participant of several standardisation groups, PTS is actively working to increase focus on usability and accessibility in the production and use of standards.

For example, PTS has participated in a national coordination group that has contributed to the production of the Standard ‘Accessibility requirements suitable for public procurement of ICT products and services in Europe (ETSI EN 301 549)’, a Swedish translation of the Standard and related support information.

Guidance has been produced to facilitate the application of Standard EN 301 549 for procurers and suppliers of ICT. This Guidance, the Standard and other support information can be downloaded via www.pts.se/EN301549vagledning.

Stakeholders behind the Guidance
This Guidance has been financed by the Swedish Post and Telecom Authority (PTS) and has been produced by the experts Bruno von Niman and Clas Thorén.

Besides PTS, the Swedish Agency for Participation (MFD) and the national standardisation organisations ITS and SIS have contributed to the preparatory work leading to the Guidance.

The responsibility for providing support to public stakeholders and suppliers in conjunction with public procurement rests with the National Agency for Public Procurement (UHM), www.upphandlingsmyndigheten.se.

Copyright and intellectual property
The present document, "Guidance for the application of the Accessibility Standard EN 301 549 for procurers and suppliers of ICT in Sweden” has been developed for the Swedish Post and Telecom Authority (PTS), www.pts.se. It is made freely available and without any claims on Intellectual Property Rights (IPRs), including the applicable copyright. The document is free to use and to publish in part or whole for non-commercial purposes.
Guidance for the application of the Accessibility Standard EN 301 549 for procurers and suppliers of ICT in Sweden
Contents

1 The Guidance and the Accessibility Standard EN 301 549 ................................. 3
  1.1 Reading instructions for the Guidance ...................................................................... 3
  1.2 Creation of the Standard .............................................................................................. 3
  1.3 The future of the Standard: maintenance, extension, harmonisation, globalisation? ....4

2 Description, scope and application ............................................................................ 5
  2.1 The Standard applies in preference to all other documents ........................................ 5
  2.2 Description and scope of the Standard ........................................................................ 5
  2.3 Descriptions of user needs ............................................................................................ 6
  2.4 Functional requirements ............................................................................................... 7
  2.5 Structure of requirements ............................................................................................ 8

3 Referring to the Standard in an invitation to tender .................................................. 9
  3.1 The Standard as a technical specification or as an award criterion ......................... 9
  3.2 Accessibility as a quality requirement or requirements for social consideration ....... 9

4 The procurer's imposition of requirements with reference to the Standard ............. 10
  4.1 Four alternatives for the imposition of requirements ................................................. 10
  4.2 Example of wording of requirement with reference to clause 4.2 ............................... 10
  4.3 Example of wording of requirement with reference to clauses 5 to 13 ....................... 10

5 The supplier's declaration of conformity with the Standard ........................................ 11
  5.1 Declaration of conformity during production phase ................................................... 11
  5.2 Declaration during the tendering phase ...................................................................... 12

6 Determination of compliance with the Standard through tests ............................... 12

7 Accessibility in Swedish procurement legislation .................................................... 13
  7.1 Introduction.................................................................................................................. 13
  7.2 The Public Procurement Act (LOU) ........................................................................ 13
  7.3 Act concerning public procurement within the areas of water, energy, transport and postal service (LUF) .................................................................................. 14
  7.4 Act concerning the public procurement of concessions (LUK) ................................ 14
  7.5 Defence and Security Procurement Act (LUFS) ........................................................ 14
  7.6 Comments including explanations (NOT interpretation of the law) ......................... 14
  7.7 UN Convention on the Rights of Persons with Disabilities (CRPD) ......................... 15

Appendix 1: Guidance on support documents to the Standard and the Web Tool ....... 16
Appendix 2: Training package and presentation .......................................................... 18
Appendix 3: Common questions and answers (Q&A) ................................................. 19
Appendix 4: Copyright and intellectual property ......................................................... 23
Appendix 5: References and bibliography ..................................................................... 24
Conventions, definitions and abbreviations

The Accessibility Standard EN 301 549 [1] is referred to hereafter in this document as ‘the Standard’, which in its turn is referred to as ‘the Guidance’.

The word ‘clause’ is used hereafter to refer to parts of the Standard; the word ‘chapter’ refers to parts of this Guidance.

Informations- och Kommunikationsteknologi (IKT) is the Swedish equivalent of ‘Information and Communication Technology (ICT)’ in English and has exactly the same meaning (see definition in [1SE]). Applicable English definitions and abbreviations can be found in [1], [2], [3] and [4] and also in the Standard’s Swedish translation in [1SE].

‘Accessibility’ in this Guidance and the Standard means the “extent to which products, systems, services, environments and facilities can be used by people from a population with the widest range of characteristics and capabilities, to achieve a specified goal in a specified context of use”. ‘Accessibility’ is thus not limited to people colloquially referred to as ‘people with disabilities’ (‘handicapped’ according to former usage) but encompasses all individuals.

1 The Guidance and the Accessibility Standard EN 301 549

1.1 Reading instructions for the Guidance

This ‘Guidance for Application of the Accessibility Standard for Public Procurement of ICT Products and Services in Europe’ (EN 301 549) has been produced with a view to helping both public procurers and suppliers of ICT products and services gain an insight into and learn about the Standard, what it does or does not cover, and also how it has been structured and is intended to function.

Although the Swedish standardisation groups responsible within ITS and SIS consider the Standard to be extensive, structurally complex and relatively difficult to understand and applicable for both procurers and suppliers, it is of great importance to make optimum use of the Standard. The idea of producing a Guidance (in the form of a document) came about as a direct consequence of this view.

The Guidance is fully compatible with the Standard as it is objective and does not add any new requirements. It has been structured so that the reader can first get a picture of the Standard’s creation and development. This is followed by a description of what the Standard includes, how requirements have been laid out and also how reference can be made to the Standard in a procurement. There is then a description of how the supplier can determine and declare compliance through tests. There is also an account of accessibility in procurement legislation.

The Guidance concludes by introducing a presentation and training package and includes a section with some common Q&A intended to clarify important issues that many readers are expected to raise.

Additional unofficial material drawn from several sources in the form of, for example, various diagrams, illustrations and training videos, has been included to make the Standard easier to understand and use. While some of this material may be regarded as objective and useful, the reader should treat it with a certain degree of caution and scepticism.

1.2 Creation of the Standard

ICT has become a natural part of everyone’s day-to-day life. A digital solution is increasingly the first choice for services, information and communication. Digitalisation creates both new opportunities
Guidance for application of EN 301 549

and new obstacles. The design of these digital solutions is critical for equal participation in society, at the workplace and at school.

