Sustainability of construction works - Assessment of social performance of buildings - Calculation methodology

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

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NATIONAL FOREWORD

See Eesti standard EVS-EN 16309:2014+A1:2014 sisaldab Euroopa standardi EN 16309:2014+A1:2014 inglisekeelset teksti.	This Estonian standard EVS-EN 16309:2014+A1:2014 consists of the English text of the European standard EN 16309:2014+A1:2014.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 20.08.2014.	Date of Availability of the European standard is 20.08.2014.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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Sustainability of construction works - Assessment of social performance of buildings - Calculation methodology

Contribution des ouvrages de construction au développement durable - Évaluation de la performance sociale des bâtiments - Méthodes

Nachhaltigkeit von Bauwerken - Bewertung der sozialen Qualität von Gebäuden - Berechnungsmethoden

This European Standard was approved by CEN on 23 November 2013 and includes Amendment 1 approved by CEN on 22 July 2014.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 16309:2014+A1:2014) has been prepared by Technical Committee CEN/TC 350 “Sustainability of construction works”, the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2015, and conflicting national standards shall be withdrawn at the latest by February 2015.

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

This document includes Amendment 1 approved by CEN on 22 July 2014.

This document supersedes EN 16309:2014.

The start and finish of text introduced or altered by amendment is indicated in the text by tags ⟦A1⟩ ⟨A1⟧.

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

Introduction

The purpose of this European Standard is to provide rules for the assessment of the social performance of new and existing buildings.

The social performance of a building is one aspect of the building's sustainability. The environmental performance and economic performance of a building are the other aspects of sustainability that should be assessed as part of a sustainability assessment of the building. Figure 1 illustrates how the assessment of the social performance fits within the concept of the sustainability assessment of a building.

