Zeitschrift:	IABSE reports = Rapports AIPC = IVBH Berichte
Band:	77 (1998)
Artikel:	Strategic decisions about rehabilitation of buildings
Autor:	Moga, Andrei / Popa, Petru
DOI:	https://doi.org/10.5169/seals-58212

Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften auf E-Periodica. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Das Veröffentlichen von Bildern in Print- und Online-Publikationen sowie auf Social Media-Kanälen oder Webseiten ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. <u>Mehr erfahren</u>

Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. La reproduction d'images dans des publications imprimées ou en ligne ainsi que sur des canaux de médias sociaux ou des sites web n'est autorisée qu'avec l'accord préalable des détenteurs des droits. <u>En savoir plus</u>

Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. Publishing images in print and online publications, as well as on social media channels or websites, is only permitted with the prior consent of the rights holders. <u>Find out more</u>

Download PDF: 02.07.2025

ETH-Bibliothek Zürich, E-Periodica, https://www.e-periodica.ch

Strategic Decisions about Rehabilitation of Buildings

Andrei MOGA Prof. Dr. Technical University Cluj-Napoca, Romania

Petru POPA

Prof. Dr. Technical University Cluj-Napoca, Romania Andrei Moga, born 1944, received his civil engineering degree from Technical University in 1969 and PhD in 1988. He is currently professor of technology and management engineering at the Technical University.

Petru Popa, born 1934, received his civil engineering degree from Technical University in 1958 and PhD in 1963. He is currently professor of technology and management engineering at the Technical University.

Summary

An important phase in the rehabilitation programme for the retrofitting and upgrading of the existing building stock is making decisions on the need to preserve or demolish the buildings. The time is an important factor in evaluating the future structural stability of the building and making strategic decision on repair and strengthening. Two-basic stages that must be taken in order to decide on the structure which is to be rehabilitated are described.

Keywords : rehabilitation, decision, building stock, time

1. Introduction

Many countries have adopted programmes for the retrofitting and upgrading of the existing building stock, which provide procedures for the systematic survey and rehabilitation of o.d buildings, and establish a priority system for a building review and determine whether rehabilitation works are needed. These programmes are very important because many old buildings may be vulnerable to damage due to a variety of conditions.

Time is an important factor in evaluating the future structural stability of the building and making strategic decisions on repairing and strengthening in accordance with the trend in standards of rehabilitation. Therefore any of the decisions must be established in accordance with the time related to the future service life and the vulnerable degrees of the buildings for an intervention from the urgency view point.

In many cases, old types of construction are just not covered in a current code requirements.

Upgrading an old building to comply with current standards for new constructions is generally extremely difficult and costs as a full upgrading often requires extensive demolition and reconstruction and its economic impact can result in the abandonment of a rehabilitation programme.

2. Informational Aspects

With a view of creating a comprehensive image about the existing building stock, from the point of view of structural safety, it is first of all necessary to take into account the following aspects:

- the different categories of buildings, from the point of view of functional destination and beneficiaries
- the verification of structural adequacy
- the general development strategy of the existing building stock as part of investments and systematisation actions.

The putting into safety of the existing building stock includes two main aspects: the evaluating of extend situation and the organising of the necessary adequate actions.

The gathering of the main information about the existing building stock includes three main aspects: the inventory, evaluation and classification of buildings.

The purpose of the inventory is to identify and to make a preliminary assessment of the present condition of the existing building stock through picking up the necessary dates for the identification of the buildings (situation, property, functional destination, age, dimensions) and the framing in some categories.

The evaluation represents an exact technical action which must conclude with the engineering information having as a result of the possible as performance of the buildings exposed to a variety of possible loading and environment aggressive conditions.

The classification represents the final framing of the existing building stock in some categories in accordance with some criteria (future service life, vulnerable degrees intervention from the urgent view point).

The evaluation problem of the present condition of the existing building stock, the establishment of the adequacy of the structures, the development of improved methods and technologies about the resistance capacity and the safety level, constituted preoccupations for a large number of countries in the last decades.

3. Decisional Aspects

An important phase in the rehabilitation of building stock is making decision on repair and strengthening.

Any of the decisions must be established in accordance with the time related to the future service life and the vulnerable degrees of the building for the intervention from the urgency view point.

For the putting on safety the existing building stock it is necessary to grind the decisions and adequate emergency measures with a view to the upgrading of safety level or the extensive demolition.