

## Building Components

We spend most of our time living and working in buildings. It is thus vital to ensure suitable indoor comfort as well as acceptable investment, operational and maintenance costs. As buildings normally have a substantial technical and constructional lifetime, it is important to distinguish between components, which have a shorter technical lifetime and can be replaced or upgraded without major interventions into building structure (for example, boiler, solar collectors, etc.), and components, for which any intervention would require more substantial work and higher additional costs (for example, additional thermal insulation, new windows, not to mention load-bearing construction, etc.).

We could very roughly speak about installed and built-in components. The latter ones should be designed and chosen in such a way that their characteristics allow normal and efficient functioning of a building as long as possible. For this reason national regulations usually provide already initial high-performance criteria for example for the elements of the outer building envelope.

When it comes down to new buildings or renovation of existing ones, modern requirements in regulations are often at the so-called low-energy or low-carbon levels. Nevertheless, already at early planning stages attention must be put upon operational and maintenance costs. The building sector is one of the major examples where analyses of life-cycle costs for possible solutions show most valuable long-term effects.