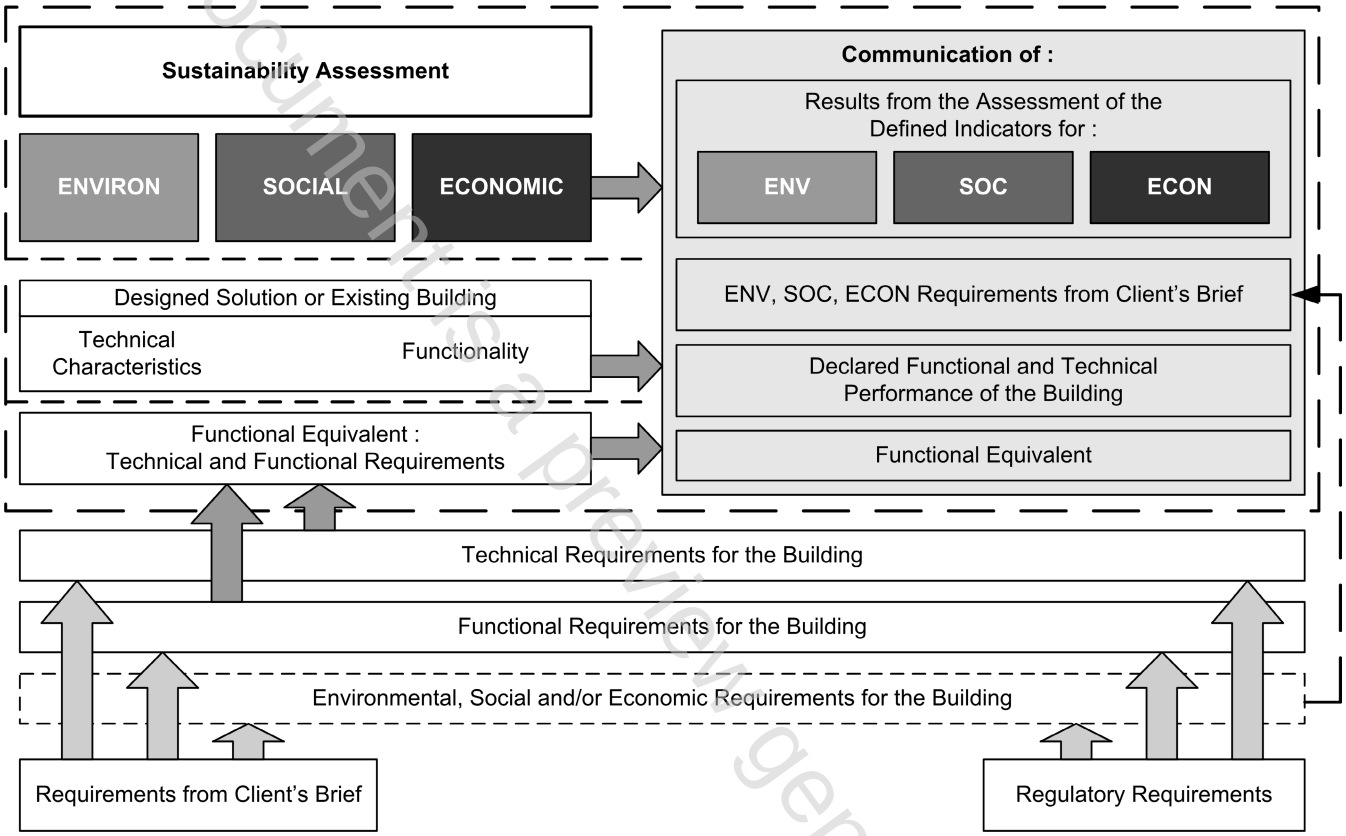
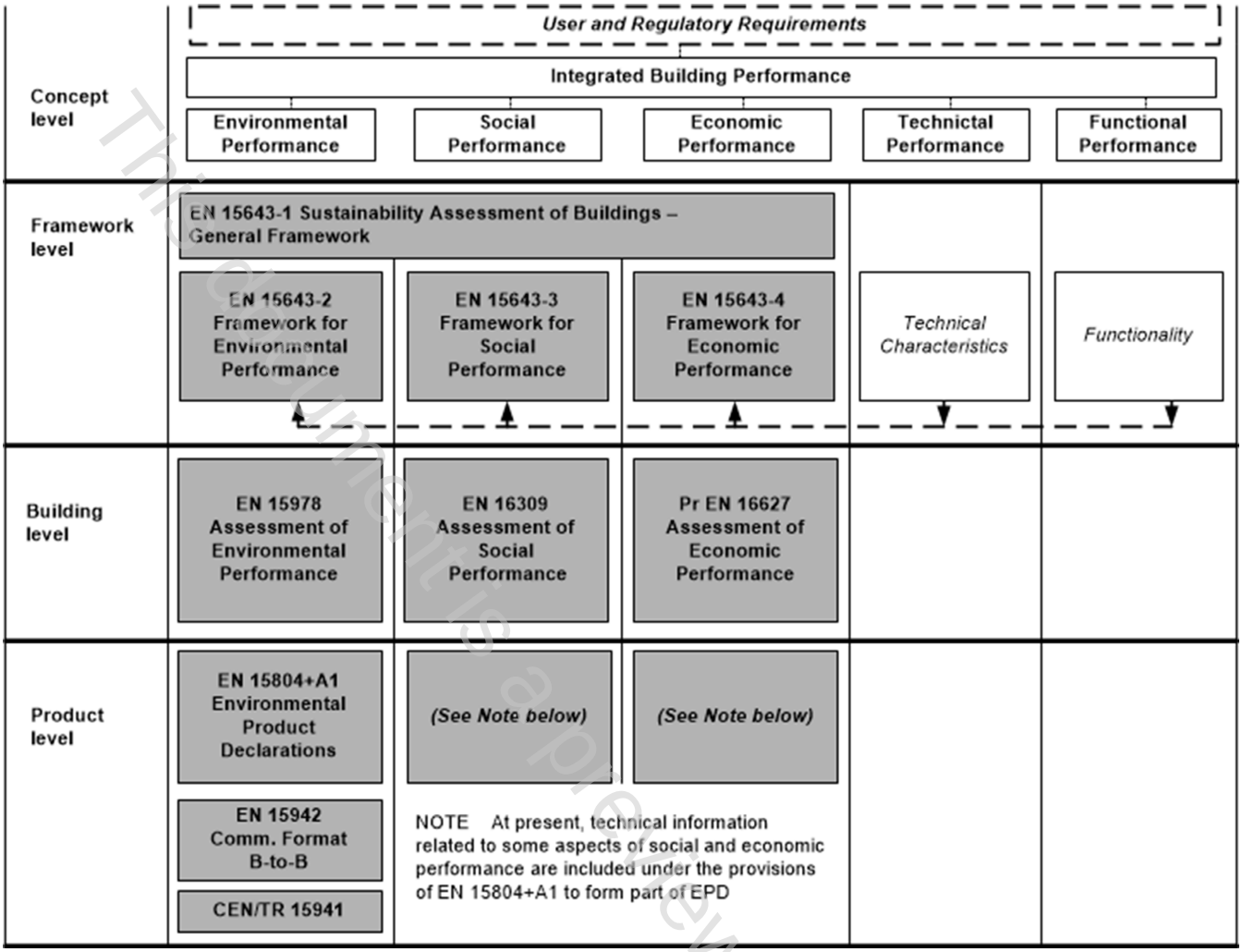