Digital solutions that make it possible for more people to use goods, services and systems benefit those offering the services, goods and systems. Enabling everyone to have access to these digital solutions is central to public activities. It is therefore important to consider all human needs when developing or purchasing goods, services and systems. Everyone would benefit from such an improvement in quality, regardless of functional capacity and other characteristics, while fewer people would be excluded from use.

It is estimated that public procurement constitutes 16% of the EU’s GDP (13% globally). The requirements imposed have a significant impact on the functional quality of ICT products and solutions. Public procurement, with good requirements supported by procurement legislation, processes and support, can help to achieve an inclusive society.

Swedish procurement legislation will be tightened up from 1 January 2017 in such a way that a requirement to consider the needs of all users must be imposed if the ICT is to be used by natural persons. A requirement will then be included regarding accessibility for people with disabilities. This statutory requirement is due to a tightening up in the EU’s new Procurement Directive of 2014 [8].

Procurement is regulated by a Swedish law that implements the Directive. The applicable wording is the text in the Swedish law.

The EU Commission mandated the European standardisation organisations CEN, CENELEC and ETSI through Mandate 376 [11] to produce a European standard for accessibility to be used in public procurement of ICT products and ICT services in Europe. One important reason was to prevent different national accessibility requirements emerging in the Member States, which would result in fragmentation and unwanted variations.

The result (EN 301 549 as the European standard [1] with associated translation into Swedish [1SE], support documents [2-4] and a web-based toolbox [5]) is the first in the world to cover ICT accessibility from a largely technologically independent and functional perspective as a direct function of the main user needs. EN 301 549 was developed in two stages over a ten-year European political and standardisation process (feasibility study of the opportunity for and production of functional requirements). The most important goals included acceptance by global standardisation organisations and public authorities and to facilitate global compatibility within ICT.

Swedish stakeholders and experts participated in the production of the Standard, first through direct participation in CEN/CENELEC and ETSI and second through the Swedish standardisation organisations ITS, SIS and SEK (in close collaboration).

The first edition of the Standard was published in 2014. A slightly revised (corrected) version was published in 2015 in conjunction with the production of a Swedish translation. No further versions will be published in 2016, although a first revision will be initiated in 2016 and is expected to be underway in 2017 and 2018.

The Swedish Post and Telecom Authority (PTS) and the Swedish Agency for Participation (MFD) played a part in producing the Standard. The decision to develop this Guidance was made with a view to facilitating use of the Standard for both procurers and ICT suppliers.

1.3 The future of the Standard: maintenance, extension, harmonisation, globalisation?

Comment 1: This is the first time ever that mandate work at the three European standardisation organisations CEN, CENELEC and ETSI has resulted in a jointly developed European standard.
Guidance for application of EN 301 549

This Standard will need to be updated and eventually replaced, as is the case with all standards. The ICT sector and standards referred to are continually changing. Furthermore, there are areas that the Standard needs to cover or cover better (e.g. ICT services, mobility, mobile applications and the needs of users with impaired cognition). Future updates of the Standard will be initiated at least every five years and will include both updates of existing requirements and the introduction of new requirement areas and also, possibly, harmonisation.

While the structure and content of the Standard was being developed, this was coordinated, where possible, with the update of corresponding requirements in the United States. The Standard was referred to during the negotiations for a free trade agreement. Globally harmonised requirements benefit everyone and result in more, better, more accessible, innovative and interoperable ICT products and services at a reasonable cost. The requirements just approved in the United States are presumed to be harmonised to some extent with the main principles of this Standard and enter into force in 2017. The need for further harmonisation initiatives will be investigated in detail.

A globalisation of the Standard has been discussed and investigated. Globalisation would involve the Standard being republished as an ISO standard without material changes, which would also make it easier for it to be used outside Europe. An update, based on experiences gained from practical use and necessary adjustments, needs to be made before such a proposal can be achieved.

Another related standard for which corresponding globalisation has been achieved is the web content accessibility standard WCAG 2.0 [12], which has become an ISO standard.

Adaptations may also be made as a result of the EU proposing a new directive at the end of 2015, referred to as the Accessibility Directive, European Accessibility Act [13].

2 Description, scope and application

2.1 The Standard applies in preference to all other documents

When referring to the Standard, the most recent English version of the Standard published by CEN, CENELEC and ETSI is the version that should always apply.

All other related documents and previous versions of the Standard, including the Swedish translation, should be solely viewed as supplementary and serve as guidance in the context.

2.2 Description and scope of the Standard

The Standard, EN 301 549, specifies functional accessibility requirements for ICT products and ICT services, such as electronic content, telecommunications products, computers and ancillary equipment, software, information kiosks and transaction machines, videos, IT services and multifunction office machines which copy, scan and fax documents. The requirements in the Standard are functional unlike requirements for specific, technical solutions that are rapidly changing and may restrict the introduction of new, innovative solutions.

NOTE 1: Requirements for ICT accessibility may be regarded as a collection of ergonomic requirements. Terms focus on the interaction between people and products, systems and services. The Standard EN 301 549 does not cover all ergonomic needs and requirements but deals solely with accessibility. Information must also be obtained from other sources, e.g. the ISO 9241 standard family 'Ergonomics of human-system interaction', in order to impose a comprehensive ergonomic requirement. The imposition of requirements should be supplemented with suitable, iterative and user-centred product and system development processes for the best results.

NOTE 2: Where ICT constitutes assistive technology for people with functional impairments, it shall use applicable documented platform accessibility services in accordance with clause 11.3.2.3
the Standard. Specific Swedish assistive technology, which is often financed by county councils, lies outside the Standard and is deemed to lie outside the frameworks of this Guidance.

There are two kinds of accessibility requirement:

1. Descriptions of user needs, which constitute the central part of the Standard;
2. Functional requirements, the main purpose of which is to be a way for the supplier to show that a product meets the needs described. The functional requirements are mostly technology neutral. Some of the requirements include technical references to standards that lay down specific solutions, e.g. applicable interoperable system (interoperability).

The Standard includes accessibility requirements for:

- ICT products;
- Services related to products (documentation, support);
- Web sites; and
- Certain specific telecommunications services necessary to provide alternative modes of communication for speech modality (such as text or images) and the route could offer access to services such as emergency calls or relay services for everyone.

The Standard does not include accessibility requirements relating to:

- The supplier’s capacity and capability;
- The supplier’s production conditions;
- ICT-related services such as operational services, system development, programming and ICT training;
- When the ICT product is in a failure, repair or maintenance state where the ordinary set of input or output functions are not available; and
- A subcomponent during start-up, shutdown and other state transitions that can be completed without user interaction.

