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SUSTAINABILITY OF MOBILE ARCHITECTURE

Mobile architecture is not a type of architecture that has many stereotypes. The reason for that is that you always try to solve a very specific problem, and a specific problem usually leads to quite innovative unusual solutions. It is far more likely for that to happen in the mobile type of architecture than in conventional static architecture, because there are many different ways of solving a static architecture problem. Sometimes it comes down to a style, to an image, to budget, whereas in mobile architecture you often work a little bit at the edge of design capabilities. However, there are set forms of mobile architecture which are repetitive and they are applied more and more often, the most common is tensile architecture; buildings which are made using tents and membranes. Another form of mobile architecture, which is quite common, is inflatable architecture (pneumatic architecture) where tents and a membrane form are used.

A portable structure is used in a situation when it is required to provide a solution to a problem that cannot be solved in any other way. Typically, these problems arise because the time of the project implementation is limited, or when the project has to be completed in a difficult location. For instance, if you are doing expeditionary work, or you have got some mining to do at a remote location, you can settle a remote mining village quickly and easily. So, each sort of solution comes basically from the problem that you are trying to solve. Sometimes that problem relates to a purely economic situation, so if you don't want to build a permanent building, you can build a temporary one that you can use again. Portable structures can be used for an exhibition, or a performance building, where image is very important, it can also be used for humanitarian purposes. Sometimes a solved problem can be economic, sometimes it is logistical, and sometimes it has to deal with image or character.

Mobile architecture is relatively expensive in some ways. You have to put a lot of effort into designing it correctly, as well as into moving it from place to place. And moving anything around is not sustainable. But when you are actually saving the building which will be otherwise wasted or demolished afterwards, thus counteract-

ing the cost of movement, there's always an equation between how much you save and how much it costs to relocate, and also how much resources it saves to make a new building. So the best way to do it more sustainably is to make your building as light as possible, very compact, which makes it a lot more economic to relocate. The lightest buildings that can be moved in compact form are the most sustainable. That is where portable architecture comes in. Pneumatic architecture, the inflatable architecture (the archetypes), where you can use a very lightweight membrane, tensile architecture (where you can also use a membrane which is very lightweight) – these forms of architecture are generally the most sustainable. Providing that the materials used to make them are also sustainable (they are not always that way, but they can be), they can be reused again and again.

More buildings nowadays are erected with the consideration that we cannot be as wasteful with the materials as we used to be. The reason for that is economy. The other reason is sustainability. If we want the mobile and the static to coexist, they both have to fulfill their functions. A mobile building, as well as a permanent building should be selected in compliance with a certain situation.

The buildings constructed today have a greater capacity to be changed in the future, as our needs change in terms of building design, whereas the buildings that were constructed in the past require a lot of time, effort and resources to be changed. In our rapidly evolving world it is very important to be able to convert buildings more easily and more quickly, thus the application of mobile architecture is as relevant as never before.

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TECHNOGENEOUS CRISIS IN KRYVYI RIH ORE MINING REGION

A metallurgical industrial complex has a huge impact on the environment. Kryvyi Rih is one of the Ukrainian cities characterized by the most dangerous environmental situation developed as a result of long and intensive iron ore extraction and processing.