

**Topic: Temporary shelter project - modular housing design for post-disaster settlements**  
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The topic of temporary structures is a whole major topic for organizations working with victims of various socio-economic or natural disasters. The project and its preparation are accompanied by an effort to gain a deeper understanding of the issues such as history, typology and design of modular buildings. The preparation of the project could focus in greater detail on relationships between temporary humanitarian settlements and the existing urban structure to which they are attached.

### **Urbanism and architecture**

The author is aware of the need of analysis to find the right location for a complex of temporary accommodation buildings and associated facilities. The project is thus set in a specific location that meets the requirements for good serviceability and is strategically located in relation to the epicentre of the disaster.

Design assembles individual modular elements into larger structures designed for a particular type of housing. This results in different volume types that create a complex settlement that can work even in the context of the city despite its temporary nature. The individual buildings are in an adequate position in relation to the whole and the spaces between them are filled with other functions. The composition of the individual containers creates spaces of different qualities within their structure, which is very positive for the potential identification of users with the spaces and their perception of their temporary home.

Designed buildings with two basic housing types are distinguishable in their volumes. Buildings for individual accommodation of students and elderly people are compact ones, buildings for co-housing are more scattered clusters of smaller elements. The two types coexist very well. The possible approach of designing from modular systems is tested on both types. However, in the case of compact building there is a visible weakness in the design. The facade of individual modules is created in such a way that their repetition results in a technicist facade without a clear artistic concept. This weakens the whole building, although conceptually interesting, and separates it qualitatively from the co-housing buildings.

The complex is complemented by a smaller building for social services. In a realistic situation the social and other common facilities would have to form a proportionately larger part of the complex, since the provision of housing is only one part of the service to victims of disaster.

### **Layout solution**

The individual modules that make up the larger units are well designed so that they can be effectively combined for different types of housing, including their vertical connection. The

author has well documented the possible work with the defined modules using the cases of two building types. There are developed functional and interesting layouts, which can be further extended if necessary.

Most of the modules offer maximum functionality in their small floor space. However, in some of them the allocated floor space is not always used efficiently. In these cases, the design should be even more precise, as these are buildings with a requirement for maximum efficiency. The possible use in colder climates could also be examined as part of the layout, as this system is meant to be used globally.

As part of the design, it would be useful to open up the concept of interior of the individual modules. Users should identify themselves with the spaces and feel comfortable in them as their lives take major twists and turns. It is the interior of these modules that should respond and try to eliminate the technician nature of such construction.

### **Construction and technical solution**

The technical solution is not developed sufficiently, although it is essential in the design of modular systems. It influences the concept of facades, quality of details, efficiency and the possibility of working with individual modules. Equally, the limits of the structures in different climatic conditions should be examined. The degree of glazing and the possibility of shading is also an issue in relation to overheating and heating possibilities. Interconnecting platforms, terrace and vegetation roofs are used in the design. These elements will also be very sensitive to the design in the case of a modular system.

### **Conclusion**

It is important to take care of the architecture of such temporary humanitarian settlements, since the technician approach that would be logical does not provide victims of disaster sufficient supportive environment. The author works in the whole complexity, creating functional modular elements that have been successfully tested in the form of larger structures and in the context of an appropriately chosen site. A weakness of the project is the lack of focus on technical side of design, which affects the whole architectural design. At the same time, the project could be more developed in the way of modules providing associated services and facilities, as reflected by the author herself.

Evaluation: **B**

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