

# Equipping Accommodation Facilities in Universal Design

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## Initial Situation

Hotel rooms are usually equipped with traditional and standard furniture that does not take disabilities into account. Many accommodating facilities offer some rooms that are barrier-free or meet the needs of people with disabilities. According to hotel operators, these rooms can be rented to people without disabilities at a discounted rate only. Reasons for that are seen in the often stigmatising appearance of their equipment. Today, hoteliers do not keep available a large number of such rooms for economic reasons. Only some offer several accessible rooms; but these are usually hotels specialising in the target group of people with disabilities, not wanting to address other guests.

## Objective

The subject of the project is to develop guidelines for design, construction and manufacture to equip accommodation facilities for individual, all-round barrier-free and accessible use in accordance with the principles of Universal Design. In that respect, focus is on the issues of flexibility and combinability, upgradability and longevity, individuality, functionality and mobility as well as reasonable pricing. It also covers the prototyping of such equipment modules.

## Approach and Results

The widely varied requirements of furniture for accommodations were determined in a first step. This did not only involve occupants of rooms (patients in a sanatorium or hotel guests), but also the requirements of management levels (for reasons of economy) or service personnel (for reasons of handling).

Based on the requirements summarised in a catalogue, the guest areas were further subdivided (into access, entrance and reception areas, corridors, rooms with a bathroom, dining halls) from the points of view of interior design and furnishing, bearing the criteria of orientation and information in mind.

The development of floor plan design solutions for all guest areas took into special account necessary space for movement. A concept was developed for orientation within the accommodation facility and for providing information having people with limited visual or aural competencies in mind.

Detail solutions were worked out for furnishing a sample room and evaluated based on a survey among experts. Not all the suggestions could be implemented, for either economic or hygienic reasons. In a review of these solutions, they were improved and then served as a basis for the manufacture of functional samples. Solutions were provided, for example, for effortlessly handling wardrobe doors, on a par for both left-handed and right-handed users, which can



Fig. 1: Solution of a handle for corpus furniture



Fig. 2: Backlit handle at corpus furniture



Fig. 3: Bed in the sample room

be produced serially and efficiently on traditional machines. The handle solution was combined with a backlighting concept which allows to easily find them, also at night (Figs. 1 and 2).

The functional samples were subjected to stability and durability tests and tested by guests during their stays in the sample room of a sanatorium (one to three weeks). Fig. 3 and Fig. 4 show the complete sample room.

The users (n=12) were interviewed for their experience in handling the novel furnishing. This survey yielded high-level acceptance of the new equipment. There were differing statements regarding the appropriateness of the bed, which was tuned to the needs of a wheelchair user. The target group of heavily disabled wheelchair users was deleted from the the catalogue, when the requirements were weighted for economic reasons. Special nursing care beds are available for that group of people. On request of the project partners, the bed shall be reviewed from the point of view of the people concerned in another project.



Fig. 4: Chair, table and wardrobe in the sample room