



Delft University of Technology

Life span assessment of dwellings

Thomsen, Andre; Straub, Ad

Publication date

2018

Document Version

Final published version

Citation (APA)

Thomsen, A., & Straub, A. (2018). *Life span assessment of dwellings*. 93-93. Abstract from ENHR Conference 2018, Uppsala, Sweden.

Important note

To cite this publication, please use the final published version (if applicable).
Please check the document version above.

Copyright

Other than for strictly personal use, it is not permitted to download, forward or distribute the text or part of it, without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license such as Creative Commons.

Takedown policy

Please contact us and provide details if you believe this document breaches copyrights.
We will remove access to the work immediately and investigate your claim.

*This work is downloaded from Delft University of Technology.
For technical reasons the number of authors shown on this cover page is limited to a maximum of 10.*



UPPSALA
UNIVERSITET



ENHR 2018

UPPSALA • JUNE 26–29

EUROPEAN NETWORK FOR HOUSING RESEARCH

MORE TOGETHER, MORE APART:
MIGRATION, DENSIFICATION, SEGREGATION

BOOK OF ABSTRACTS

Life span assessment of dwellings

4. Energy Efficiency and Environmental Sustainability of Housing

André Thomsen¹

Ad Straub²

¹ Delft University of Technology, Fac. Architecture & BE

² Delft University of Technology, OTB

What is the average life span of dwellings?

Though of decisive importance for the provision, maintenance and management of housing stocks, and despite a choice of research papers about the subject, the last word about this question is far from said.

At first a distinction should be made between the technical life span and the functional service life. The technical life span is decisive for the physical existence of a dwelling, the service life for the length of time that a dwelling fulfils the functional needs of households.

This distinction is not always clear in the available research sources which show a wide range of approaches, varying from ex-ante assessment of the physical condition and estimation of the residual technical lifespan, financial analyses of the profitable service life and/or depreciation period through ex-post mortality analyses in analogy to human mortality. Most ex-ante approaches start from a limited scope; an all-encompassing interdisciplinary approach is missing. On the other hand ex-post analyses suffer from the fact that – in contrary of human populations – buildings are man-made, -managed and -demolished; the vast majority of housing stocks is very young and consistent longitudinal series are missing. As a result, none of these approaches leads up to now to useful results, let alone reliable predictions.

As the technical life span of a dwelling as a whole strongly depends on its numerous different components, knowledge of technical life spans of dwellings and building component is also of decisive importance for ex-ante environmental life cycle assessments and life cycle cost calculations.

Based on an overview of the available sources, the paper discusses the pros and cons of the existing knowledge, possible improvements and alternatives.