

Designing High Density Cities For Social And Environmental Sustainability By Ng Edward Author 2009 Hardcover

Re-framing Urban Space: Urban Design for Emerging Hybrid and High-Density Conditions rethinks the role and meaning of urban spaces through current trends and challenges in urban development. In emerging dense, hybrid, complex and dynamic urban conditions, public urban space is not only a precious and contested commodity, but also one of the key vehicles for achieving socially, environmentally and economically sustainable urban living. Past research has been predominantly focused on familiar models of urban space, such as squares, plazas, streets, parks and arcades, without consistent and clear rules on what constitutes good urban space, let alone what constitutes good urban space in 'high-density context'. Through an innovative and integrative research framework, Re-Framing Urban Space guides the assessment, planning, design and re-design of urban spaces at various stages of the decision-making process, facilitating an understanding of how enduring qualities are expressed and negotiated through design measures in high-density urban environments. This book explores over 50 best practice case studies of recent urban design projects in high-density contexts, including Singapore, Beijing, Tokyo, New York, and Rotterdam. Visually compelling and insightful, Re-Framing Urban Space provides a comprehensive and accessible means to understand the critical properties that shape new urban spaces, illustrating key design components and principles. An invaluable guide to the stages of urban design, planning, policy and decision making, this book is essential reading for urban design and planning professionals, academics and students interested in public spaces within high-density urban development.

Each century has its own unique approach toward addressing the problem of high density and the 21st century is no exception. As cities try to cope with rapid population growth - adding 2.5 billion dwellers by 2050 - and grapple with destructive sprawl, politicians, planners and architects have become increasingly interested in the vertical city paradigm. Unfortunately, cities all over the world are grossly unprepared for integrating tall buildings, as these buildings may aggravate multidimensional sustainability challenges resulting in a "vertical sprawl" that could have worse consequences than "horizontal" sprawl. By using extensive data and numerous illustrations this book provides a comprehensive guide to the successful and sustainable integration of tall buildings into cities. A new crop of skyscrapers that employ passive design strategies, green technologies, energy-saving systems and innovative renewable energy offers significant architectural improvements. At the urban scale, the book argues that planners must integrate tall buildings with efficient mass transit, walkable neighbourhoods, cycling networks, vibrant mixed-use activities, iconic transit stations, attractive plazas, well-landscaped streets, spacious parks and engaging public art. Particularly, it proposes the Tall Building and Transit Oriented Development (TB-TOD) model as one of the sustainable options for large cities going forward. Building on the work of leaders in the fields of ecological and sustainable design, this book will open readers' eyes to a wider range of possibilities for utilizing green, resilient, smart, and sustainable features in architecture and urban planning projects. The 20 chapters offer comprehensive reading for all those interested in the planning, design, and construction of sustainable cities.

The Graduate Program in Sustainability Science under the Department of Urban Engineering of The University of Tokyo has been running an environmental leadership education program at the graduate student level since 2007 called the Asian Program for Incubation of Environmental Leaders (APIEL). This book describes the University's experiences in establishing and organizing that program and provides some lessons learned for those who

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are considering starting environmental leadership education programs. APIEL's curriculum includes the classroom topic "Environmental Challenges and Leadership in Asia." As well, the APIEL program has field units to provide experience in problem solving, decision making, and participation, taking into consideration ecological, political, economic, social, aesthetic, and ethical aspects. Another characteristic feature of the program is that it promotes changes in attitudes and behavior that will help to solve existing environmental problems and to avoid a generation of new ones. Over the four years of study, efforts have been made to bond leadership with field-oriented exercises such as: 1) The Intensive Program on Sustainability; 2) an integral approach focused on sustainable integrated watershed management of arid regions; 3) sustainable development of programs in Cambodia, Vietnam, and Thailand for qualifying students with problem-solving processes to combat issues such as flooding, lack of proper urban environmental infrastructure, and health risks; and 4) the Greater Pearl River Delta program with multicultural diversity to bring about sustainable urban development for a green city. All of those are described in the book. Last but not least, APIEL's resonance throughout international networks and alumni are introduced.

