Two major earthquakes of 2020 have dramatically impacted the goals and concerns of the architectural community in Croatia – the first one happened on March 20th with its epicentre near Zagreb, the other on December 29th with an epicentre near Petrinja. The aftermath of the damage prompted an introspective look into the way we protect and renew buildings erected before (or not adhering to) contemporary codes, but also gave a devastating insight into dismal living conditions and poor construction in many communities. While the first earthquake ignited discussions beyond mere safety and renewal of existing structures and expanded them into burning topics of planning and protection, the second one made brusies of a fundamentally existentialist nature, with hundreds of people left homeless overnight.

The Faculty of Architecture at the University of Zagreb immediately became involved with all issues related to these disastrous events – from its staff participating in the outpour of volunteer work, assessing damage, collecting and publishing archival documentation and research which could benefit renewal, becoming involved in bodies on all levels, contributing to planning, documenting, designing for reconstruction and renewal, and also producing new research, openly sharing knowledge, and reacting profoundly architecturally – by design. This book is a collection of a segment in these efforts, offering an open source of models justified in existing and possible technological and industrial resources, aimed particularly at those affected by the second earthquake in the County of Sisak and Moslavina, therefore looking into traditional patterns and local lifestyles to propose applicable, grounded solutions. While the activities preceding this collection of standardized, modular homes came from a collective series of engagements by professors, engineers and industry representatives, the initiative of the collection presented in this book came from the Dean of the Faculty, professor Bojan Baletic, and the Section of Housing lead by its chair, associate professor Luka Korlaet, who brought together architects from all departments and acted as the book’s editors.

The introduction by the Dean Bojan Baletic is followed by conclusions of a round table held at the Faculty on January 8th, initiated by professor Karin Serman and joined by professors Mateo Biluš, Mladen Josić, Josip Galic and Krunoslav Smit, as well as a list of points for continued action, focusing on a series of issues, scales and temporal steps, but also identifying crucial partners. These conclusions resulted in fundaments of actions spanning the direct and current engagement of architects and engineers, the political and procedural aspect, the legal and financial ones, the sociological and economic aspects of scenarios and perspectives of possible futures for areas which were in dire need of revising a sound strategy even before the earthquake struck.

Luka Korlaet contributed with a chapter chronicling the earthquakes’ aftermath: the long-term changes they left in the soil, requiring a revision of geomechanical data for the whole area; the devastating percentage of damage to structures acquired through the ArcGIS Collector and coordinated by the Croatian Centre for Earthquake Engineering; the short-term and long-term solutions to lodgings, first as provisional containers and then as a system of dwelling types observed as an opportunity to improve living conditions which, in many of the affected areas, were of low quality to begin with.

Mateo Biluš, Dunja Mandić, Zorana Protic and Darko Uzarevici provided a comparative analysis of possible structural systems and materials to be utilized in these standardized dwellings, both erected in-situ and prefabricated, establishing a useful overview whose use exceeds the immediate need of this collection, with an appendix of companies currently present in the Croatian construction market. This chapter is followed by an introduction to zero-energy building and its translation into concrete measures in individual housing, from materials, insulation, thermo-technical systems and requirements resulting from current legislation, authored by Zoran Versić, Marin Binicki and Davor Prodan Abramovic. Finally, Mladen Josić laid out the design standards for these replacement dwellings based on various family sizes or co-housing arrangements, requirements for modular articulation, spatial and technical standards, and finally, design guidelines.

Based on these precise inputs, an overwhelming outpour of responses by architects teaching at the Faculty (as well as their collaborators and partners) produced a collection of designs reflecting on traditional domestic rituals, vernacular patterns, specific dwellers (which in some cases include humans, animals and agricultural vehicles) and fast construction needs, channelling them into contemporary interpretations of flexible and sustainable homes enriching rural futures. Each design is laid out following an analogous structure: its concept and adaptability to various needs and contexts, architectural design, structural detailing as well as a unified table marking possibility of material use in relation to available industries. Contributions in this major segment of the volume have been made by teachers of the Faculty Vjera Bakic (with Matthias Kulstrunk), Bojan Baletic (with Zora Salopek Baletic and Davor Salopek), Alenka Delic (with Davor Delic), Vedran Dulapnic, Ivan Horvat, Senid Mandić, Iva Martinis, Ljubomir Miščević (with Mark Miščević), Petar Miškovic, Lea Pelivan (with Studio UP), Ivica Plavec, Branimir Rajčić, Tamara Relić, Vanja Rister, Krunoslav Smit (with Nataša Ivanšević, Katarina Kozlović and Ivan Matorić) and Nino Virag.

Both earthquakes prompted all involved – architects, planners, politicians, lawmakers, communities – to take a deep look into gaps existing in all steps of caring for the built environment which contributed to the damage being so vast and the reconstruction still moving at a slow pace. Apart from providing needed, targeted help for a region devastated by a natural disaster, this book, with its introductory and broad-but-concise approach to all actions and actors involved, provides a textbook of steps to be taken should another, hopefully less catastrophic, yet acute need, occur. The book is, finally, a testament to one of the fundamental callings of an architect: one of outreach, one of care.