The Standard includes a table (informative Annex B) specifying which functional technical requirements are associated with each user need.

The Standard also specifies test procedures and evaluation methodology for each functional requirement (Annex C).

2.3 Descriptions of user needs

It must be possible for everyone using an ICT product or an ICT system to find, identify and operate the functions of the system or product. This applies to both employees who have ICT systems as work tools and for citizens who use public e-services, regardless of the physical, cognitive or sensory abilities of the users.

Everyone who so wishes shall have access to digital products and services. A fundamental principle of the Standard is that there should be alternative means of operating the ICT so that no-one is solely dependent on audio or video to be able to use a system or a product.

This need for alternative modes of operation is specified in clause 4 of the Standard ‘Performance statements’, which is the central part of the Standard. For example:

“4.2.4 Usage without hearing

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

NOTE: Visual and tactile user interfaces may contribute towards meeting this clause.
“4.2.10 Usage with limited cognition

Some users will need the ICT to provide features that make it simpler and easier to use.

NOTE: 1: This clause is intended to include the needs of persons with limited cognitive, language and learning abilities.

NOTE: 2: Adjustable timings, error indication and suggestion, and a logical focus order are examples of design features that may contribute towards meeting this clause.”

A product fulfils the Standard by meeting these needs. How this is resolved in practice and in detail is a task for the product’s manufacturer. However, the Standard provides support for the manufacturer in the form of a number of requirements of a more detailed nature which, if they are to be fulfilled, must be deemed to meet the needs for alternative modes of operation. They are described in the following chapter.

2.4 Functional requirements

Clauses 5 to 13 of the Standard comprise requirements for functions that are deemed capable of satisfying the user needs described in clause 4 of the Standard. These requirements specify what is needed to satisfy these needs. The Standard does not say that these requirements are the only way to fulfil the needs. It only says that if these requirements are fulfilled, then the needs are fulfilled.

The functional requirements comprise:

- general, generic requirements common to ICT products, including self-service systems (clause 5);
- requirements for two-way voice communication (clause 6);
- requirements for ICT with video capabilities (clause 7);
- requirements for hardware (clause 8);
- requirements for web sites (clause 9);
- requirements for non-web documents and other content (clause 10);
- requirements for software (clause 11);
- requirements for documentation and support services (clause 12); and
- requirements for ICT providing relay or emergency service access (clause 13).

Requirements are of a technical nature but are expressed as functional requirements and thus are not linked to any particular, specific, technical solution, make, operating system, version or supplier applicable at that point in time. Requirements are expressed as mandatory and thus include the verb ‘shall’ – with a few exceptions in respect of the ‘should’ requirement.

The following requirements are ‘should’ requirements, which means that they should be perceived as recommendations:

- 5.1.3.3 for auditory output;
- 6.1, 6.4, 6.5.2b, 6.5.3b for ICT with two-way voice communication;
- Clause 8.3 concerning physical access to ICT (8.3.2.1, 8.3.2.2, 8.3.2.3.1, 8.3.2.3.2, 8.3.2.3.3, 8.3.2.5, 8.3.2.6, 8.3.3.1.1, 8.3.3.1.2, 8.3.3.1.3.2, 8.3.3.1.3.3, 8.3.3.2.1, 8.3.3.2.2, 8.3.3.2.3.1, 8.3.3.2.3.2, 8.3.4, 8.3.5);
- 10.2.39, 10.2.40 for caption and audio description positioning, and
- 11.2.2.7, 11.2.2.8, 11.3.2.1, 11.3.2.2 for non-Web software and accessibility services.

Clause 8.3 describes suitable measurements for space around the equipment with which the user is working. It is essentially about a wheelchair user being able to have space at and reach buttons and controls on the equipment. Unlike the other functional requirements, this clause only includes recommendations, not mandatory requirements. This is explained in more detail in [2].
Clause 9 deals with accessibility to web sites.

Since 1996, the World Wide Web Consortium (W3C, www.w3.org) has been working to make the web more accessible through its Web Accessibility Initiative (WAI) and by developing, establishing and advancing guidelines for accessible web content through Web Content Accessibility Guidelines.

The second version of the specification on accessibility to the content of web sites, Web Content Accessibility Guidelines 2.0 (WCAG 2.0) [12], forms an integral part of the functional technical requirements in the Standard.

NOTE 3: Two other documents in the WAI family, the Authoring Tool Accessibility Guidelines (ATAG) and User Agent Accessibility Guidelines (UAAG) (see www.w3.org/WAI/ for details) are not currently used by the Standard.

The requirements in clause 9 of the Standard apply to web pages including:

- documents that are web pages and documents that are embedded in web pages; and
- software that is a web page, and software that is embedded in web pages.

Web applications, mobile web applications and the like are covered under the definition of ‘web page’.

Clause 9 corresponds entirely with WCAG 2.0, to which the Standard refers directly.

The web content requirements in clause 9.2 set out all of the Level A and Level AA Success Criteria from WCAG 2.0. The WCAG 2.0 conformance requirements are contained in clause 9.3 of the Standard.


WCAG 2.0 has also been published as an ISO/IEC standard (ISO/IEC 40 500) but is primarily referred to as WCAG 2.0, in accordance with W3C’s wishes.

The accessibility requirements for non-web documents (e.g. an e-book) and non-web software (e.g. a spreadsheet program) are dealt with in clauses 10 and 11 of the Standard. These requirements apply to documents or software that are not (or are not embedded in) a web page nor used in the rendering or functioning of the page.

2.5 Structure of requirements

One characteristic of the functional requirements that is common throughout (with the exception of clause 12) is that they are conditional, i.e. they explicitly state the conditions for which the requirement is relevant. This means that each individual clause is structured according to the model “Where <pre-condition>, shall <requirement>”. For example:

“5.3 Biometrics

Where ICT uses biological characteristics, it shall not rely on the use of a particular biological characteristic as the only means of user identification or for control of ICT.”

Here, the pre-condition is “ICT uses biological characteristics”, while the requirement is “it shall not rely on the use of a particular biological characteristic as the only means of user identification or for control of ICT”.

Guidance for application of EN 301 549
“8.4.1 Numeric keys

Where provided, physical numeric keys arranged in a rectangular keypad layout shall have the number five key tactiley distinct from the other keys of the keypad.”

Here the pre-condition is “Where provided, physical numeric keys arranged in a rectangular keypad layout” while the requirement is “have the number five key tactilely distinct from the other keys of the keypad”.