Figure 1 — Concept of sustainability assessment of buildings

This European Standard is intended to support the decision making process and documentation of the assessment of the social performance of a building.

In this European Standard, the method of assessment of the social performance of a building is based on a life cycle approach. The general requirements for sustainability assessment of buildings are described in EN 15643-1 (the General Framework standard). The framework for the assessment of social performance is given in EN 15643-3. Figure 2 shows other standards developed by CEN/TC 350 in this area, and also how they are related to this standard.

The assessment of social performance differs from the assessment of economic and ecological aspects in that it requires both quantitative and descriptive approaches. Where methods leading to a quantitative result are not available for assessment criteria and indicators, a checklist-approach is adopted to make the descriptive approach quantifiable.



NOTE The grey boxes represent the work programme as presented in EN 15643-1.

Figure 2 — Work programme of CEN/TC 350

1 Scope

This European Standard is one part of a suite of European Standards. The standard provides the specific methods and requirements for the assessment of social performance of a building while taking into account the building's functionality and technical characteristics.

This European Standard applies to all types of buildings, both new and existing. In this first version of the standard, the social dimension of sustainability concentrates on the assessment of aspects and impacts for the use stage of a building expressed using the following social performance categories (from EN 15643-3):

— accessibility;

— adaptability;

— health and comfort;

— impacts on the neighbourhood;

— maintenance;

— safety and security.

NOTE 1 Only impacts and aspects of the above social performance categories are deemed to have an agreed basis for European standardization at this time. Two of the social performance categories included in EN 15643–3 (sourcing of materials and services and stakeholder involvement) are not deemed to be ready for standardization at this time and will be considered for inclusion in future versions of this standard (see informative Annex C).

This standard does not set the rules for how building assessment schemes may provide valuation methods. Nor does it prescribe levels, classes or benchmarks of performance.

Valuation methods, levels, classes or benchmarks may be prescribed in the requirements for environmental, social and economic performance in the client's brief, building regulations, national standards, national codes of practice, building assessment and certification schemes, etc.

NOTE 2 Where National building regulations give minimum requirements and reference to assessment methods on these aspects, the social performance determined by assessment according to this standard can be used to determine the degree to which the building goes beyond the regulatory/legal requirements.

The corporate social responsibility (CSR) of organizations is not covered by this standard.

The standard gives requirements for:

— the description of the object of assessment;

— the system boundary that applies at the building level;

— the list of indicators and procedures for the application of these indicators;

— the presentation of the results in reporting and communication;

— the data necessary for the application of the standard, and

— verification.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1027, *Windows and doors — Watertightness — Test method*

EN 12208, *Windows and doors — Watertightness — Classification*

EN 12354-1, *Building Acoustics — Estimation of acoustic performance of buildings from the performance of elements — Part 1: Airborne sound insulation between rooms*

〈A1〉 EN 12354-2, *Building acoustics — Estimation of acoustic performance of buildings from the performance of elements — Part 2: Impact sound insulation between rooms*

