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Smart Technologies and Design For Healthy Built Environments Jan 25 2022 Smart Technologies and Design for Healthy Built Environment connects smart technology to a healthy built environment that builds upon the sustainable building movement. It provides an overall summary of the state-of-the-art technologies that are applied in the built environment. The book covers a broad spectrum of smart technology categories ranging from dynamic operability, energy efficiency, self-regulating and self-learning systems, and responsive systems. The foreseeable challenges that are associated with smart technologies are discussed and outlined in the book. Firstly, this book provides a snapshot of state-of-the-art smart technologies being applied in the built environment. It covers a broad spectrum of smart technology categories, ranging from dynamic operability, energy efficiency, self-regulating and self-learning systems, to responsive systems. Secondly, this book provides in-depth analysis of the four primary components of health (biological, physical, physiological and psychological); their effects on wellbeing and cognitive performance are introduced as well. Thirdly, it connects smart technologies to those health-influencing factors by reviewing three completed smart building projects. This book can also serve as a basis for education and discussion among professionals and students of diverse backgrounds who are interested in smart

technologies, smart building, and healthy building. *Smart Technologies and Design for Healthy Built Environment* serves as the basis for education and discussions among professionals and students who are interested in smart technologies, smart building and healthy building, as it bridges the gap between smart technologies and a healthy built environment. The book also provides a foundation for anyone who is interested in the impact of smart technology on the health of built environment.

The Modular Housing Handbook Aug 08 2020 Modular construction has the potential to improve housing quality, speed up delivery and reduce building costs – so why isn't everyone doing it? This practical handbook combines real-world advice on designing modular housing with a compelling argument for off-site construction as a means for architects taking a greater role and achieving more influence in their housing projects. Focusing on the benefits as well as the challenges of modular construction, this book illustrates that off-site construction need not act as a design constraint and can in fact provide an opportunity for greater design impact. Richly illustrated with recent case studies and featuring over 100 photographs of exemplar projects, *The Modular Housing Handbook* provides inspiration as well as timely, practical advice.

Solar Energy Conversion Systems in the Built Environment Sep 01 2022 This book focuses on solar energy conversion systems that can be implemented in the built environment, at building or at community level. The quest for developing a sustainable built environment asks for specific solutions to provide clean energy based on renewable sources, and solar

energy is considered one of the cleanest available energy on Earth. The specific issues raised by the implementation location are discussed, including the climatic profile distorted by the buildings, the available surface on the buildings for implementation, etc. This book also discusses the seasonal and diurnal variability of the solar energy resource in parallel with the variability of the electrical and thermal energy demand in the built environment (particularly focusing on the residential buildings). Solutions are proposed to match these variabilities, including the development of energy mixes with other renewables (e.g. geothermal or biomass, for thermal energy production). Specific solutions, including case studies of systems implemented on buildings all over the world, are presented and analyzed for electrical and for thermal energy production and the main differences in the systems design are outlined. The conversion efficiency (thus the output) and the main causes of energy losses are considered in both cases. The architectural constraints are additionally considered and novel solar energy convertors with different shapes and colors are presented and discussed. The durability of the solar energy conversion systems is analyzed considering the specific issues that occur when these systems are implemented in the built environment; based on practical examples, general conclusions are formulated and specific aspects are discussed in relation to experimental results and literature data. With renewables implemented in the built environment likely to expand in the near future, this book represents welcome and timely material for

all professionals and researchers that are aiming to provide efficient and feasible solutions for the sustainable built environment.

