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Nota di contenuto	City Information Modelling: An Insight into a New Era for the Built Environment -- Concepts and Trends -- City Information Modelling and Sustainable Development: The Role of CIM in Achieving Sustainable Urbanization -- Enhancing Health Outcomes through City Information Modeling (CIM): A Case Study of Sydney, Australia -- City Information Modeling and its Applications: A Review -- Applications and Digitisation -- Optimizing Urban Design for Pandemics Using Reinforcement Learning and Multi-Objective Optimization -- Sustainable Smart City Application Based on Machine Learning: A Case Study Example from the Province of Tekirda, Turkey -- The Role of City Information Modelling (CIM) in Evaluating the Spatial Correlation Between Vegetation Index Changes and Heat Island Severity in the Last Two Decades in Tehran Metropolis -- Exploiting Advantages of VPL in City Information Modelling for Rapid Digital Urban Surveying and Structural Analysis -- Frameworks and Practices -- Towards Adaptive

and Resilient Strategies using Digital Twins: A Study on the Port of Tyne, UK -- Ecosystem Institutional Maturity: Perspectives for CIM in Urban Management and Planning in Curitiba, Brazil -- The Use of City Information Modelling (CIM) for Realizing Zero Energy Community: A Path Towards Carbon Neutrality -- Conclusions and the Future of City Information Modelling (CIM).

Sommario/riassunto

This is the first book focused on City Information Modelling (CIM) that puts together a collection of recent studies related to concepts and trends in CIM, application and digitization processes/methods, and frameworks and practices of CIM. This emerging topic is important to various research and practice under sectors of the built environment, civil engineering, urban planning, urban design, and urban management. CIM aligns well with smart cities, data-driven urban analytics and optimization, information-based city planning, and future development paradigms. City Information Modelling provides global case study examples in three parts. At first, the contributors offer several examples of ‘Concepts and Trends’, where CIM is explored further in urban management, urban sustainability, and big data studies. In the second part, the book offers various examples of application and digitization processes or methods related to urban planning and design practices. In the third part, the contributors delve into several examples of CIM frameworks and practices critical to contemporary research, planning and design paradigms, and future practices. This collection is a niche resource for various stakeholders, particularly urban scientists, urban analytics, urban practitioners, and researchers. It will also be a valuable collection for those who work with information-based models, urban optimization models, and big data analytics, particularly from policy and practice perspectives. The findings of this collection help direct future research in CIM and suggest opportunities for big-data urban research, integrated urban models, and holistic frameworks in sustainable cities, smart cities, and future cities.