

# Architectural freedom and industrialized architecture - retrofit design to passive house level

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## Abstrakt

Based on the repetitive architecture from the “building boom” from 1960 to 1973, it is discussed how architects can handle these Danish element and montage buildings through the transformation to upgraded aesthetical, functional and energy efficient architecture.

The method used is analysis of cases, parallels to literature studies and client and producer interviews. The analysis compares best practice in Denmark and best practice in Austria.

Modern architects accepted the fact that industrialized architecture told the storey of repetition and monotony as basic condition. This article aims to explain that architecture can be thought as a complex and diverse design through customization, telling exactly the revitalized storey about the change to a contemporary sustainable and better performing expression in direct relation to the given context.

Through the last couple of years we have in Denmark been focusing on a more sustainable and low energy building technique which also includes production and montage on site. The clients, the architects, the producers and the building contractors have through different projects developed a working method which indicates several ways to handle the retrofitting of the existing concrete element blocks from the period. Related to the actual demands to the building physic problems a new industrialized period has started based on lightweight elements basically made of wooden structures and faced with different suitable materials meant for individual expression in the specific housing area.

It is the aim of this article to expand the different design strategies which architects can use – to give the individual project attitudes and designs with architectural quality.

Through the customized component production it is possible to choose different proportions, to organize the process on site choosing either one room wall components or several rooms wall components – either horizontally or vertically. Combined with the seamless joint the playing with

these possibilities the new industrialized architecture can deliver variations in choice of solutions for retrofit design. If we add the question of the installations e.g. ventilation to this systematic thinking of building technique we get a diverse and functional architecture, thereby creating a new and clearer story telling about new and smart system based thinking behind architectural expression.

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