In order to determine whether a requirement has been fulfilled, there is a test for each (applicable) requirement that determines whether or not the requirement has been fulfilled. These tests are found in Annex C of the Standard. A requirement is fulfilled when the pre-condition for the requirement is true and the corresponding test in Annex C is passed – see chapter 6 below.

3 Referring to the Standard in an invitation to tender

3.1 The Standard as a technical specification or as an award criterion

According to the Procurement Act, technical specifications (‘shall’ requirements) shall refer to standards or be expressed as performance or functional requirements. EN 301 549 is a Swedish standard that corresponds with a European standard and can therefore be referred to in the invitation to tender. The Standard also expresses accessibility requirements in terms of functional performance and functional characteristics.

Fulfilment of the Standard may also comprise an award criterion (‘should’ requirement). The requirements in the Standard are criteria that, when linked to the object of the procurement, may be considered in procurements as the award criterion ‘most economically advantageous tender’. The award criterion may comprise a requirement to fulfil all or parts of the Standard.

3.2 Accessibility as a quality requirement or requirements for social consideration

‘Accessibility’ is defined in the Standard as the “extent to which products, systems, services, environments and facilities can be used by people from a population with the widest range of characteristics and capabilities, to achieve a specified goal in a specified context of use (from ISO 26800)”.

Procurement legislation regards accessibility as a characteristic of a product or service, thus primarily a quality characteristic. This is also indicated by Article 67, item 2(a) of the Procurement Directive 2014/24/EU, where accessibility is mentioned as an example of ‘quality’.

The EU Commission has published guidance on socially responsible procurement [6] which states accessibility for people with disabilities as an example of what may be referred to as a ‘social consideration’. The National Agency for Public Procurement has a corresponding approach; see http://www.upphandlingsmyndigheten.se/hallbarhet/socialt-ansvarsfull-upphandling/.

In procurement legislation ‘social considerations’ are basically related to working conditions and most closely a requirement to the supplier’s organisation of the work. The Standard has not been formulated with a view to this kind of requirement. Nor does the Standard include social services (such as health and social care).
4 The procurer’s imposition of requirements with reference to the Standard

4.1 Four alternatives for the imposition of requirements

There are four alternatives for the procurer to impose requirements with reference to the Standard:

1. Requirement to meet all user needs in clause 4.2;
2. Requirement to meet some user needs in clause 4.2;
3. Requirement to meet all applicable functional requirements in clauses 5 to 13; or
4. Requirement to meet some applicable functional requirements in clauses 5 to 13.

The main alternative is to require all of clause 4.2 to be met, which is also the fundamental approach of the Standard. This means that the tendered ICT shall meet all of the user needs described in clause 4.2 of the Standard. This ensures as far as possible that the object being procured can be used by people from a group with the broadest possible range of characteristics and capabilities.

In some cases it is enough to satisfy some of the needs in clause 4.2. This may be the case if, for example, the ICT has been acquired for a specific individual or where a specific usage scenario applies.

It is also possible to refer in the invitation to tender to applicable requirements in clauses 5 to 13. It is the supplier who decides on the technical solution being tendered and thus fulfils the requirements in the invitation to tender. It is therefore the supplier who decides which technical requirements apply in the individual case; i.e. which of the pre-conditions apply to the product or system in question.

The procurer is actually permitted to select the requirements that they consider are relevant to the usage context. Although if it is also possible in many cases (e.g. for certain simple standard products), it is still not appropriate. This would involve procurers taking it upon themselves to anticipate exactly which technical solution the tenderers will tender. Furthermore, the procurer’s selection may differ from the supplier’s selection if the supplier had already issued a certificate of conformity during the production phase.

4.2 Example of wording of requirement with reference to clause 4.2

The tendered ICT shall meet all of the needs described in clause 4.2 of EN 301 549.

The tenderer can use one of the declarations specified in clause 5.2.5 of TR 101 551 as evidence that the requirements have been met.

As regards the content and form of the declaration, see EN 301 549 Annex C, item C1.

4.3 Example of wording of requirement with reference to clauses 5 to 13

The tendered ICT shall fulfil applicable requirements in clauses 5 to 13 of EN 301 549.

One of the following three verifications is accepted as evidence of compliance.

- A first party declaration, based on applicable tests in Annex C to EN 301 549, that applicable requirements have been fulfilled. The declaration must be signed by an authorised person.
- A ‘Supplier’s Declaration of Conformity’ compliant with ISO/IEC 17050-1 and -2 or equivalent, based on applicable tests in Annex C to EN 301 549;
- A test report or certificate from a body for assessment of conformity This body shall be accredited for the task in accordance with the original wording of Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out requirements for accreditation and market surveillance relating to the marketing of products and repealing
5 The supplier's declaration of conformity with the Standard

5.1 Declaration of conformity during production phase

A standard normally includes a clause stating which pre-conditions are to be fulfilled for compliance with the standard to be deemed to have occurred. EN 301 549 has no clause of this kind. Clause 5.2.5 of TR 101 552 [4] specifies instead how a supplier can demonstrate in the production phase or in the tender that the Standard has been fulfilled. This chapter is based on this clause.

There are three ways in which a supplier can demonstrate that a requirement for conformity with the Standard has been fulfilled (see TR 101 552 [4] for details):

1. They can declare that they have met the user needs expressed in the functional performance statements contained in clause 4.2 of the Standard and provide the necessary additional evidence to support this claim. This evidence could include results of user trials, experience from previous installations of similar ICT, or any other evidence that the supplier believes supports their assertion.

2. They can declare that they have met all of the applicable testable requirements that appear in clauses 5 to 13 of the Standard. ICT that meets these requirements is deemed to have met the requirement for conformity with the Standard. There is a table in Annex B to the Standard showing which of the requirements in 5 to 13 support each of the functional performance statements in 4.2, to make it easier for the supplier to determine which requirements in clauses 5 to 13 are applicable.

3. They can declare how many of the applicable testable requirements which appear in clauses 5 to 13 of the Standard they have met. If they have not fully met all of these requirements, the tenderer can provide additional evidence to show how they have fully met the performance statements in clause 4.2 that are addressed by the requirements that they have not met.

The Standard includes some ‘should’ requirements; see chapter 2.4 above. The Standard is deemed to be fulfilled even if the ‘should’ requirements are applicable but have not been met.

The declaration should:

− make clear whether there is compliance with all the applicable requirements or whether there is only compliance with some requirements;
− note the sampling and assessment techniques used to evaluate what is being tendered;
− show whether equivalent accessible functionality exists in places where non-compliance was found; and
− show whether equivalent means were used to achieve the outcome envisioned, where technical non-compliance was found.