"An invaluable text for all those interested in cities and economic change. Empirically grounded, theoretically informed, and written in a highly accessible way to help students understand processes underlying the changing urban economy, urban governance, and the role of place." - Lily Kong, National University of Singapore "Editors and contributors leave readers in no doubt about the extent of the transformations coursing through urban economies in the global north and south." - Kevin Ward, University of Manchester "An essential read for anyone interested in the role of cities in the changing global space economy." - James Faulconbridge, Lancaster University "A timely and path-breaking contribution to the urban literature. It stands out as an excellent addition to the expanding urban library and a key reference on urban issues." - George C.S. Lin, Hong Kong University

Cities and Economic Change combines a sound theoretical grounding with an empirical overview of the urban economy. Specific references are made to key emergent processes and debates including splintered labour markets, informal economies, consumption, a comparative discussion of North and South, and quantitative aspects of globalization. The text is clear and accessible, with pedagogical features and illustrative case studies integrated throughout. The use of boxes for city examples, key questions for discussion at the end of main chapters together with suggested readings and key web sites are designed to aid learning and understanding.

Containing the proceedings of the 9th International Conference on Urban Regeneration and Sustainability this book addresses the multi-disciplinary aspects of urban planning; a result of the increasing size of cities; the amount of resources and services required and the complexity of modern society. Most of earth's population now lives in cities and the process of urbanisation still continues generating many problems deriving from the drift of the population towards them. These problems can be resolved by cities becoming efficient habitats, saving resources in a way that improves the quality and standard of living. The process however, faces a number of major challenges, related to reducing pollution, improving main transportation and infrastructure systems. New urban solutions are required to optimise the use of space and energy resources leading to improvements in the environment, i.e. reduction in air, water and soil pollution as well as efficient ways to deal with waste generation. These challenges contribute to the development of social and economic imbalances and require the development of new solutions. Large cities are probably the most complex mechanisms to manage. However, despite such complexity they represent a fertile ground for architects, engineers, city planners, social and political scientists, and other professionals able to conceive new ideas and time them according to technological advances and human requirements. The challenge of planning sustainable cities lies in considering their dynamics, the exchange of energy and matter, and the function and maintenance of ordered structures

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directly or indirectly, supplied and maintained by natural systems. Topics covered include: Urban strategies; Planning, development and management; Urban conservation and regeneration; The community and the city; Eco-town planning; Landscape planning and design; Environmental management; Sustainable energy and the city; Transportation; Quality of life; Waterfront development; Case studies; Architectural issues; Cultural heritage issues; Intelligent environment and emerging technologies; Planning for risk; Disaster and emergency response; Safety and security; Waste management; Infrastructure and society; Urban metabolism.

Growing Compact: Urban Form, Density and Sustainability explores and unravels the phenomena, links and benefits between density, compactness and the sustainability of cities. It looks at the socio-climatic implications of density and takes a more holistic approach to sustainable urbanism by understanding the correlations between the social, economic and environmental dimensions of the city, and the challenges and opportunities with density. The book presents contributions from internationally well-known scholars, thinkers and practitioners whose theoretical and practical works address city planning, urban and architectural design for density and sustainability at various levels, including challenges in building resilience against climate change and natural disasters, capacity and integration for growth and adaptability, ageing, community and security, vegetation, food production, compact resource systems and regeneration.

The six-volume set LNCS 10404-10409 constitutes the refereed proceedings of the 17th International Conference on Computational Science and Its Applications, ICCSA 2017, held in Trieste, Italy, in July 2017. The 313 full papers and 12 short papers included in the 6-volume proceedings set were carefully reviewed and selected from 1052 submissions. Apart from the general tracks, ICCSA 2017 included 43 international workshops in various areas of computational sciences, ranging from computational science technologies to specific areas of computational sciences, such as computer graphics and virtual reality. Furthermore, this year ICCSA 2017 hosted the XIV International Workshop On Quantum Reactive Scattering. The program also featured 3 keynote speeches and 4 tutorials.

With contributions from academics across the globe, this book showcases how you can use data analysis for better and more effective urban planning and management.

Designing High-density Cities for Social and Environmental Sustainability Earthscan

The efficient usage, investigation, and promotion of new methods, tools, and technologies within the field of architecture, particularly in urban planning and design, is becoming more critical as innovation holds the key to cities becoming smarter and ultimately more sustainable. In response to this need, strategies that can potentially yield more realistic results are continually being sought. *The Handbook of Research on Digital Research Methods and Architectural Tools in Urban Planning and Design* is a critical reference source that comprehensively covers the concepts and processes of more than 20 new methods in both planning and design in the field of architecture and aims to explain the ways for researchers to apply these methods in their works. Pairing innovative approaches alongside traditional research methods, the physical dimensions of traditional and new cities are addressed in addition to the non-physical aspects and applied models that are currently under development in new settlements such as sustainable cities, smart cities, creative cities, and intercultural cities. Featuring a wide range of topics such as built environment, urban morphology, and city information modeling, this book is essential for researchers, academicians, professionals, technology developers, architects, engineers, and policymakers.

