Abstract

Building services don’t have the same service life as the building. The pipes for domestic water, wastewater and space heating are often placed in the slabs and walls. Leakages cause damages on adjacent constructions and the costs for repairs become much more expensive than necessary. If the services were easily exchangeable it would be possible to reduce both material and labor costs. Exchangeable services also give flexibility and better opportunities to adapt the building for new purposes. Material separation after demolition is also facilitated.

The aims of the project are to analyze, evaluate and develop the possibilities with exchangeable building services in residential buildings and to shoe how exchangeable building services could be performed. This second part of the study is carried through as a case study where the services in four departments are easily exchangeable and traditionally performed in 43 departments. The object is followed and documented through the phases of design and erection. An analysis of, economical and organizational consequences are done.

Compared to traditional performed hidden services the exchangeable services generally are a bit more complicated in the design phase and therefore more expensive. This is especially valid for the electrical services. Organizationally it means that some moments replace other, some are excluded and some are additional. A further result from this case study is that the technical functions aren't affected and any differences in management couldn’t be identified, but the maintenance is facilitated. The calculations show that it is hard to find economical motives for exchangeable services.

If a house-owner should be willing to pay a higher price for exchangeable services they must at least be as attractive as hidden services.