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Nota di contenuto	Historical evolution of prefabrication -- Additive Manufacturing and Automation in Construction -- Engineering the systems The role of research and development -- The role of prefab in the context of climate emergency -- Emblematic prefab systems.
Sommario/riassunto	This book provides an overview of the latest innovations in prefabrication. It analyzes how digital, material, and process innovations are transforming the mass prefabrication of homes, schools, and offices into mass customization. It provides an understanding of available manufacturing processes, including distributed ownership of manufacturing, platform approaches, and robotics. It discusses how the integration of cutting-edge advanced

construction techniques, coupled with robotic manufacturing and assembly from the earliest stages of building system design, has the potential to unlock new formal and technical paradigms. Investigating the impact of prefab in the context of climate emergency, the book analyzes the capacity and shortfall in delivering net zero emissions. It discusses the opportunities that Modern Methods of Construction provide to enable the transition towards circular constructions, from reuse to retrofitting. Including the users' experience, it demonstrates the importance of developing methodologies for capturing users' occupancy evaluation, as a means for understanding real performances, benchmarking indicators, and tuning systems to target the long-term well-being of the occupants. Referring to a plethora of emblematic cases, this work demonstrates the importance of investing in research and development to optimize construction systems, reduce material use, facilitate lean construction, advance mechanical and environmental performances, and move toward circular systems to close the loop. This book is aimed at practitioners, architects, technologists, researchers, and students in architectural engineering.