The annexes in TR 101 552 [4] include examples of how declarations could be formulated.

To determine whether a requirement has been fulfilled, there is a test with specific pre-conditions for each applicable requirement that determines whether or not the requirement has been fulfilled. These detailed tests are found in Annex C to the Standard. A requirement is fulfilled when the precondition for the requirement is true and the corresponding test in Annex C is passed – see chapter 6 below.
5.2 Declaration during the tendering phase
The technical specification contained in the invitation to tender may include mandatory requirements that the ICT shall fulfil all of the needs specified in clause 4.2 of the Standard. Accessibility can sometimes be met by a subset of the needs, e.g. where the object being procured shall be designed to be used by a specific individual or for a well-defined usage scenario.

If the manufacturer has issued a declaration of conformity with the Standard, then it is this in the first instance that constitutes the certificate to be included in the tender, provided the invitation to tender does not include any special requirements for the formulation of the certificate.

If the manufacturer has not issued a declaration of compliance with the Standard, the tenderer can choose one of the three alternatives specified in chapter 5.1 above to demonstrate that the needs have been met, regardless of whether all or some of the selected needs shall be met.

If requirements have been imposed for fulfilment of applicable requirements in clauses 5 to 13, the tenderer can declare that the ICT has undergone and passed all corresponding tests in Annex C.

If fulfilment of the Standard is an award criterion (‘should’ requirement), the tenderer can use one of the three methods of declaration in chapter 5.1 above, the difference being that it is not necessary in the third case to present alternative certificates for those requirements that are not fulfilled.

6. Determination of compliance with the Standard through tests
All of the functional requirements in clauses 5 to 13 of the Standard are of the YES/NO kind. Requirements are measurable, testable and quantifiable.

There is a test for each individual requirement resulting in a YES or NO. The tests can be found in Annex C to the Standard.

An example of a requirement (number 5.5.2 in the Standard) is presented below with associated test (see Annex, requirement C.5.5.2):

“5.5.2 Operable parts discernibility
Where ICT has operable parts, it shall provide a means to discern each operable part, without requiring vision and without performing the action associated with the operable part.

NOTE: One way of meeting this requirement is by making the operable parts tactilely discernible.

C.5.5.2 Operable parts discernibility

<table>
<thead>
<tr>
<th>Type of assessment</th>
<th>Testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-conditions</td>
<td>The ICT has operable parts</td>
</tr>
</tbody>
</table>
| Procedure          | 1. Identify that there is a means to discern each operable part without vision.  
                      2. Check that the action associated with the operable part has not been performed when using the means to discern each operable part of step 1. |
| Result             | Pass: Checks 1 and 2 are true.  
                      Fail: Checks 1 or 2 are false.” |
ICT is often comprised of an assembly of two or more items of ICT. If the items individually fail to meet any particular requirement, the ICT as a whole cannot meet the requirement.

Annex C does not prioritise requirements – instead this is left to users of the Standard: the manufacturer and supplier and/or party placing the order and procurer, who may have additional knowledge about suitable requirements with regard to, for example, the intended context of use.

An example of the context of use affecting which requirements are imposed (or should be imposed) is a procurement for a ticket machine located outside that must be able to be used (e.g. read) in direct sunlight, in the dark, in heat, cold, rain and snow, compared with use in indoor environments that are more ergonomically controlled.

Compliance with the accessibility requirements could be affected by subsequent implementation or maintenance.

Sampling may be required for tests of large, extensive ICT, when there are too many instances of the object to be tested. The Standard cannot recommend specific sampling techniques for this purpose, as these are assumed to be context-specific.

7 Accessibility in Swedish procurement legislation

7.1 Introduction

This chapter is based on the statutory wording proposed in Government Bill 2015/16: 195 Nytt regelverk om upphandling [New rules and regulations for procurement]. A new Public Procurement Act (LOU), a new Act concerning public procurement within the areas of water, energy, transport and postal service (LUF) and a new Act concerning the public procurement of concessions (LUK) come into force from and including 1 January 2017.


Accessibility is also dealt with in the current Defence and Security Procurement Act (LUFS), which is not covered by the Government Bill.

The accessibility provisions contained in the new LOU and new LUF only apply to procurements within the area governed by the Directive (i.e. procurements over the thresholds). The accessibility provisions referred to below do not apply to procurements below the thresholds. In other words, it is not mandatory to impose accessibility requirements for procurements below the thresholds. However, it is both possible and appropriate to do this.

The Act on System of Choice in the Public Sector (2008:962 – LOV) applies to services within health and social services. The contracting authority may impose special social pre-conditions for how a contract is to be performed. This could include accessibility requirements, although this is not mentioned explicitly in the statutory wording. The Standard does not cover the services encompassed by the Act on System of Choice in the Public Sector.

7.2 The Public Procurement Act (LOU)

The following is stated in Chapter 9 of the new LOU: Technical requirements:

“Acquisition for use by natural persons

Article 2 When the object being acquired is to be used by natural persons, the technical specifications shall be determined considering the needs of all users, including accessibility for people with disabilities.
An exemption may be made if there are exceptional reasons.

If the European Union has adopted mandatory requirements for accessibility in a legal act, the technical specifications referred to in the first paragraph shall be defined by reference to the legal act.”

The following is mentioned about quality assurance standards in Chapter 15, Article 15 ‘Self-declarations and investigation of suppliers’:

“Quality assurance standards

Article 15 Contracting authorities shall, where they require suppliers to show certificates drawn up by independent bodies attesting that the supplier complies with certain quality assurance standards, including standards on accessibility for people with disabilities, specify requirements by referring to quality assurance systems based on relevant European standard series certified by accredited bodies.

Authorities shall accept equivalent certificates from other bodies established within the European Economic Area (EEA).

When a supplier cannot obtain the certificate within the specified time limits for reasons that are not attributable to the supplier or a circumstance on the part of the supplier, the authority shall also accept other evidence that the supplier has taken equivalent quality assurance measures provided the supplier proves that these measures comply with the quality assurance standards required by the authority.”

A definition of what is referred to as ‘technical specifications’ is provided in Annex 3. The definition for goods and services reads:

“2. b) technical specification in the case of public supply or service contracts:

a specification in a document defining the required characteristics of a product or a service, such as quality levels, environmental and climate performance levels, design for all requirements (including accessibility for people with disabilities) and conformity assessment, performance, use of the product, safety or dimensions, including requirements relevant to the product as regards the name under which the product is sold, terminology, symbols, testing and test methods, packaging, marking and labelling, user instructions, production processes and methods at any stage of the life cycle of the supply or service and conformity assessment procedures.”

