



SLOVENSKI STANDARD
oSIST prEN 15643-1:2009
01-april-2009

**Trajnost gradbenih objektov - Celostno vrednotenje kakovosti stavb - 1. del:
Splošni okvir**

Sustainability of Construction Works - Assessment of Buildings - Part 1: General Framework

Nachhaltigkeit von Bauwerken - Ganzheitliche Bewertung der Qualität von Gebäuden - Teil 1: Generelle Rahmenbedingungen

Contribution des ouvrages de construction au développement durable - Evaluation intégrée de la performance des bâtiments - Partie 1 : Cadre général

Ta slovenski standard je istoveten z: prEN 15643-1

ICS:

91.040.01 Stavbe na splošno Buildings in general

oSIST prEN 15643-1:2009 **en**

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 15643-1

January 2009

ICS 91.040.01

English Version

Sustainability of Construction Works - Assessment of Buildings Part 1: General Framework

Contribution des ouvrages de construction au
développement durable - Evaluation intégrée de la
performance des bâtiments - Partie 1 : Cadre général

Nachhaltigkeit von Bauwerken - Ganzheitliche Bewertung
der Qualität von Gebäuden - Teil 2: Generelle
Rahmenbedingungen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 350.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

Page

Foreword.....	3
Introduction	4
1 Scope	7
2 Normative references	7
3 Terms and definitions	8
4 General principles.....	17
4.1 General.....	17
4.2 Relevance of technical and functional performance requirements	18
4.3 Consideration of building life cycle	18
4.4 Objectives of assessment of the building.....	18
4.5 Approach to assessment of environmental, social and economic performance	18
4.6 Other principles	19
5 Requirements for assessment methods	19
5.1 General.....	19
5.2 Object of assessment.....	19
5.3 Functional equivalent - requirements for basis for comparability	19
5.4 Type of data and data sources in the assessments.....	20
5.5 Transparency of the assessment methods.....	21
5.6 Requirements for communication	21
Annex A Work programme of CEN/TC 350	24
Bibliography	25

Foreword

This document (prEN 15643-1:2009) has been prepared by Technical Committee CEN/TC 350 “Sustainability of construction works”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 15643-1:2010

<https://standards.iteh.ai/catalog/standards/sist/2f65ba93-a688-4ff1-a176-4c7f50d1e5ba/sist-en-15643-1-2010>

Introduction

This European Standard forms part of a suite of the European Standards, written by CEN/TC 350, that provide a system for the sustainability assessment of buildings using a life cycle approach and quantitative indicators for the environmental performance, social performance and economic performance of buildings.

The purpose of this EN is to provide a framework with principles, requirements and guidelines for the sustainability assessment of construction works. The purpose of the suite of standards within this framework is to enable comparability of the results of assessments.

In carrying out assessments, only at the building level it is possible to provide necessary scenarios and a functional equivalent for the building. Assessment at the building level means that the descriptive model of the building with the major technical and functional requirements has been defined (as represented in the client's brief and regulatory requirements and are the same for each part of the assessment illustrated in the Figure 1).

This suite of standards will allow the sustainability assessment, i.e. the assessment of environmental, social and economic performance of a building to be made concurrently and on an equal footing, on the basis of the same technical characteristics and functionality of the object of assessment.

Although, the evaluation of technical and functional performance is beyond the scope of this suite of standards, the technical performance and functional performance are, considered within this framework by reference to the functional. The functional equivalent takes into account the technical and functional requirements and forms the basis for comparisons of the results of the assessment.

Figure 1, shows how the functional equivalent, and any deviation in the technical and functional performance from that required either by the client's brief or through regulation, are to be declared and communicated with the results of the assessment. Demands for the environmental, social and economic performance defined in the client's brief, or in the regulations, are made available for communication.

