ILNAS

Institut luxembourgeois de la normalisation
de l'accréditation, de la sécurité et qualité
des produits et services

# ILNAS-EN 16627:2015

## Sustainability of construction works - Assessment of economic performance of buildings - Calculation methods

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

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

06/2015

**National Foreword**

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ILNAS-EN 16627:2015

# EUROPEAN STANDARD **EN 16627**

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## Sustainability of construction works - Assessment of economic performance of buildings - Calculation methods

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

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This European Standard was approved by CEN on 19 March 2015.

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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 16627:2015) 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of an identical text or by endorsement, at the latest by December 2015 and conflicting national standards shall be withdrawn at the latest by December 2015.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.

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# Introduction

The purpose of this European Standard is to provide calculation rules for the assessment of the economic performance of new and existing buildings as one part of an assessment of the sustainability of the building. It complements the European Standard EN 15643-4.

In EN 15643-4 the following economic assessment indicators are described:

This standard describes the methods and the rules for calculating the cash flows over the life cycle of buildings, with an emphasis on the field of life cycle costing. Principles developed in ISO 15686-5 are included, but have been adapted for sustainability assessment in the European context.

This standard describes two approaches to the calculation of economic performance:

a) Life Cycle Costing: Economic performance expressed in cost terms over the life cycle, taking account of negative costs related to energy exports and from re-use and recycling of parts of the building during its life cycle and at the end of life. Calculation of this indicator is mandatory for compliance with the standard.

b) Life cycle economic balance: Life Cycle Costing (see above) and in addition incomes over the life cycle and at the end of life. Calculation of this additional indicator is optional for compliance with the standard.

NOTE 1 Annex C describes a further optional approach, value stability.

This European Standard is part of a suite of European Standards, Technical Specifications and Technical Reports for the assessment of the economic performance of buildings that together support quantification of the contribution of the assessed building to sustainable construction and sustainable development.

The economic performance of a building is only one aspect of its sustainability. The environmental and social performance of the building are also aspects of sustainability that are assessed as part of a sustainability assessment. These are described in the framework standards (EN 15643-1, EN 15643-2, and EN 15643-3, EN 15643-4).

NOTE 2 The economic assessment is undertaken at the building level. However, it requires technical and cost information about individual products and components within the building and its services and systems, including service life data, type and frequency of inspection, replacement, cleaning, maintenance and repair, and deconstruction and disposal. This information is used as input quantities for the calculation of cost in the life cycle of buildings.

The evaluation of technical and functional performance is beyond the scope of this European Standard. Technical and functional characteristics are taken into account here by reference to the functional equivalent, which also forms a basis for comparison of the results of assessments.

This European Standard is intended to support the decision-making process and documentation of the assessment of the economic performance of a building. Although the assessment results are based on realistic scenarios, they may not fully reflect the actual and future performance of the building. Figure 1 illustrates how the assessment of the economic performance takes place within the concept of the sustainability assessment of buildings.

