SUSTAINABLE ARCHITECTURE

Edited by
Dr. Valentina Frighi
Dr. Stanislav Kolisnychenko

TRANS TECH PUBLICATIONS

Sustainable Architecture

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Dr. Stanislav Kolisnychenko

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Aggregated Book

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Dr. Valentina Frighi and Dr. Stanislav Kolisnychenko

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Preface

The dimension of sustainability in architecture requires the definition of new design trajectories concerning buildings but also the surrounding environment, reasoning on the entire complex of the architectural and spatial human habitat.

Being sustainable means, from one side, meeting our needs without compromising the ability of future generations to meet their own needs, including also concerns for social equity and economic development. But, on the other side, we can also say that it is strongly related to adapting to the changing environment and human habits.

For these reasons, the design of buildings, eco-systems, and infrastructures must take place considering climatic and environmental conditions, with the primary goal of minimising the impact on the surroundings while achieving the desired level of flexibility and adaptability of the designed facilities also for future exploitation.

In this process, the use of recycled and environmentally friendly materials during the design and construction stage and the efficiency of new and existing structures and infrastructure (in terms of energy, functioning, and maintenance) complements the principle of adaptability, helping to shape a complete concept of sustainability within the domains of architecture and urban planning.

So, this thematic publication origins from the will to provide an overview of recent breakthrough approaches, methods, research results, and technical solutions to identify new and emerging sustainable development challenges within the abovementioned domains.

The book contains selected articles published by Trans Tech Publications Inc. in the period 2016 - 2021 years and is divided into two main sections, which group under them six chapters:

SECTION 1. On the Concept of Sustainability in Building Design
Chapter 1: Strategies and Design Directions
Chapter 2: Materials and Methods
Chapter 3: Case Studies and Practical Decisions
SECTION 2. Sustainable Urban Development
Chapter 4: Urban and Territorial Development
Chapter 5: Sustainable Tourism
Chapter 6: Transport and Mobility Infrastructures

We hope this edition will be helpful and exciting for a broad audience of researchers and specialists within the Architecture, Engineering and Construction (AEC) sector.

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