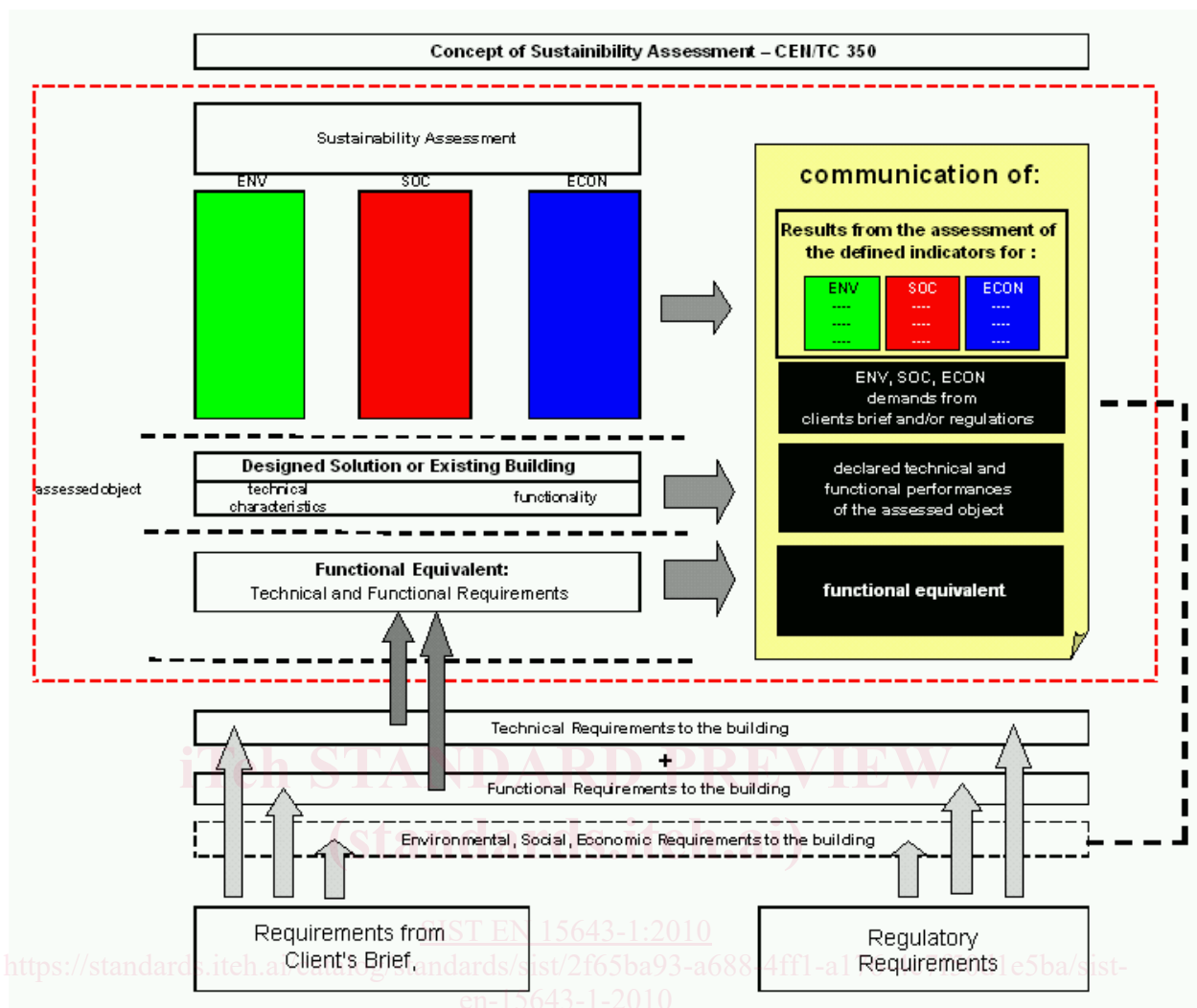


Figure 1 – The outer box with the dotted line represents the area to be standardised by CEN/TC350 and the concept of sustainability assessment of buildings

Developing a framework for the sustainability assessment of buildings as a contribution to implementing sustainability of construction works is a multi-step procedure.

The first revision of this framework standard will combine all four parts of the framework of this suite of standards into one framework standard.

When describing the integrated building performance at the "concept level", the environmental, social and economic performance are one part and the technical and functional performance are another; both parts are intrinsically related to each other, as described in the Figure 2. This interrelationship is prerequisite for an assessment of sustainability performance of buildings.