7.3 Act concerning public procurement within the areas of water, energy, transport and postal service (LUF)

The new LUF includes the same provisions as the corresponding chapter in LOU in Chapter 9, Technical requirements, Article 2, Chapter 14, Qualification, Article 18 and Appendix 3.

7.4 Act concerning the public procurement of concessions (LUK)

Government Bill 2015/16:195 does not include any provision relating to accessibility.

7.5 Defence and Security Procurement Act (LUFS)

LUFS specifies in Appendix 4 that a technical specification may encompass characteristic requirements for the design of all requirements, including accessibility for people with disabilities. There is no corresponding section for Chapter 9, Article 2 LOU in LUFS.

7.6 Comments including explanations (NOT interpretation of the law)

The following are some comments for purely explanatory purposes – explanations that should not be misunderstood as an attempt to interpret the law.
We also wish to remind the reader that the most recent English version of the Standard published by CEN, CENELEC and ETSI (EN 301 549) takes precedence as the main reference over all other documents and previous versions, including the Swedish translation of EN. At the time of writing (September 2016) this main reference is version 1.1.2, published in April 2015. All other related documents, including this Guidance, should be viewed as ‘guidance’ in this context. The following comments should be regarded as our attempt at an explanation.

Comment 2: The provisions of LOU and LUF apply regardless of whether the object being procured is going to be used by the general public or by staff at the contracting authority.

Comment 3: The EU legal instruments mentioned in the final paragraph of Chapter 9, Article 2 LOU and LUF are primarily the European Accessibility Act [13], for which the EU Commission presented a proposal in December 2015 and a Directive concerning accessibility to the public authority’s web sites, which is currently (September 2016) being discussed by the EU.

Comment 4: According to Chapter 9, Section 2 LOU and LUF, an exception may be made only if there are special reasons to do so. It is stated in the proposal referred to the Council on Legislation for consideration that it is unclear what is meant by ‘duly justified cases’ in corresponding text in the Directive. It has also been said that “however, it is in the nature of things that it is the contracting authority that has the burden of proving, when procuring such objects that are to be used by natural persons, that there is reason to determine the technical specifications without taking account of the circumstances in clauses 1 and 2. These reasons shall also relate to the object of the procurement. A situation where the exception provision might apply is where it becomes apparent right from the start that the object being procured will not be used by people with disabilities.” (Proposal referred to the Council on Legislation for consideration, page 904.)

Comment 5: The fact that the provisions in LOU and LUF concerning accessibility are not applied in procurements outside the area governed by the Directive does not mean that it is prohibited to impose accessibility requirements in such procurements; quite the opposite.

7.7 UN Convention on the Rights of Persons with Disabilities (CRPD)

While work was being carried out on Mandate 376, Sweden’s Government signed the UN Convention on the Rights of Persons with Disabilities (CRPD) from 2006 [9]. This constitutes a commitment for states and is implemented through the laws and ordinances under which public entities are governed.

CRPD has been ratified by over 160 states, including the EU and EFTA. CRPD is the first UN Convention to encompass ICT and the EU’s Procurement Directive and refers to the Convention (see recital no. 3). For further details, see [link to the CRPD website].
Appendix 1: Guidance on support documents to the Standard and the Web Tool

B1.1 Introduction
The three technical reports [2-4] and Web Tool [5], produced in parallel with the Standard, have not been translated into Swedish.

The development of the Standard was preceded by a detailed preliminary study phase, which also forms the basis for generation of the requirements. This is reported in detail through [7].

There are three supplementary technical support reports to the Standard (see [2-4]) that exclusively use the preceding Public Procurement Directives (from 2004) and have not been updated for the new Public Procurement Directives (see reference [8] in Appendix 5 to the Guidance).

These are not translated into Swedish but are recommended to readers who would like a deeper understanding of the details of the Standard’s production, certain decisions and other details.

Guidance on the content of these reports is provided in this section.

There is also a Web-based Toolkit [5] that has not been updated to the latest edition of the Standard. This Web Tool cannot be used at the current time and first needs to be updated (and possibly further developed) to be of any use. The Standard was originally intended to constitute the basis of the Web Tool.

B1.2 Guidance on TR 101 550 [2]
ETSI TR 101 550 [2], or CEN/CENELEC/ETSI TR 101 550: ‘Accessibility requirements suitable for public procurement of ICT products and services in Europe’ constitutes a support document for the Standard and lists all of the standards and technical specifications used when developing requirements. References are also made to other documents necessary for implementation of the test procedures specified in the Standard.

New test methods produced during production of the Standard are noted. A number of explanations are also given for certain clauses as well as for some methods of measurement, particularly in cases where there are currently no tests that have been agreed globally.

Last but not least, some exceptional cases have been identified where continued research is considered necessary.

B1.3 Guidance on TR 101 551 [3]

The report also provides the background to the design of EN 301 549 with functional user performance statements on the one part and functional technical requirements on the other part, the aim of which is to demonstrate compliance with needs. It may be regarded as an application of Article 42, item 3c of the Procurement Directive 2014/24/EC, i.e. the technical specifications can be designed in terms of performance or functional requirements, with reference to standards as a means of presuming conformity with such performance or functional requirements. In other words, ‘performance and functional requirements’ in the Standard correspond to ‘performance statements’ in Section 4.2 of EN 301 549, while ‘standards’ correspond to ‘clauses 5 to 13’.

There is a description in clause 5.2.5 of the report of how the supplier can demonstrate that they have met the needs in clause 4.2. See chapter 5 of this Guidance.

ETSI TR 101 552 [4], or CEN/CENELEC/ETSI TR 101 552: ‘Guidance for the application of conformity assessment to accessibility requirements for public procurement of ICT products and services in Europe’ reports on various forms of certification concerning fulfilment of requirements under the Standard. Advice is also provided on the appropriate kind of certification to choose for various situations. In addition, there is a discussion on how to follow up how accessibility requirements can be maintained during contract management.

There are various kinds of certification of compliance with various levels of objectivity for different situations. These are described and defined in the standard SS-EN ISO/IEC 17000:2005: ‘Conformity assessment – Vocabulary and general principles’. This standard applies regardless of requirement area and thus has not been specially produced for ICT accessibility.