Even with significant reductions of greenhouse gas emissions, a certain degree of climate change will inevitably occur. Adapting to climate change, then, will become a necessary step in reducing the vulnerability of many regions across the globe. This is especially true for urban areas where climate change has been shown to have particularly destabilizing effects. Through

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the identification and analysis of the most relevant impacts facing urban areas, this book makes clear the need to incorporate climate change concerns into the mainstream of local planning, governance and policy making practices. Adaptation as a workable concept within urban areas cannot be treated in isolation from the many pre-existing challenges facing cities. By offering numerous examples of ongoing adaptation programs and strategies across a wide range of contexts, the authors show the growing potential of cities in the fight against climate change. This book has its origins in a collection of papers originally presented at the Resilient Cities 2010 Congress in Bonn, Germany (May 2010), the first global forum on cities and adaptation to climate change, convened by ICLEI – Local Governments for Sustainability. In this volume, the first in a new series dedicated to this annual event, a range of contributors bring their perspectives to bear on the most pressing issues and controversies surrounding adaptation to climate change within cities. These writings will prove invaluable to anyone interested in understanding and confronting climate change at the local level.

If twenty-first-century urbanization is understood as a problem, its regional epicenter is the cities in Asia. Facing unprecedented diversity in scale, scope, and environmental dynamics in the Asian urban experience, scholars will need an approach that can truly capture the significance of place and context. The challenge, as this volume illustrates, can be met by the analytic of ecologies of urbanism. Eschewing a rigid, single ecology, the contributors identify multiple forms of nature—in biophysical, cultural, and political terms—that have discernable impact on power relations and human social action. The case studies in this book—including leopards in Mumbai, a network of tubewells in northern India, an island that grows through reclamation in Hong Kong, and a railway continuum linking Khon Kaen and Bangkok—all attest to the versatility of ecologies of urbanism. Guided by urban processes rather than geopolitical boundaries, *Places of Nature in Ecologies of Urbanism* offers a picture of urban Asia that is composed of varied ecologies of urbanism. “This intellectually adventurous work displays a deep cultural-ethical sensibility in its close attention to geographically variegated forms of place making. A first-rate contribution to urban scholarship on Asia and beyond.” —Vinay K. Gidwani, Department of Geography, Environment and Society and Institute for Global Studies, University of Minnesota “This volume derives from a several-year collaborative effort to bring scholars from different disciplines together to reflect on the constructed, shifting, and contested meanings of the forward-slash separating Urban/Natures. The essays in this volume are bold, rigorous, original, and sometimes even witty. Without losing track of the intellectual genealogies that enable their collective effort, the authors in *Places of Nature in Ecologies of Urbanism* give us new tools for imagining urban Asia’s possible futures.” —William Glover, Department of History, University of Michigan

The book comprehensively investigates the relationship between critical urban form and fabric parameters and urban microclimate in the high-rise urban environment that prevails in Asian megacities such as Shanghai. It helps readers gain a deeper understanding of climate-responsive urban design strategies and tactics for effectively mitigating the negative impacts of deteriorating urban thermal environments on pedestrian thermal comfort, outdoor air quality and building energy consumption. It also reviews the latest advances in urban climate research, with a focus on the challenges in terms of outdoor space comfort, health, and livability posed by the high-rise and high-density development in emerging Asian megacities, and proposes an integrated framework in response to the pressing need for microclimate research. It then presents a series of studies on high-rise residential and non-residential urban neighborhoods and districts based on instrumented field study, validated numerical simulation, and spatial analysis using a GIS platform. The book includes extensive, valuable experimental data presented in a clear and concise manner. The thermal atlas methodology based on empirical modeling and spatial analysis described is a useful climate-responsive design tool for both urban designer and architects. As such, the book is of particular interest to researchers,

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professionals, and graduate students in the fields of urban planning and design, building science and urban climatology.

