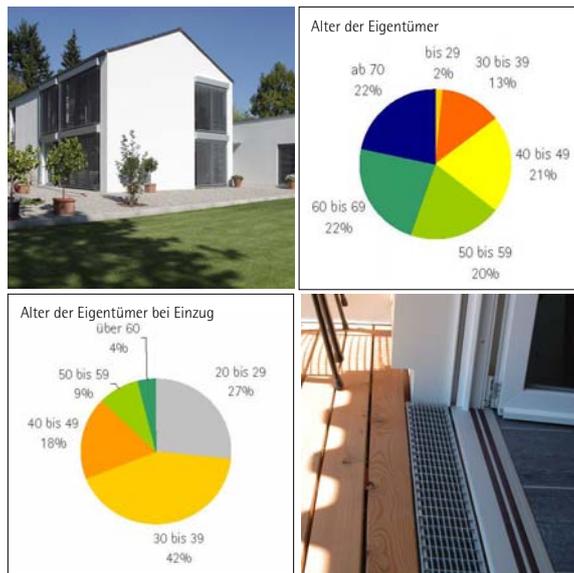


Ein- und Zweifamilienhäuser  
im Lebens- und Nutzungszyklus

English Summary

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Adaptation of Existent and Adaptability of New Buildings  
Concepts, Procedures, Products



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**WEBER+PARTNER**

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# Family Homes in Life Cycle

Adaptation of Existing and Adaptability of New Buildings  
Concepts, Procedures, Products

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The study is part of a twin project – this part dealing mainly with customisation and adaptability of the building as a whole, the other focussing on appointments and equipment<sup>1</sup>.

Our subject – life cycles of family homes – is usually discussed in the context of sustainability, i.e. in terms of durability, low operating costs, economic maintenance and of course thorough ecological compliance.

But life cycles are rarely continuous and simple. There are changes in the use of houses because inhabitants change their wants and habits or are confronted with new necessities, and this quite often alters their living and impacts their dwelling conditions and house as well. Also new inhabitants may move in, bringing with them many other different requirements. Thus, in a wider perspective, sustainability can also be seen as a dwelling's capacity to allow changes and reasonable alterations, which are not aimed at maintenance or energy saving and the like. This "human-life-related" life cycle of houses is the general focus of our study.

We intended to cover five main questions:

- 1 How may the needs of family home dwellers change during their lifetime?
- 2 What are the main issues regarding common types of family homes?
- 3 What adaptation issues are there suitable solutions for, and which are lacking solutions altogether?

- 4 How can the problems faced during the adaptation projects of old houses be avoided in new building development?
- 5 To what extent are adaptations, which meet inhabitants' needs, an opportunity for further modernisation of the house and vice versa?

Some topics covered in this context:

- 1 Family home dwellers change very much during their lifetime:
  - ▶ A family may grow or shrink  
Age brings other needs (preschoolers, school aged children, teenagers, young adults etc.)
  - ▶ A family member may become disabled or need nursing care
  - ▶ A family or family members may change lifestyle or hobbies
- 2 The main issues regarding common types of family homes are:
  - ▶ Poor square-meterage
  - ▶ Small and mono-functional rooms
  - ▶ Dangerous stairs; stairs in open-plan concepts
  - ▶ Houses preventing functional partition
  - ▶ Cramped entrance and corridors; steps
  - ▶ Insufficient storeroom
  - ▶ House too big for a one- or two-person household
  - ▶ Insufficient parking close to the house
- 3 For some adaptation issues suitable solutions do exist:
  - ▶ Unifying small rooms or moving walls may provide suitable adaptations
  - ▶ Attachments or independent annexes may provide necessary enhancement for a growing family

<sup>1</sup> Niedersächsische Fachstelle für Wohnberatung, Katrin Hodler, Annette Brümmer

- ▶ Reorganizing the ground floor may increase the usability of a house for the elderly
- ▶ Two family dwellings usually offer a growing family good conditions to expand and are a reversible solution

For other adaptation issues suitable solutions are lacking:

- ▶ Very few of the larger houses allow division into two autonomous dwelling units
- ▶ The house's construction, along with a lack of further buildable land, may prevent any useful change or extension – inhabitants might be better to move
- ▶ Staircase problems are usually hard to resolve; subsequent installation of a stair lift should normally be possible  
In special cases, a stair lift is unsuitable and an elevator becomes necessary, leading to much bigger problems (space, finances etc.)
- ▶ The trend of 3- and 4-level town-houses contributes to the stock of nonflexible family homes

- 4 The problems faced during adaptation projects of old houses can be avoided in new building development by:
- ▶ Using scenarios of possible changes in the house's occupancy and the occupants way of life to check sustainable usability
  - ▶ Separating the main structural components and further technical elements, to allow alteration without major damage  
This also enhances the possibilities for reusing recyclable materials
  - ▶ Provide soundproofing between individual rooms as such and individual rooms and the rest of the house (e.g. ceiling)

- 5 Adaptations, which meet inhabitants' needs, are often an opportunity for further modernisation of the house and vice versa:
- ▶ The elderly are less likely to make major changes
  - ▶ Adaptations tackled while a house is empty can easily be combined with modernisation of any kind, especially structural work, altering door and window apertures and building services (heating, ventilation, sanitation, electrics etc.)
  - ▶ Possible energy savings are based, for the most part, on the state of the building envelope and on the supply of thermal heat – both can be modernised with fewer limitations to common house usage
  - ▶ Planned repair of wear and damage should be carried out together with desired adaptations and vice versa – having the chance to use the same resources for both will reduce cost and effort

Beyond these questions and answers further statements and suggestions have been made:

- ▶ The majority of family home tenants are over 60 years of age, thus the necessity of alteration and modernisation of houses will considerably increase. In addition, new regulations will require energy saving constructional measures and changes of technical equipment. But the elderly are not only the least likely to make any avoidable changes in their houses, but also the most unwilling to move.
- ▶ New house's construction and design is strongly influenced by requirements of young families, who are the main clients or buyers in this market and don't bother about e.g. barrier free layout and details.

Thus the big stock of unadapted houses continues to grow, which obstructs both, allow people to stay, and let them find more suitable dwelling elsewhere.

- ▶ The existing promotion programmes established by the federal government, federal state's governments and local authorities are manifold. They tend to be special in terms of assigned purposes, appropriate scheme of things, addressees and financial conditions. This seems to be a challenge to create some more transparency and customer-friendliness.