Constructing an Urban Future: The sustainability and resilience of cities – infrastructures, communities, buildings and housing.

• Paper / Proposal Title:
[Open Building Theory & Method for a Flexible Housing Environment in Saudi Arabia]

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• Author(s) Name:
Najwa Hijazi, Kazunobu Minami

• University or Company Affiliation:
Graduate School, College of Architecture and Civil Engineering, Department of Architectural Planning, Shibaura Institute of Technology, Japan

• Abstract (300 words):
The housing environment characteristics of constant evolution and change is a universal quality of living, and Saudi Arabia is not an exception. The country has witnessed enormous changes economically and socially in a relatively short period of time, and all these changes had their direct and indirect effects on the local housing environment.

These effects include changes in spatial planning, uses, related social behavior etc. Moreover, these changes are happening on a fast pace in Saudi Arabia and the conventional housing systems are not well qualified to adapt to these changes.

Hence, this paper argues and proposes the Open Building Theory & Method as an answer to develop a more resilient, adaptable and timeless living environment for its users.
The flexibility of planning, ease of maintenance, applicability of change, and the power given to “The User” that the Open Building Theory promise makes it a universally adoptable tool.

The argument of this study is to utilize the Open Building Theory & Method into the housing environment in Saudi Arabia and analyze the possibility of developing a local construction systems that is more flexible to change and serve efficiently for a longer life-span.

The benefits of such a Method reflects on technical qualities such as maintenance, environmental qualities of saving resources wasted during reconstruction and damage caused by maintenance failure, as well as social qualities of providing living spaces that respond to their users’ needs for an enhanced living quality.

Based on the result of an analysis of the current housing construction systems in Saudi Arabia, the possibility of adopting the new system into the local housing sector is then recommended.

As a conclusion for this study a Skeleton/Infill design model is proposed based on the Open Building Systems and developed from the local construction and housing environment of Saudi Arabia.

• Author(s) Biography (200 words each):

Najwa Hijazi: Graduate Student, Shibaura Institute of Technology, Japan.
Graduated with a B.Sc. degree in Architecture Engineering from the University of Jordan in 2011.
From 2012-2014 returned to Saudi Arabia and worked as an architect in an urban consultants office in Riyadh. In this position worked on a variety of projects including educational facilities, commercial, office, and residential buildings, and an urban planning project.
In 2016 enrolled in the Master’s program at Shibaura Institute of Technology in Japan researching Open Building as well as the housing environment of Saudi Arabia and the adequate means of combining both for the development of the Saudi housing environment.

Kazunobu Minami: Ph.D., SM.Architecture, Professor of Architecture, Shibaura Institute of Technology, Japan.
Dr. Minami is an architect who has worked for the Ministry of Posts and Telecommunications and the Ministry of Construction for more than 20 years. He
received several awards for his design works including the Best Architecture Award from Chiba City and the International Illumination Design Awards. He has received his Ph.D. Degree in Architecture from the University of Tokyo and his Master of Science Degree in Architecture from MIT. He was a joint coordinator of CIBW104 – Open Building Implementation from October 2003 to 2010. In recent years, Dr. Minami has devoted himself in the research of the development of the longer life housing and sustainability of building and city. He published an article “Japanese Innovation in Adaptable Homes” in Loose-Fit Architecture: Designing Buildings for Change AD. He is also working for the national committee to recognize the industrialized housing in Japan.