This book is intended to fill a knowledge gap in the study of contemporary high-rise living. While there has been much documentation on the engineering and technological aspects of tall buildings, relatively little has been written about the social and livability of high-rise. Much less is written about Asian cities even though Asia is the current hotbed of high-rise development. Even though traditional discourse of high-rise housing is not always positive, new forces are redefining its place in 21st century urbanity. Many cities around the world are reembracing high-rise in urban agenda under current narrative of sustainable development. High-rise is fast becoming a priority area in international research agenda. The quest is for livable and sustainable high-rise development. Against the background of current trends--globalization, urbanization, mixed-use development, and new-built taller buildings in inner city areas in both developed and developing countries, this book examines the software: design, economics, estate management, legal and property rights, physical environment, planning, community development, and social dimensions of high-rise living. Analysis is with the widely acclaimed successful high-rise public housing in Hong Kong and Singapore to understand the advantages and worries of high-rise living, and to distill the key points and lessons in the making of a 'good' highrise living environment. Hong Kong and Singapore have been constructing high-rise for more than four decades each. The majority of their population has moved to live in high-rise, selecting to live high-rise, and registering consistently high residential satisfaction. The height of apartment buildings in both cities continues to rise. The tallest is anticipated to be 70-storey. It is the contention of this book that contrary to earlier common negative discourses on public high-rise living, the high-rise environment may yet offer urban residents a satisfying dwelling experience. Leading housing academics, researchers and practitioners in the two cities have contributed to this book. This book presents a timely contribution to our understanding of a widening urban phenomenon that will affect a growing number of the world's population.

Providing an in-depth exploration of the complexities of densification policy and processes, this book brings the important experiences of densification in Johannesburg into conversation with a range of cities in Africa, the BRICS countries and the Global North. It moves beyond the divisive debate over whether densification is good or bad, adding nuance and complexity to the calls from multilateral organisations for densification as a key urban strategy.

Containing research on sustainable urban redevelopment presented at the latest in a biennial series organised by the Wessex Institute of Technology, this book addresses an area of growing interest. The conference series was first held in 2000. These proceedings are split into two volumes. Urban areas produce a series of environmental challenges arising from the consumption of natural resources and the consequent generation of waste and pollution, contributing to the development of social and economic imbalances. All these problems, which continue to grow in our society, require the development of new solutions. Topics include: Volume I – Urban Strategies; Eco-town Planning; Planning, development and management; Planning, development and management for urban conservation and regeneration; Case studies; Landscape planning and design; Environmental management; Intelligent environments and emerging technologies. Volume II – Sustainable energy and the city; Waterfront developments; The community and the city; Quality of life; Cultural heritage issues; Transportation; Planning for risk; Planning for risk; Transport models in emergency conditions; Industrial wastes as raw materials; Waste management; Safety and security; The city heritage. Planning Sustainable Cities: An infrastructure-based approach provides an analytical framework for urban sustainability, focusing on the services and performance of infrastructure systems. The book approaches infrastructure as a series of systems that function in synergy and are directly linked with urban planning. This method streamlines

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and guides the planning process, while still highlighting detail, each infrastructure system is decoded in four "system levels". The levels organize the processes, highlight connections between entities and decode the high-level planning and decision making process affecting infrastructure. For each system level strategic objectives of planning are determined. The objectives correspond to the five focus areas of the Zofnass program: Quality of life, Natural World, Climate and Risk, Resource Allocation, Leadership. Developed through the Zofnass Program at the Harvard Graduate School of Design, this approach integrates the key infrastructure systems of Energy, Landscape, Transportation, Waste, Water, Information and Food and explores their synergies through land use planning, engineering, economics and policy. The size and complexity of infrastructure systems means that multiple stakeholders facing their own challenges and agendas are involved in planning; this book creates a common, collaborative platform between public authorities, planners, and engineers. It is an essential resource for those seeking Envision Sustainability Professionals accreditation. Compact living is sustainable living. High-density cities can support closer amenities, encourage reduced trip lengths and the use of public transport and therefore reduce transport energy costs and carbon emissions. High-density planning also helps to control the spread of urban suburbs into open lands, improves efficiency in urban infrastructure and services, and results in environmental improvements that support higher quality of life in cities. Encouraging, even requiring, higher density urban development is a major policy and a central principle of growth management programmes used by planners around the world. However, such density creates design challenges and problems. A collection of experts in each of the related architectural and planning areas examines these environmental and social issues, and argues that high-density cities are a sustainable solution. It will be essential reading for anyone with an interest in sustainable urban development.