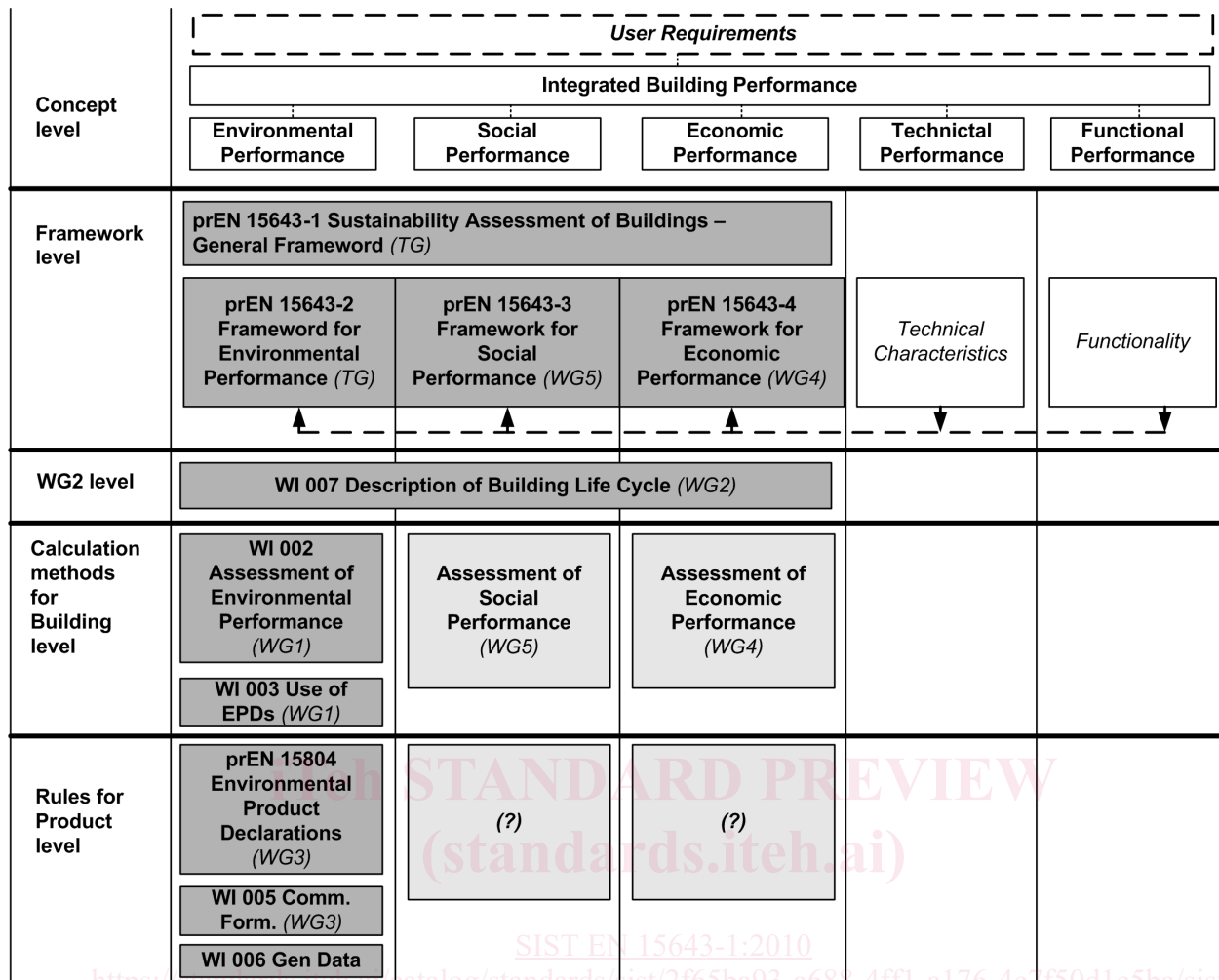


Figure 2 – The darkened boxes represent the work programme of CEN/TC 350

This framework is the Part 1 of the framework standards for sustainability assessment of buildings. It focuses on the general principles and requirements for the assessment of the environmental performance, social performance and economic performance of a building as described at the “framework level” in the Figure 2.

1 Scope

This European Standard provides the general principles and requirements, expressed through a suite of standards, for the sustainability assessment of buildings in terms of environmental performance, social performance and economic performance taking into account technical characteristics and functionality of a building.

The framework applies to all types of buildings, both new and existing, and it is relevant for the assessment of the environmental, social and economic performance of new buildings over their entire life cycle, and of existing buildings undergoing refurbishment, renewal or extension, to the end of their life.

