Vario Apartments

Goals and Strategies

Reducing Construction Time

With the use of prefabricated elements, components such as entire facades, sanitary cells or space modules, the construction process can be accelerated. This is an advantage, especially in inner-city locations. Restrictions on residents are kept low, and logistics are potentially simplified.

Affordable Construction

In order to reduce construction costs, the projects pursue various strategies, including simplified construction, standardized components, serial floor plan designs and reduced fit-out standards.

Adjustable Construction

The model projects have different approaches towards adaptability. All of them are considered for elderly friendly living. Sufficient widths, movement areas and mostly barrier-free bathrooms allow the use even with handicaps. Targeted breakthroughs enable a precisely defined re-use at low costs. Skeleton constructions with large spans allow a very high flexibility of floor plans, though associated with higher manufacturing costs.

Quality of Use

An essential requirement in the funding program is the creation of community spaces. These give room for informal meetings and enable activities which are not possible within the individual living units.

Sustainable Construction

All model projects have been subjected to a sustainability certification. Their ecological, economic, socio-cultural, technical and process qualities were considered.
The buildings' entire life cycle is considered through Life Cycle Assessment (LCA) and Life Cycle Costing (LCC).

After more than 20 years of vacancy, 247 dwellings have been created for students in the former dental clinic in Erfurt. The production costs amounted to 1,775 €/m² living area and were thus significantly lower than the costs for a comparable new building.

In Chemnitz, due to pre-planned possible breakthroughs and non-load-bearing lightweight walls, a variety of floor plans is guaranteed in case of subsequent use at minimal cost.

In Berlin-Marzahn, more than 5m² of common area is available per resident. The common spaces are connected by an air space between two floors and have a high spatial quality. The furnishing allows a wide range of possible uses and the appropriation by the tenants.

For the Hamburg-Steilshoop model building project, entire room cells were prefabricated. 48 room units with a gross capacity of 8,400 m³ were assembled within 10 working days. The material for interior fittings was delivered directly to the construction site, included in the respective space modules.

In Meschede, the former job center (left figure) was refurbished sustainably to a large extent after more than 16 years of vacancy. Here, the continued use of the embodied energy contained in the shell structure, the consistent supply of renewable energies and smart building technology is essential to the concept.

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