Development Challenges, South-South Solutions is the monthly e-newsletter for the United Nations Development Programme's South-South Cooperation Unit (www.southerninnovator.org). It has been published every month since 2006.

Climate change is the main challenge facing developed countries in the 21st century. To what extent does this agenda converge with issues of poverty and social exclusion? Climate change and poverty offers a timely new perspective on the 'ecosocial' understanding of the causes and symptoms of, and solutions to, poverty and applies this to recent developments across a number of areas, including fuel poverty, food poverty, housing, transport and air pollution. Unlike any other publication, the book therefore establishes a new agenda for both environmental and social policies which has cross-national relevance. It will appeal to students in social policy, public policy, applied social studies and politics and will also be of interest to those studying international development, economics and geography

Detroit is nowadays know for what you see below -- an abandoned city. Once bustling businesses, hotels, and theaters are now in ruin due to Detroit's economic downtown. The vision of the Detroit risen, Detroit driven proposal is that of redemption and renewal. It aims at promoting urban reuse, regeneration, and development.

The tropical belt – where large areas of South East Asia, India, Africa and parts of both North and South America are located – forms the biggest landmass in the world and has one of the highest numbers of rapidly developing cities. Coincidentally, architecture

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in these regions shares common problems, the most easily identifiable being the tropical conditions of climate and natural environment. The context for architecture here is fraught with conflicts between tradition and modernization, massive influx of rural poor into urban areas, poorly managed rapid urban development as well as the cultural and social strain of globalization. Many local and overseas architects, planners and city fathers are interested in the social and environmental dimensions of these areas that contribute towards short terms solutions and long term sustainable developments. This book, developed from the first conference of the International Network for Tropical Architecture, supplies a wealth of information from experts worldwide covering the cultural, environmental and technical aspects of thinking, researching and designing for the tropics.

This edited book surveys the major sustainability challenges facing Asian cities, in particular those related to urban energy and city cooling. The book discusses the key concepts and issues involved, addressing the three levels of micro (individual buildings), meso (neighbourhoods/districts) and macro (whole or large parts of cities). It illustrates different paradigms of urban development and explores how to create cooler cities by applying integrated sustainable design and planning on all three levels, bridging the gap between specialist approaches by highlighting both built projects, processes, and research. It also raises questions about prevalent paradigms of urban development as well as topics relating to urban district cooling solutions, sustainable construction materials, and processes towards effective delivery of sustainable cities. Providing cutting edge insights into hot climate cities in Asia, this text is also pertinent for the study of cities in other world regions, notably in developing countries, and of broad relevance to sustainable urban planning in all contexts.

As the world hurtles towards urbanization at an ever-increasing pace, there arises the need for further theological reflection on the city. Globalization, international immigration, and densification in cities are having a transformative impact on the urban landscape. Urban mission is at the forefront of many denominations, church planting networks, ministries, and mission organizations yearning for citywide transformation. How are we to think biblically and theologically about the city? *View from the Urban Loft* will take readers through the development of cities throughout history, act as a guide to navigating the current forces shaping urban environments, and seek to uncover a theology of the city that gives Christians a rationale and a biblical understanding of the meaning and purposes of the city and then how to live in it for the glory of God.

This book highlights the importance of outdoor thermal comfort for improving urban living quality in the context of urban planning and urban geometry design. It introduces readers to a range of assessment methods and applications of outdoor thermal comfort and addresses urban geometry and thermal environment at the neighbourhood scale using real-world examples and parametric studies. In addition, the subjective evaluations by urban dwellers and numerical modelling tools introduced in this book provide not only a comprehensive assessment of outdoor thermal comfort but also an integrated approach to using thermal comfort indicators as a standard in high-density cities. Given its scope, the book offers a valuable guide for urban climate researchers, urban planners, and designers, and policymakers pursuing more liveable urban environments.

Given the significant benefits of play on children's health, wellbeing and happiness, the design of a new residential community should begin with the question: How can we provide the youngest residents with opportunities to freely play outdoors, walk independently, and feel a

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sense of belonging and ownership within their communities? This publication, funded by the Winston Churchill Memorial Trust, explores various design interventions and policies from around the world, which aim to improve liveability for children and their families living in urban environments.