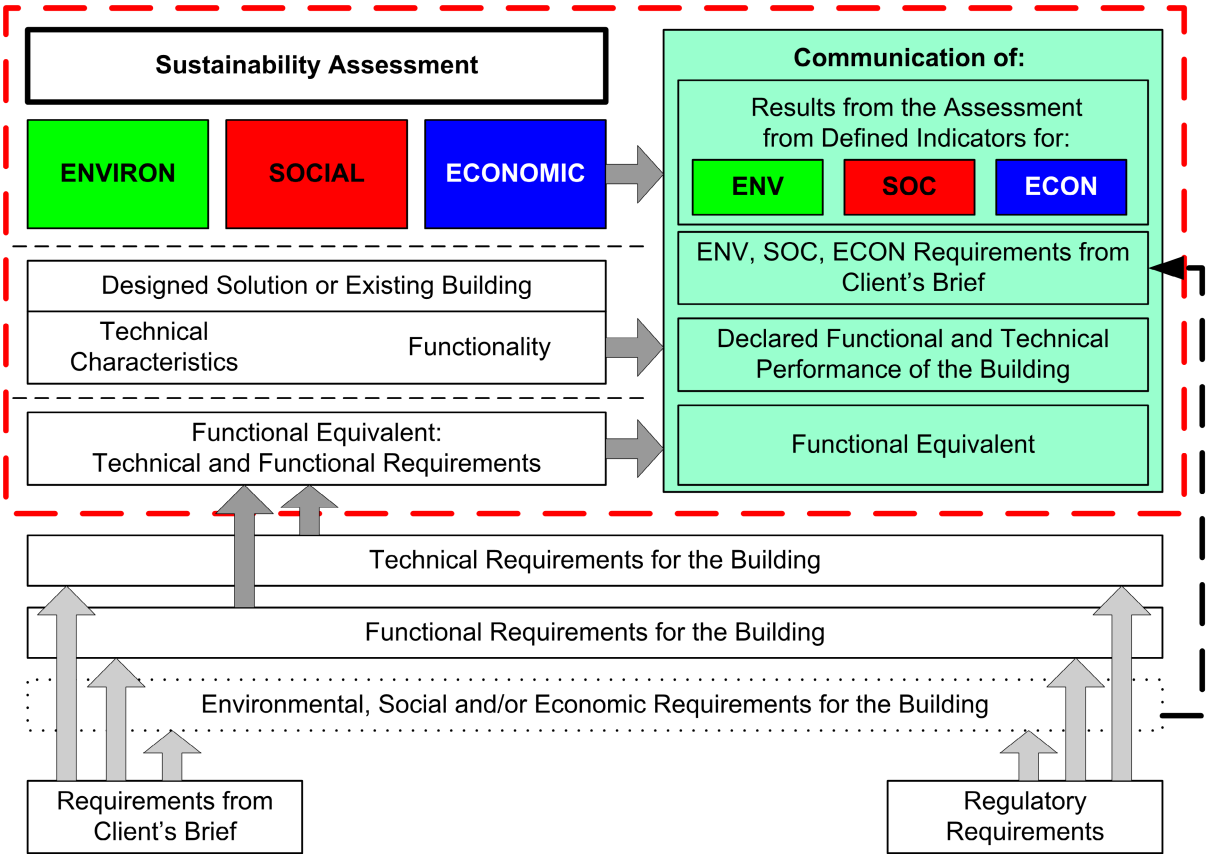


**Figure 1 — Concept of sustainability assessment of buildings**

In this European Standard, the assessment method for the quantitative evaluation of the economic performance of the building is based on a life cycle, cash flow approach. The general requirements for sustainability assessment of buildings are described in EN 15643-1 (the general framework standard).

It is important to use a consistent model for describing and recording the building and its life cycle for assessing the environmental, social and economic performance. The same reference study period is used for all three elements of the assessment.

Additional specific requirements for the assessment of economic performance are given in EN 15643-4, including additional pre-construction activity and costs such as site costs and professional fees, which are quantified and reported in the additional information module A0.

The calculation of economic indicators uses a model of the building and its life cycle with associated time and financial costs. An economic performance assessment supports a complete sustainability assessment, including an environmental or social performance assessment or both. The economic assessment can also provide data for:

— budgeting, by estimation of future maintenance or operational costs;

— tendering, e.g. by estimation of future cleaning costs sensitivity analysis, e.g. estimation of future energy costs (nominal values);

— estimating end of life costs and waste streams;

— specific economic analyses (e.g. cost benefit analysis);

— assigning cash flows to individual actors (landlord/tenant);

— applying methods of valuation (e.g. investment appraisal).

Other European Standards developed by CEN/TC 350 in this area, and how they are related to this European Standard, are shown in Figure 2.