EN 12354-3, *Building acoustics — Estimation of acoustic performance of buildings from the performance of elements — Part 3: Airborne sound insulation against outdoor sound*

EN 12354-5, *Building acoustics — Estimation of acoustic performance of building from the performance of elements — Part 5: Sounds levels due to the service equipment*

EN 12354-6, *Building acoustics — Estimation of acoustic performance of buildings from the performance of elements — Part 6: Sound absorption in enclosed spaces* 〈A1〉

EN 12464-1:2011, *Light and lighting — Lighting of work places — Part 1: Indoor work places*

EN 12865, *Hygrothermal performance of building components and building elements — Determination of the resistance of external wall systems to driving rain under pulsating air pressure*

EN 15251, *Indoor environmental input parameters for design and assessment of energy performance of buildings addressing indoor air quality, thermal environment, lighting and acoustics*

EN 15643-3, *Sustainability of construction works — Assessment of buildings — Part 3: Framework for the assessment of social performance*

CEN/TS 16516, *Construction products — Assessment of release of dangerous substances — Determination of emissions into indoor air*

〈A1〉 EN ISO 717-1, *Acoustics — Rating of sound insulation in buildings and of building elements — Part 1: Airborne sound insulation (ISO 717-1)*

EN ISO 717-2, *Acoustics — Rating of sound insulation in buildings and of building elements — Part 2: Impact sound insulation (ISO 717-2)*

EN ISO 3382-2, *Acoustics — Measurement of room acoustic parameters — Part 2: Reverberation time in ordinary rooms (ISO 3382-2)*

EN ISO 3382-3, *Acoustics — Measurement of room acoustic parameters — Part 3: Open plan offices (ISO 3382-3)*

EN ISO 10140-2, *Acoustics — Laboratory measurement of sound insulation of building elements — Part 2: Measurement of airborne sound insulation (ISO 10140-2)*

EN ISO 10140-3, *Acoustics — Laboratory measurement of sound insulation of building elements — Part 3: Measurement of impact sound insulation (ISO 10140-3)* 〈A1〉

EN ISO 13788, *Hygrothermal performance of building components and building elements — Internal surface temperature to avoid critical surface humidity and interstitial condensation — Calculation methods (ISO 13788)*

〚A1〛 EN ISO 16283-1, *Acoustics — Field measurement of sound insulation in buildings and of building elements — Part 1: Airborne sound insulation (ISO 16283-1)* 〚A1〛

ISO 2631, *Mechanical vibration and shock — Evaluation of human exposure to whole-body vibration*

ISO 15686-1:2011, *Buildings and constructed assets — Service life planning — Part 1: General principles and framework*

ISO 15686-2, *Buildings and constructed assets — Service life planning — Part 2: Service life prediction procedures*

ISO 15686-7, *Buildings and constructed assets — Service life planning — Part 7: Performance evaluation for feedback of service life data from practice*

ISO 15686-8, *Buildings and constructed assets — Service-life planning — Part 8: Reference service life and service-life estimation*

ISO 16817, *Building environment design — Indoor environment — Design process for visual environment*

3 Terms and definitions

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

3.1
assembled system
part of works
component or a set of components incorporated in the construction works

Note 1 to entry: Adapted from the definitions in the Construction Products Directive, Guidance Paper C and from the definition of construction in ISO 6707-1:2004.

[SOURCE: EN 15643-1:2010, 3.1, modified — Note 1 to entry has been slightly changed.]

3.2
building fabric
all construction products that are fixed to the building in a permanent manner, so that the dismantling of the product changes the performance of the building and the dismantling or replacement of the product constitutes construction operations

[SOURCE: EN 15643-1:2010, 3.4, modified — "All" has been added at the beginning of the definition.]

3.3
building-integrated technical system
installed technical equipment to support operation of a building

Note 1 to entry: This includes technical building systems and other systems for sanitation, security, fire safety, internal transport and building automation and control and IT communications.

[SOURCE: EN 15643-1:2010, 3.5]

3.4
component
construction product manufactured as a distinct unit to serve a specific function or functions

[SOURCE: ISO 6707-1:2004, 6.1.3]