This book offers practical solutions to achieving sustainable urban design and development, and helps designers communicate these solutions effectively to planners, developers and policy makers. Addressing sustainability issues in relation to the design and planning of the urban environment is a complex, multi-disciplinary issue and solutions never arrive from a single perspective. The authors use design as a facilitating factor to consider when and by whom decisions that contribute to sustainability are made, and through three major city-centre case studies - London, Manchester and Sheffield – they consider social, environmental and economic factors and examine their relationship to the decision-making process. Designing Sustainable Cities begins by identifying the key processes and lead decision-makers. The following chapters develop an understanding of the dimensions of sustainability, presenting the tools by which the dimensions can be analysed. Later chapters illustrate the trade-offs and the relationships between the dimensions of sustainability - with case study examples - as well as the use of IT in making design decisions. Finally, the book makes recommendations for future approaches to the design, development and on-going management of urban environments. Designing Sustainable Cities covers: latest research data on the urban environment and the interaction between social, economic and environmental issues methods of understanding the context in which urban design takes place guidance on the codes of practice process maps to help understand the context, make trade-offs and develop design solutions that allow for change methods for testing the consequences of design proposals and monitoring outcomes. Provides comprehensive coverage of major topics in urban and regional studies Under the guidance of Editor-in-Chief Anthony Orum, this definitive reference work covers central and emergent topics in the field, through an examination of urban and regional conditions and variation across the world. It also provides authoritative entries on the main conceptual tools used by anthropologists, sociologists, geographers, and political scientists in the study of cities and regions. Among such concepts are those of place and space; geographical regions; the nature of power and politics in cities; urban culture; and many others. The Wiley Blackwell Encyclopedia of Urban and Regional Studies captures the character of complex urban and regional dynamics across the globe, including timely entries on Latin America, Africa, India and China. At the same time, it contains illuminating entries on some of the current concepts that seek to grasp the essence of the global world today, such as those of Friedmann and Sassen on 'global cities'. It also includes discussions of recent economic writings on cities and regions such as those of Richard Florida. Comprised of over 450 entries on the most important topics and from a range of theoretical perspectives Features authoritative entries on topics ranging from gender and the city to biographical profiles of figures like Frank Lloyd Wright Takes a global perspective with entries providing coverage of Latin America and Africa, India and China, and, the US and Europe Includes biographies of central figures in urban and regional studies, such as Doreen Massey, Peter Hall, Neil Smith, and Henri Lefebvre The Wiley Blackwell Encyclopedia of Urban and Regional Studies is an indispensable reference for students and researchers in urban and regional studies, urban sociology, urban geography, and urban anthropology.

Looks at the latest trends and research in urban and regional environmentally sustainable planning.

Rapid urbanization, higher density and more compact cities have brought about a new science of urban climatology. An understanding of the mapping of this phenomenon is crucial for urban planners. The book brings together experts in the field of Urban Climatic Mapping to provide the state of the art understanding on how urban climatic knowledge can be made available and

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utilized by urban planners. The book contains the technology, methodology, and various focuses and approaches of urban climatic map making. It illustrates this understanding with examples and case studies from around the world, and it explains how urban climatic information can be analysed, interpreted and applied in urban planning. The book attempts to bridge the gap between the science of urban climatology and the practice of urban planning. It provides a useful one-stop reference for postgraduates, academics and urban climatologists wishing to better understand the needs for urban climatic knowledge in city planning; and urban planners and policy makers interested in applying the knowledge to design future sustainable cities and quality urban spaces.

Studies of compact cities have evolved along with the rising awareness of climate change and sustainable development. Relevant debates, however, reveal that the prevailing definitions and practices of compact cities are tied primarily to traditional Western urban forms. This book reinterprets "compact city", and develops a ground-breaking discourse of "Vertical Urbanism", a concept that has never been critically articulated. It emphasizes "Vertical Urbanism" as a dynamic design strategy instead of a static form, distinguishing it from the stereotyped concept of "vertical city" or "towers in the park" dominant in China and elsewhere, and suggests its adaptability to different geographic and cultural contexts. Using Chinese cities as laboratories of investigation, this book explores the design, ecological, and sociocultural dimensions of building compact cities, and addresses important global urban issues through localized design solutions, such as the relationship between density and vitality, the integration of horizontal and vertical dimensions of design, and the ecological and social adaptability of combinatory mega-forms. In addition, through discussions with scholars from the United States, China, and Japan, this book provides an insight into the theoretical debates surrounding "compact city" and "Vertical Urbanism" in the global context. Scholars and students in architecture and urban planning will be attracted by this book. Also, it will appeal to readers with an interest in urban development and Asian studies.