NOTE 1 In the future, the assessment methodologies within this framework standard may be part of an overall assessment of integrated building performance. The assessment methodologies may also be extended to an assessment of the neighbourhoods and the built environment.

The standards developed under this framework do not set the rules for how the different assessment methodologies may provide valuation methods. Nor do they prescribe levels, classes or benchmarks for measuring performance.

NOTE 2 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 etc.

The rules for assessment of environmental, social or economic aspects of organizations are not included within this framework. However, their results, which impact the environmental, social and economic performance of the object of assessment, are taken into account.

2 Normative references

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

ISO 15392:2008, Sustainability in building construction — General principles.

ISO 15686-1, Buildings and constructed assets — Service life planning — General principles.

ISO 15686-2:2001, Buildings and constructed assets — Service life planning — Service life prediction procedures.

ISO 15686-7:2007, Buildings and constructed assets — Service life planning — Performance evaluation for feedback of service life data from practice.

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

ISO/TS 15686-9, Buildings and constructed assets — Service life planning — Guidance on the provision of reference service life data.

prEN 15643-2, Sustainability of construction works – Sustainability assessment of buildings – Framework for the assessment of environmental performance

prEN 15804, Sustainability of construction works — Environmental product declarations — Product category rules.

3 Terms and definitions

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

3.1

assembled system part of works

component (3.7) or a set of components incorporated in the *construction works* (3.10)

NOTE Adapted from the definitions in the Construction Products Directive Guidance Paper C and from the definition of *construction* in ISO 6707-1.

3.2

brief

written document that states the *client's* (3.6) requirements for a construction project

[ISO 6707-2:1993]

3.3

building

construction works (3.10) that has the provision of shelter for its occupants or contents as one of its main purposes and is usually enclosed and designed to stand permanently in one place

[ISO 6707-1:2004]

3.4

building site

specified area of land where a *building* (3.3) is located or is defined to be located and *construction work* (3.9) of the *building* and associated *external works* (3.25) are undertaken

NOTE Adapted from the definition of site in ISO 6707-1.

3.5

built environment

collection of man-made or induced physical objects located in a particular area or region

NOTE 1 When treated as a whole, the *built environment* typically is taken to include *buildings* (3.3), *external works* (3.25) (landscaped areas), infrastructure and other *construction works* (3.10) within the area under consideration.

NOTE 2 Adapted from the definition of *environment* in ISO 6707-1.

[ISO 15392:2008]

3.6

client

person or organization that requires a *building* (3.3) to be provided, altered or extended and is responsible for initiating and approving the *brief* (3.2)

[ISO 6707-1:2004]

3.7

component

construction product (3.8) manufactured as a distinct unit to serve a specific function or functions

[ISO 6707-1:2004]

3.8**construction product**

item manufactured or processed for incorporation in *construction works* (3.10)

NOTE 1 *Construction products* are items supplied by a single responsible body.

NOTE 2 Adapted from the definition in ISO 6707-1 according to the recommendation of ISO/TC59/AHG Terminology.

3.9**construction work**

activities of forming a *construction works* (3.10)

[ISO 6707-1:2004]

3.10**construction works**

everything that is constructed or results from construction operations

NOTE 1 This covers both *building* (3.3) and civil engineering works, and both structural and non-structural elements.

NOTE 2 Adapted from the definition in ISO 6707-1.

3.11**decommissioning**

activities of removing *building* (3.3) or an *assembled system (part of works)* (3.1) from operational status to non-operational status

3.12**delivered energy**

total energy, expressed per energy carrier, supplied to the *technical building system* (3.60) through the system boundary to satisfy the uses taken into account (heating, cooling, ventilation, domestic hot water, lighting, appliances etc.) or to produce electricity

NOTE 1 For active solar and wind energy systems the incident solar radiation on solar panels or on solar collectors or the kinetic energy of wind is not part of the energy balance of the building. Renewable energy produced on site is part of the delivered energy.

NOTE 2 *Delivered energy* can be calculated for defined energy uses or it can be measured.

[EN 15603:2008]

3.13**design life**

required *service life* (3.52)

NOTE Adapted from the definition in ISO 15686-1.

3.14**disposal**

waste (3.65) treatment operation other than *recovery* (3.45)

NOTE Adapted from the EC waste framework directive.