The Sustainable Enterprise Jul 07 2020 Perceptions of a business's sustainability can have a real impact on the bottom-line. The benefits accrued will far outweigh any costs. Drawing on the experience and expertise of leading professionals and practitioners, it reviews the specific challenges that sustainability can involve from energy use to employment rights, from emissions trading to corporate governance, and from environmental technology to stakeholder relationships. Depending on the nature of the business, they might be critical or they might be routine. However, passively complying with rules and regulations is no longer sufficient. Sustainability is starting to permeate every business decision and needs to be managed in an active, integrated way. The rewards for responsibility, accountability and transparency can be high: brand loyalty, high-calibre recruits, strengthened partnerships, easier entry to new markets and better access to capital. Any failure to live up to a commitment to sustainability, however, can fundamentally undermine prospects for future growth. In securing these rewards and minimising the risks, this book is designed as a practical guide to the strategic and operating challenges in becoming a sustainable enterprise.

Green Building Illustrated Oct 10 2020 FULLY ILLUSTRATED, UPDATED GUIDE TO THE STRATEGIC DESIGN OF GREEN BUILDINGS In the tradition of *Building Construction Illustrated*, Francis D.K. Ching and Ian M. Shapiro offer a fully illustrated guide to the

theory and practice of sustainable design. This guide provides architects, designers, and builders in the green design professional community a framework and detailed strategies for designing substantively green buildings. With a focus on sustainable sites, approaching and reaching net-zero energy, low and zero-water usage, minimum-impact materials and superior indoor environmental quality, this guide explains why we need to build green, as well as green building theory and advancements in the industry. This Second Edition includes: All-new case studies featuring geographically diverse buildings with proven zero energy performance Expanded coverage of zero energy building design, as well as zero water and zero waste buildings Practical guidance for the schematic design of high-performance buildings, heating and hot water system selection, building envelope details, and integrating renewable energy Advanced strategies, such as the concept of shape efficiency, and the optimal location for stairwells in buildings Additional strategies for affordability in green design and construction Updated references to the latest codes and standards This Second Edition of *Green Building Illustrated* is an excellent resource for professionals, students and those interested in the design and construction of sustainable buildings.

Future Access Enablers for Ubiquitous and Intelligent Infrastructures Mar 07 2023 This book constitutes the refereed post-conference proceedings of the 5th International Conference on Future Access Enablers for Ubiquitous and Intelligent Infrastructures, FABULOUS 2021, held in May 2021.

Due to COVID-19 pandemic the conference was held virtually. This year's conference topic covers security of innovative services and infrastructure in traffic, transport and logistic ecosystems. The 30 revised full papers were carefully reviewed and selected from 60 submissions. The papers are organized in thematic sessions on: Internet of things and smart city; smart environment applications; information and communications technology; smart health applications; sustainable communications and computing infrastructures.

Big Data Dec 12 2020 Promise, Application and Pitfalls

Fields of Knowledge Dec 24 2021 This issue of Political Power and Social Theory explores the changes in science associated with the rise of neoliberalism since the 1970s. The collected papers together chart an important theoretical agenda for future research in the study of sciencesociety relations in the contemporary era.

Handbook of Research on Supply Chain Management for Sustainable Development Sep 08 2020 The issue of sustainability has become a vital discussion in many industries within the public and private sectors. In the business realm, incorporating such practices allows organizations to redesign their operations more effectively. The Handbook of Research on Supply Chain Management for Sustainable Development is a critical scholarly resource that examines academic and corporate interest in sustainability in all facets of business management. Featuring coverage on a wide range of topics such as green supply chains, environmental standards, and production planning, this book is geared toward professionals,

researchers, and managers seeking current and relevant research on optimizing supply chains to ensure fair labor practices, lower emissions, and a cleaner environment.