The three most important forms of certificate, which are also described in TR 101 552, are:

1. First party declaration, or self-declaration, where the supplier itself certifies that the product complies with a certain defined specification.
2. ‘Supplier’s Declaration of Conformity’, which is a first party declaration supplemented with more detailed information about how the supplier went about assessing whether requirements in the specification have been fulfilled.
3. Third party certification, which is a certificate issued by a person or organisation that is independent of both the supplier and customer interests. The party issuing the certificate may be accredited, i.e. authorised by an authority to certify.

The annexes in TR 101 552 [4] include examples of how certificates could be formulated.

It is worth noting that a third party certificate just states that a product has the accessibility it is said to have. A product is not more accessible purely because its accessibility has been certified by a third party, compared with self-declaration.

Clause 7 of [4] includes advice on what factors may affect the choice of certificate. It may involve, for example, how important the object being procured is for the operation or how critical accessibility is for employees with a disability.

Clause 8 in TR 101 552 provides advice about when it is appropriate to require various kinds of certificate. The principle of proportionality is important here, i.e. there should not be a requirement for certificates that are stronger and more complicated than necessary. This clause differentiates between requiring a certificate at the time of tender and requiring a certificate in the contract (as delivery acceptance or follow up after a certain period). It is stated here, for example, that:

- A first party declaration counts for more than a simple ‘yes’ answer, as the certificate shall be based on a verification of conformity.
- A requirement for ‘Supplier’s Declaration of Conformity’ is relevant when it is important to know which determination method was used as a basis for the certificate.
- A requirement for third party certification is only meaningful for series-produced products, as certification is normally part of the production process and thus takes place before the product is introduced onto the market.

The issue of how the principles for assessment of conformity can be used to follow up that accessibility is being maintained during the contract period is dealt with in clause 9 in [4]. As ICT normally changes during the course of the contract owing to changes in the operation and technical development, this may affect accessibility. If requirements have been imposed for the Standard to be
Guidance for application of EN 301 549

fulfilled, the follow-up may comprise selected tests in accordance with Annex C to EN 301 549 being implemented at periodic intervals during the term of the contract.

B1.5 Guidance on Web Tool [5]

A Web-based Toolkit was produced [5]. It is still in the evaluation stage and has not been updated to the latest edition of the Standard. For this reason, but also for other practical quality reasons, it cannot be recommended for use at this stage.

Appendix 2: Training package and presentation

A presentation and training package, comprising a PowerPoint presentation easily adaptable for different audiences (also suitable as a handout), is obtainable and accompanies this document.

Comment 6: The Guidance, training package and presentation are expected to be free and readily available through, for example, a Web page offering central access to all reference documents that are relevant in the context.
Appendix 3: Common questions and answers (Q&A)

1. Is there a European as well as a national version of the Standard in each EU and EFTA country?

The Standard is an approved European standard (EN) and thus applies as a national standard within all EU and EFTA Member States (totalling 28 and 4 respectively). If it were to become ‘harmonised’ (a special category used for legislative purposes), it would be approved and transposed in a further 16 CEPT countries (48 countries in total). Similar competing national standards within the same areas must be revoked. The Standard thus applies ‘throughout Europe’. It may possibly be supplemented with implementation instructions for each country, a document about specific processes and conditions for the country in question.

2. Has the Standard been translated into all of the other 23 official EU languages? Is there a Swedish version of the Standard?

The Standard has been developed and published in English. So far only a few countries – Spain, Sweden (see [1SE]) and Germany – have chosen to translate it to simplify its dissemination and use. More countries will follow.

3. Has the Standard been translated into our official national minority languages – Finnish, Meänkieli, Sami, Romany and Yiddish – and sign language?

No. Finland might translate the Standard into Finnish.

4. And other languages, such as Arabic, Serbo-Croatian or Spanish?

There is a Spanish and a German translation of the Standard. More languages will probably be added. A Croatian translation might be produced by Croatia.

5. Which version applies as reference in a legal context?

The most recent edition of the original English version (published by ETSI and printed on one of the ETSI’s reference printers, if relevant) always applies.

6. Which products and services are referred to as ‘ICT’ and are encompassed by the Standard, in concrete terms and more precisely?

According to the definition, the Standard encompasses “technology, equipment or interconnected system or subsystem of equipment for which the principal function is the creation, conversion, duplication, automatic acquisition, storage, analysis, evaluation, manipulation, management, movement, control, display, switching, interchange, transmission, reception, or broadcast of data or information.

Examples of ICT are electronic content, telecommunications products, computers and ancillary equipment, software, information kiosks and transaction machines, videos, IT services and multifunction office machines that copy, scan and fax documents.”

7. Is more accessible ICT good for everyone? Is it also more usable?

Adaptations of ICT that benefit all users, including people with disabilities (one in four people in Europe according to certain sources), will often be of benefit in everyday use situations and thus contribute to a more inclusive, digitalised e-society.

All passengers must be able to use a boat ticket machine located outdoors in direct sunlight and in heat.

‘More accessible ICT’ does not necessarily have to mean ‘more usable ICT’ but constitutes a precondition for access and use.
8. The term ‘Universal design’ is used in many contexts. Does this mean ‘design for all users’?

‘Design for all users’ refers to the term ‘Universal formulation’ which, according to the UN Convention on the Rights of Persons with Disabilities, means “the design of products, environments, programmes and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. ‘Universal design’ shall not exclude assistive devices for particular groups of people with disabilities where this is needed.”

It should be noted that ‘universal design’, like the Standard’s definition of accessibility, relates to a broader circle of users than just people with disabilities. It might be said that universal design relates to the accessibility needs of all users in such a way that universal design is the work process that may result in good ICT accessibility.

9. Should I use the Standard when developing my technology and products? How and when?

Yes, definitely. Those who do not already do so are lagging behind and at risk of weakening their competitiveness when, for example, participating in, among other things, public procurements.

It would be best to use the Standard as an integral part of your established development processes.

10. Do I need to adapt my development processes in any way?

Yes. It would be best to base your development processes on the Standard or at least include user-centred system development methods and usability requirements; this is the way in which to make best use of the Standard’s requirements.


An original English version of the Standard can be downloaded from the web sites of ETSI, CEN and CENELEC (see Appendix 5).


A web site with central access to reference documents relevant to the context (in an accessible format) should be made available.

12. Where do EN documents apply?

The Standard is an approved European standard (EN) and thus applies as a national standard within the EU and EFTA/EEA. Similar, competing national standards within the same areas must be revoked. The Standard thus applies ‘throughout Europe’.

13. Can the Standard be used for procurements below the thresholds?

The accessibility provisions referred to above do not apply to procurements below the thresholds. In other words, it is not mandatory to impose accessibility requirements on procurements below the thresholds. However, it is both possible and appropriate to do so.