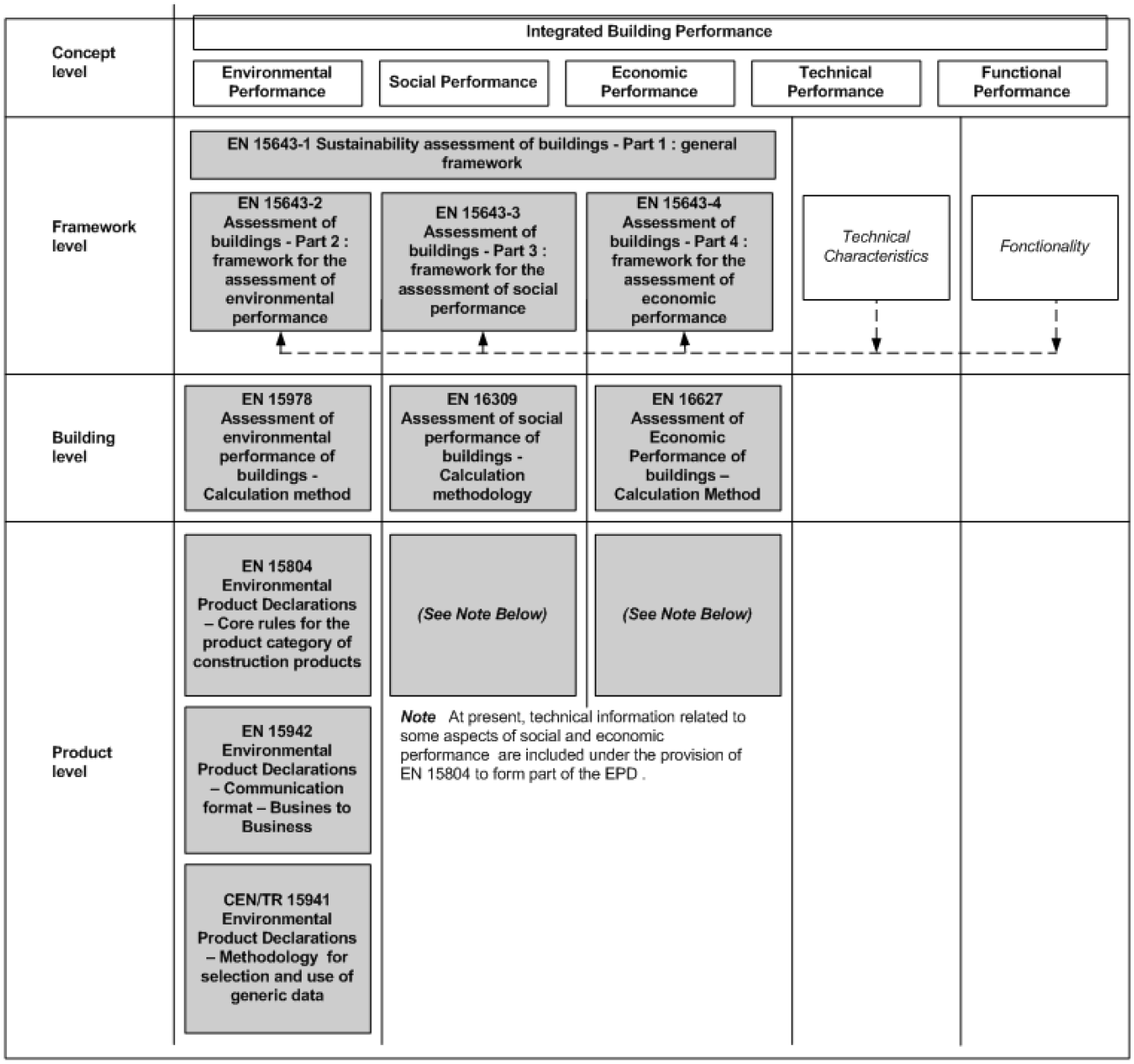


**Figure 2 — Work program of CEN/TC 350**

NOTE 3 This European Standard is intended for use to assess the economic aspects of sustainable performance of a building. This is a distinct activity from the Commission Delegated Regulation (EU) No 244/2012 of 16 January 2012 supplementing Directive 2010/31/EU of the European Parliament and of the Council on the energy performance of buildings, which is a methodology for the setting of energy performance standards in national and regional building regulations by Member States, and not for use on specific buildings.