Before discussing the research itself in greater depth, it is beneficial at this stage to introduce the background to the research. To do so, the chapter is divided into four parts. The first part of the chapter summarises terminologies associated with adaptability, and goes on to define and elaborate on the meaning of adaptability in this research study. The second part of this chapter defines mass housing; the development of mass housing and its problems are also illustrated. In the third part, as the key solution for addressing housing occupants' requirements and accommodating changes, the importance of adaptability in improving overall housing quality, particularly from a social, financial, and environmental point of view, is outlined. The sustainability of adaptability is also discussed. Even though studies of adaptability have been developed structurally, functionally, technically and financially, adaptability still occupies a marginal position due to the production of mass housing. The final part of the chapter rethinks the notion of adaptability for mass housing. Factors of mass housing related to social, financial, technical and design issues and which address adaptability are explored. Lastly, it is revealed that the design aspect of adaptability is chosen as the research focus in this research study.

This book offers a wealth of interdisciplinary approaches to urbanization strategies in architecture centered on growing concerns about the future of cities and their impacts on essential elements of architectural optimization, livability, energy consumption and sustainability. It portrays the urban condition in architectural terms, as well as the living condition in human terms, both of which can be optimized by mathematical modeling as well as mathematical calculation and assessment. Special features include:

- new research on the construction of future cities and smart cities
- discussions of sustainability and new technologies

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designed to advance ideas to future city developments Graduate students and researchers in architecture, engineering, mathematical modeling, and building physics will be engaged by the contributions written by eminent international experts from a variety of disciplines including architecture, engineering, modeling, optimization, and related fields.

This book explores the bioclimatic approach to building design. Constant innovations in the field are evident, including the need to face climate changes and increase the local resilience at different scales (regional, urban, architectural). Differently from other contributions, this book provides a definition of the bioclimatic design approach following a technological and performance-driven vision. It includes one of the largest collection of research voices on the topic, becoming also a critical reference work for bioclimatic theory. It is intended for architects, engineers, researchers, and technicians who have professional and research interests in bioclimatic and in sustainable and technological design issues.

Integrated Sustainable Design of Buildings aims to provide a guide to members of design and masterplanning teams on how to deliver sustainable development and buildings cost effectively, meeting current and emerging UK and international statutory and planning requirements. Using a series of case histories and examples from the author's ten years of providing sustainability advisory services the book sets out a clear and understandable strategy that deals with all aspects of sustainable design and construction and the implications for delivery, costs, saleability and long term operation. The extensive scope includes all aspects of environmental, social and economic sustainability, including strategies to reduce carbon emissions and the impact of climate change. Integrated Sustainable Design of Buildings appeared in the Cambridge Top 40 Sustainability Books of 2010.

A volume of five parts, this book is a culmination of selected research papers from the second version of the international conferences on Urban Planning & Architectural Design for sustainable Development (UPADSD) and Urban Transit and Sustainable Networks (UTSN) of 2017 in Palermo and the first of the Resilient and Responsible Architecture and Urbanism Conference (RRAU) of 2018 in the Netherlands. This book, not only discusses environmental challenges of the world today, but also informs the reader of the new technologies, tools, and approaches used today for successful planning and development as well as new and upcoming ones. Chapters of this book provide in-depth debates on fields of environmental planning and management, transportation planning, renewable energy generation and sustainable urban land use. It addresses long-term issues as well as short-term issues of land use and transportation in different parts of the world in hopes of improving the quality of life. Topics within this book include: (1) Sustainability and the Built Environment (2) Urban and Environmental Planning (3) Sustainable Urban Land Use and Transportation (4) Energy Efficient Urban Areas & Renewable Energy Generation (5) Quality of Life & Environmental

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Management Systems. This book is a useful source for academics, researchers and practitioners seeking pioneering research in the field.

This book offers a comprehensive overview of the intellectual developments in urban conservation. The authors offer unique insights from UNESCO's World Heritage Centre and the book is richly illustrated with colour photographs. Examples are drawn from urban heritage sites worldwide from Timbuktu to Liverpool to demonstrate key issues and best practice in urban conservation today. The book offers an invaluable resource for architects, planners, surveyors and engineers worldwide working in heritage conservation, as well as for local authority conservation officers and managers of heritage sites.

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