14. How can I impose a requirement? What does this mean in practical and concrete terms?

There are four alternative ways for the procurer to impose requirements with reference to the Standard: A requirement to fulfil all, or some, needs in accordance with clause 4.2 and also a requirement to fulfil all, or just some, of the applicable functional requirements in clauses 5 to 13. See chapter 4 of this Guidance for details.
15. Can I impose requirements at several levels simultaneously, e.g. a basic level and more advanced level?

No, the Standard has just one requirement level. The opportunity to possibly use several requirement levels in parallel, for example, to encourage development or comply with more advanced requirements for certain users or in some more digitalised, ICT-mature countries has been discussed but not implemented.

16. How can the supplier fulfil requirements – and demonstrate that this has been done?

It is the supplier that determines the technical solution to be tendered. It is therefore the supplier who decides which technical requirements apply in the individual case; i.e. which of the conditions apply to the product or system in question.

It is actually permitted, but not appropriate, for the procurer to select the requirements that they consider are relevant to the usage context in question. See chapter 5 of this Guidance for further details.

There are three ways in which a supplier can demonstrate that a requirement for conformity with the Standard has been fulfilled (see chapter 5 and TR 101 552 [4] for details) by declaring:

1. that they have met the needs expressed in the functional performance statements in clause 4.2 of the Standard;
2. that they have met all of the applicable testable requirements that appear in clauses 5 to 13 of the Standard; or
3. how many of the applicable testable requirements which appear in clauses 5 to 13 of the Standard they have met.

If they have not fully met all of these requirements, the tenderer can provide additional evidence to show how they have fully met the performance statements in clause 4.2 that are addressed by the requirements that they have not met.

17. How long will the Standard apply?

Indefinitely. The Standard, including associated translation and support document covering ICT accessibility from a (largely) technologically independent, functional perspective, represents a significant investment. It has been developed thoroughly and with public support, with global acceptance and compatibility as its goals. The need to revise the Standard will be investigated every five years in the usual way and will be initiated, if necessary, to keep the Standard up-to-date.

18. Are there courses and training relating to ‘Standard (EN 301 549) knowledge’?

There is currently a presentation that can be used together with this Guidance.

Training will be arranged by appropriate stakeholders, such as public authorities or higher education institutions, depending on the nature of need.

19. Are there any accessible ICT products to procure – that fulfil the Standard’s requirements?

Yes, although it is taking time for ICT products and services that satisfy the requirements to ‘reach the shelves’. A requirement for full compatibility with the Standard in 2014 would probably have severely limited the number of tenders. Hopefully, many of the requirements will become so well-established as time goes by that they will be fulfilled by most ICT products, which would benefit and please all users.

20. Is information available on future accessibility technologies and products?

Yes, see, for example, ETSI Guide EG 202 848: ‘Human Factors; Inclusive eServices for all: Optimizing the accessibility and the use of upcoming user-interaction technologies’. This document, in English, is available free of charge from http://www.etsi.org/
21. Can we help to develop the next generation of accessible ICT products, where none currently meet the requirements of the Standard?
Of course, a long-term approach is an effective way of working and may also potentially lead to new business opportunities for suppliers of ICT products and services.

22. Can we influence the imposition of requirements and design so that there is more, better integrated accessibility (e.g. at the stage of the technology development process)?
Yes. The technology development cycles for some technology platforms may be quite long (for mobile telephony, up to 10 years between, for example, 2G, 3G, 4G and 5G). The better the opportunity to offer accessible products and solutions is integrated into and supported by a technology platform, the easier and more cost efficient it may be to address global accessibility perspectives and use them for socially beneficial purposes.

23. Can the same requirements be applied for procurement in several countries?
Yes, for example for procurements covering EU regions across borders or requiring interoperable ICT systems and services across borders.

Yes – but a response to this needs to be obtained from the public authority involved.

25. Who can I refer to with possible proposals for new requirements, improvements or ideas and wishes about future expansion?
General and specific comments, views, ideas and requirements will be gratefully received in the following ways:

In Sweden, contact one of the standardisation organisations ITS or SIS (or SEK), or one of the following public authorities: UHM, PTS or MFD.

- In Europe, contact the cooperation group for e-Accessibility (CEN/CENELEC/ETSI JWG e-Accessibility) or ETSI TC Human Factors (hfsupport@etsi.org or +33 492 94 42 28).
Appendix 4: Copyright and intellectual property

The Swedish Post and Telecom Authority (PTS) owns the rights to all materials and results – regardless of medium – attributable to this document.

PTS is entitled to modify, adapt or transfer parts of or the entire content for its own use and at its own expense.

All copyright, patent rights and intellectual property attributable to the result, which are not protected through moral rights, belong to PTS.

ETSI, CEN and CENELEC own the rights to the content of their documents [1- 4] and [7], including the Swedish translation of the Standard [1SE].

W3C owns the rights to the content of their documents [12].
Appendix 5: References and bibliography

A complete list of all applicable references (in English) is available in [1].

[1] CEN/CENELEC/ETSI EN 301 549: ‘Accessibility requirements suitable for public procurement of ICT products and services in Europe’
   Most recent version: v 1.1.2, 04/2015.

   Most recent version: v 1.1.2, 04/2015.

   Most recent version: v 1.1.2, 02/2014.

   Most recent version:

   Most recent version: v 1.1.2, 03/2014.

   See http://mandate376.standards.eu


[8] EU’s new ‘Public Procurement Directives’ (2014)
   See http://ec.europa.eu/environment/gpp/eu_public_directives_en.htm

[9] UN Convention on the Rights of Persons with Disabilities (CRPD)

[10] ‘Vägledning för webbutveckling: De officiella riktlinjerna för hur man bör arbeta med webbplatser i offentlig sektor’ [only available in in Swedish]
   See http://webbriktlinjer.se

Comment 7: The Swedish Post and Telecommunications Authority assumed responsibility for the web guidelines after the e-Delegation.

[11] M/376 Standardisation Mandate to CEN, CENELEC and ETSI in support of European accessibility requirements for public procurement of products and services in the ICT domain
Guidance for application of EN 301 549


[12] W3C 'Web Content Accessibility Guidelines (WCAG) 2.0’ (authorised Swedish translation available)

See http://www.w3.org/TR/WCAG20/

Comment 8: Also available as ISO/IEC standard, see ISO/IEC 40 500.


See http://ec.europa.eu/social/main.jsp?catId=1202&langId=en

Comment 9: These links were last checked on 21 October 2016.

Comment 10: All references are freely available in electronic format and are free of charge.