Urban Growth and the Circular Economy May 29 2022 Presented at the 1st International Conference on Urban Growth and the Circular Economy that was held in Alicante, Spain the papers included in this book focus on the continuing and rapid growth of cities and their regions of influence and how that has led to the need to find new solutions which allow for promoting their sustainable development. The quest for the Sustainable City has until recently focused on the efficient use of resources with the application of technical advances giving rise to the definition of SMART Cities. The economic model emphasised however is still "linear" in the sense that the design and consumption follows the pattern of extraction of natural resources, manufacturing, product usage and waste disposal. The continuous growth of urban population has recently given rise to the emergence of a new model which responds better to the challenges of natural resource depletion as well as waste management. This model has been called the "circular economy". The circular economy is a recent concept based on the reuse of what up to now has been considered wastes, reintroducing them into the productive cycle. The objective of the circular economy is to reduce consumption and achieve savings in terms of raw materials, water and energy, thus contributing to the preservation of resources in order to reach sustainable development. One of the most important of these resources is water which is becoming a

scarce commodity in an ever expanding world whose population demands a better standard of living. Water is required for agricultural purposes as well as by industry, in addition to its use by the general population. The recycling of water is an essential component of the circular economy. There is no possibility for the success of a long term economic policy without addressing the problems of natural resources and environmental pollution, which will affect the reuse of materials and products. The current market economy based on a linear model from resource extraction, manufacturing, consumption and waste disposal, has not proved a long term suitable solution, in spite of the substantial efforts made in reducing its environmental impacts. This is largely due to the continuous population growth, in a society that demands high standards of living, thus requiring an ever increasing share of natural resources.

Real Estate Mar 03 2020 This textbook takes a robust overview of property within a market context, examining the complex nature of property rights and issues related to its specialist nature both from an investment and an occupier point of view.

Green and Smart Buildings Sep 20 2021 This book highlights the various technologies that are currently available or are now being developed for the green and smart buildings of the future. It examines why green building performance is important, and how it can be measured and rated using appropriate benchmarking systems. Lastly, the book provides an overview of the state-of-the-art in green building technologies and the trend towards zero energy or net positive energy buildings in the

future.

Age Of Fire Is Over, The: A New Approach To The Energy Transition Feb 23 2022 The heart of the contemporary argument on climate change and energy transition focuses on how energy supply should be decarbonized to mitigate greenhouse gas emissions. This book proposes an alternative approach. *The Age of Fire Is Over: A New Approach to the Energy Transition* finds that energy transitions are not driven by supply-side driven transformations but rather by evolutions in demand patterns. Exploring the potential of recently emerged key technologies, *The Age of Fire Is Over* argues that the so-called Energy Transition has not yet started. In the future, key technologies will significantly transform demand and provide services at a fraction of today's cost or offer new services not yet imagined. To a large extent, energy paradigm shifts are driven by such evolutions, largely inevitable and often unanticipated, because they provide societies with greater benefits: lower costs, more jobs, and rapid adaptation. This book closes with key novel recommendations for government institutions to accelerate the energy transition, which – instead of replicating an approach from the past – should focus on these demand transformations to both advance civilization and mitigate climate change. With Foreword by Jean-Pascal Tricoire, Schneider Electric Chief Executive Officer.

Building Information Modelling (BIM) in Design, Construction and Operations III May 17 2021 Originating from the 2019 International Conference on Building Information Modelling this book presents latest findings in the field. This volume presents

research from a panel of experts from industry, practice and academia touching on key topics, the development of innovative solutions, and the identification future trends.

architect, verb. Jun 05 2020 Leading architect Reinier de Graaf punctures the myths behind the debates on what contemporary architecture is, with wit and devastating honesty. Architecture, it seems, has become too important to leave to architects. No longer does it suffice to judge a building solely by its appearance, it must be measured, and certified. When architects talk about Excellence', 'Sustainability', 'Well-being', 'Liveability', 'Placemaking', 'Creativity', 'Beauty' and 'Innovation' what do they actually mean? In Architect, Verb, de Graff dryly skewers the doublespeak and hot air of an industry in search of an identity in the 21st century. Who determines how to measure a 'green building'? Why is Vancouver more 'liveable' than Vienna? How do developers get away with advertising their buildings as promoting 'well-being'? Why did Silicon Valley become so obsessed with devising 'creative' spaces or developing code that replaces architects? How much revenue can be attributed to the design of public space? Who gets to decide what these measurements should be, and what do they actually mean? And what does it mean for the future of our homes, cities, planet? He also includes a biting, satirical dictionary of 'profspeak': the corporate language of consultants, developers and planners from 'Active listening' to 'Zoom Readiness"

