Ressources Efficiency and Life Span

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Executive Summary

The goal

The goal of this study is to precise obvious corelation between resources efficiency and life span in building sector. The focuses are methods of dealing with existing resources but also improvement of modern design strategies. While we need to improve environmental conditions and use possibilities of modern techniques, we concentrate on both aspects theoretical- showing some solutions we can adapt to brand new designs, and technical- discussing opportunities we get from existing templates.

The approach / Methodology

The comparison of existing situation in different countries was used as a fundations for further research. Case studies has been done based on the literature and different cases were investigated and compared. Case study was divided into two scenarios: analysis of resources and their conditions in existing stock. Second version is using new resources to create new quality. This vision of designing is to rise life span and quality of living for future generation with giving them possibilities to rearrange their space while needed with no causing harm to environment.

Results

In case study several different scenarios are taking into account. General solutions are given in Design Strategies chapter but with the stipulation that these are not universal principles and must to be considered with particular emphasis to local legislations, climate conditions and additional indicators.

As a result few designing starategies are shown and are proposed to become fundations for modular system project which are flexible enough to be developed differently depending on budget, people's needs and environmental conditions.

Design strategies include:

- Four- dimentional design
- Design for detailing
- Design for deconstruction
- Prefabrication systems

Conclusion

According to the study, it is shown that designing guide cannot be standarized but has to take into account different scenarios. Notwithstanding it can be used as a solid basis to show directions in conscious design and lead to the formation of modular system commonly used in sustainable building sector.

Recommendations

Resources efficiency and life span are strongly connected and should not be considered seperatly. Designing process should start with deep investigation and take into account different levels of whole building life. Each case should be considered seperatly with its own analysis. Using existing building stock can be beneficial for both environment and comfort of living. Extension of Life Span affects Resources Efficiency.