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Buildings and constructed assets — Service life planning —

Part 7: Performance evaluation for feedback of service life data from practice

*Bâtiments et biens immobiliers construits — Prév́ision de la duré́e
de vie —*

*Partie 7: Évaluation de la performance de l'information en retour
relative à la duré́e de vie, issue de la pratique*



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Contents

	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Methodological framework	3
4.1 Service life planning.....	3
4.2 Performance assessment of service life in the course of the construction life cycle.....	4
4.2.1 Relation to service life design and reference service life (RSL).....	4
4.2.2 Life cycle performance of construction.....	5
5 Performance surveys	7
5.1 General.....	7
5.2 Registration level and user-oriented types of inspection.....	8
5.3 Phases and activities in the performance survey.....	9
5.3.1 General overview.....	9
5.3.2 Defining the task.....	10
5.3.3 Planning.....	11
5.3.4 Examination.....	12
5.3.5 Evaluation.....	14
5.3.6 Reporting.....	17
Annex A (informative) Guidance on Factor E — Environmental classification systems and methods for assessment in microenvironments	19
Annex B (informative) Prediction of (residual) service life on the object (single building) level and on the network level (population of buildings)	24
Annex C (informative) Prediction of the performance development over time by Markov Chain	25
Annex D (informative) Worked example of RSL data records from “Inspection of buildings”	30
Bibliography	33

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by ISO Technical Committee ISO/TC 59, *Buildings and civil engineering works*, Subcommittee SC 14, *Design life*.

This second edition cancels and replaces the first edition (ISO 15686-7:2006), which has been technically revised.

A list of all the parts in the ISO 15686 series can be found on the ISO website.

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Introduction

The ISO 15686 series, including this document, is an important contribution to the development of a policy for design life. A major impetus for the preparation of the ISO 15686 series is the concern over the inability to predict service life, costs of ownership and maintenance of buildings and constructed assets. Common methods and standards for performance assessment and proper feedback of data from practice are decisive in order to make experience data from the building stock more consistent and comparable.

This document provides a framework to channel information, collected as part of building performance surveys and assessments, into structured data that can be used in various aspects of the service life planning process.

By applying the generic protocol and terms from this document, to evaluate the service life performance during a building's life cycle, practitioners can generate "in-use" service life data, as referenced in ISO 15686-2 and ISO 15686-8.

The inspection and reporting procedures described in this document, acknowledge that both the condition, of any given building, component or system, as well as performance requirements, can change during the lifecycle. Those changes typically result in corrective actions, maintenance or re-commissioning, to rectify the performance gaps. While commissioning, re-commissioning and maintenance planning are beyond the consideration of this document, the interactions and significance of initial inspection data, maintenance-driven inspections, changed performance expectations, performance surveys, service life predictions and service life planning are discussed.

ISO 15686-10 stipulates that functional performance is to be assessed at various stages during the whole life, most critically during the project delivery phase, and at commissioning. Functional performance assessments are to continue during the property management phase and when considering disposal, to compare actual serviceability profile of the facility to the generic or typical functional requirement profile of potential occupants or buyers. This document provides essential input to the functional performance review process of ISO 15686-10 and as such is of importance to all members of the building team.

ISO 15686-4 lays out procedures for the application of Building Information Modelling (BIM), specifically to provide a consistent computerized structure for the retention and use of service life planning information and service life predictions. Coupled with the emergence and inherent capabilities of BIM, the techniques described in this document will become more useful, lead to better service life estimations and generally improve service life planning.

This document is intended for all members of a building team, e.g. building owners and developers, professional advisors, constructors, assessors, manufacturers of building products, insurers, managers of both publicly and privately owned constructed assets.