RIBA Climate Guide May 09 2023 Climate change is a threat to humankind, which requires immediate

action. The built environment has a vital role to play in responding to the climate emergency. There is a pressing need for architects to acquire the requisite skills and knowledge to design buildings that deliver sustainable outcomes, meeting the RIBA 2030 Climate Challenge and mandatory competence in climate literacy. Equipping you with the key information that built environment professionals require to halt climate change and mitigate its impacts in your day-to-day work, this book is organised around six overarching topics: 1. Human Factors 2. Circular Economy 3. Energy and Carbon 4. Water 5. Ecology and Biodiversity 6. Connectivity and Transport Featuring images and original illustrations, each themed section will guide you through fundamental elements and competencies for creating a sustainable design and delivery framework that can be implemented by you in your practice. Contextualising the climate emergency within the built environment landscape, the guide maps out the essential background knowledge around climate science, international agreements, legislations, commitments and roadmaps. A collection of short, building- and urban-scale case studies present key takeaways, illustrating real-life applications of design strategies and industry-wide tools, as well as standards that are deployed in climate-conscious built environments all around the world.

A Carbon Primer for the Built Environment Apr 03 2020 In a world increasingly concerned about the impact of carbon dioxide and other greenhouse gases in the atmosphere on global climate, the A Carbon Primer for the Built Environment will provide an understanding of the science and the public policy

and regulation intended to tackle climate change. It will spell out the essential information needed for navigating through the growing regulatory maze with confidence. The book will:

- Provide an explanation of climate change, why carbon has been targeted as the main culprit and how this will impact the working lives of architects
- Explain key concepts such as: carbon footprinting, contraction & convergence, concentration based targets, the Energy Performance of Buildings Directive, decarbonising supply and reducing energy demand as well as the relevance of relevant government targets and international agreements
- Suggest an overall framework for achieving the carbon reduction targets and the requirements that will place on building designers
- Outline requirements and common standards and codes – providing guidance on compliance mechanisms
- Suggest and examine likely models for future practice

The book will be essential reading for anyone wanting to familiarise themselves with the new landscape of carbon reduction in the built environment, with a particular focus on building design. It will also provide an accessible reference volume for information on particular policies, terms and initiatives as well as key data and numbers that will assist initial carbon calculations.

Sustainable Communities Nov 22 2021 This book would not have been possible without the dedication and commitment of each of the chapter authors. For some authors, writing a chapter was beyond their “9–5” job, and this book reflects their commitment to sustainability at the local level for their communities. To every chapter author and their staff, friends, and families, thank you. This

dynamic and paradigm-changing volume on the topic of sustainable development is focused on communities such as cities, schools, and colleges where the future of our families and children are most at risk. We must act today as each of the chapters represents in their presentations. This book marks a new era: the Third Industrial Revolution. The new age of the Third Industrial Revolution has been labeled by some as the "green era" or "green economy," but it had already started around the world, especially in Europe and Japan, for over a decade – since the end of the 20th century. More significantly, the book highlights people and communities who have a shared concern and vision along with the will and determination to enact programs and policies that make sustainable development real – not just political rhetoric or "branding" or even the current "buzz word" for obtaining funds and grants. The book presents "The Sequel to an Inconvenient Truth" – actual examples of how communities can and have changed in order to mitigate climate change. Again, thanks to everyone and their colleagues.

New Frontiers in Light Metals Nov 10 2020 "Held at the Auditorium of the Eindhoven University of Technology, Eindhoven, the Netherlands on 23-25 June 2010" -- t.p.

Sustainable Retail Development Apr 15 2021
Sustainable Retail Development, addresses the emerging issue of green retail buildings and retail development that will grow significantly in importance over the next half-decade, a trend seen throughout the developed world. This volume is a practical and comprehensive guide to greening retail

real estate, including green building and marketing strategies, corporate sustainability programs and features a 10-point “action program” for greening any retail real estate portfolio. *Sustainable Retail Development*, should be essential reading for professionals in design, construction and operations of shopping centers and retail stores. Well illustrated, this volume features over 30 green retail developments from North America, Europe, South America, Asia and Australia, as well as interviews with 25 leading industry experts.

Advances in Human Factors in Architecture, Sustainable Urban Planning and Infrastructure Jun 29 2022 This book presents human factors research focused on achieving and assessing sustainability in the built environment and architecture. It reports on advanced engineering methods for architecture and design, and on assessments of the social, environmental, and economic impacts of various designs and projects. The book covers a broad range of practical studies relating to ergonomic design and assessment of public and private places, urban ecological constructions, and urban planning for smart city. Further topics include green area planning, environmentally-responsive architecture, and conservation and adaptation of vernacular architectures in modern design. Based on the AHFE 2020 Virtual Conference on Human Factors in Architecture, Sustainable Urban Planning and Infrastructure, held on July 16–20, 2020, this book offers a wealth of perspectives on sustainability and ergonomics in architecture and urban planning. As such, it represents a timely source of inspiration for designers, architects, urban

planners, as well as civil and environmental engineers, and other professionals, including policy-makers, seeking for developing sustainable buildings and infrastructure.

Putting a Price on Sustainability Jan 31 2020 First published in 2005. Routledge is an imprint of Taylor & Francis, an informa company.

Building the Future Jan 13 2021 Niccolò Machiavelli famously wrote, "There is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success than to take the lead in the introduction of a new order of things." That's what this book is about--innovation far more audacious than a new way to find a restaurant or a smart phone you can wear on your wrist. Harvard professor Amy Edmondson and journalist Susan Salter Reynolds explore how to bring into being systems that transform human experience and make the world more livable and sustainable. This demands "big teaming": intense collaboration across professions and industries that may have completely different mindsets and even be antagonistic to each other. To do this successfully requires practicing new forms of leadership that combine an expansive vision with incremental action--not an easy balance. To reveal how pioneers build the future, Edmondson and Reynolds tell the story of Living PlanIT, an award-winning "smart city" start-up with a breathtakingly ambitious goal: building a showcase high-tech city from scratch to pilot its software. This meant a joint effort spanning a truly disparate group of software entrepreneurs, real estate developers, city government officials, architects, construction companies, and technology corporations. We get to

know Living PlanIT's leaders and follow them and their partners through cycles of hope, exhaustion, disillusionment, pragmatism, and renewal. There are powerful lessons here for anyone, in any industry, seeking to transform the world.

Smart Buildings Apr 08 2023 How is technology shaping our built environment and changing the practice of architecture? This book explores how buildings and spaces are designed, built, used, and better understood through technology. A practical guide to technical advances including Internet of Things (IoT), 3D printing, innovative materials and robotics, Smart Buildings also outlines the opportunities for architecture including improved communication, flexibility, wellbeing, productivity and data collection. Bringing together multidisciplinary contributions and case studies from across the globe, this book provides an inspiring practical guide on how technology can inspire new architectural ideas, improving quality, comfort, health and wellbeing in the built environment

Sustainaspeak Feb 11 2021 Architecture 2030; BUG; Biophilic Design; BIPV; Circular Economy; LEED; Passive Design; Solar Chimney; Systems Thinking; WELL; Xeriscaping. What does it all mean? The complex and evolving language used in the sustainable design community can be very challenging, particularly to those new to environmentally friendly and resource-efficient design strategies that are needed today. Definitions of over two hundred terms with further sources. Clearly cross-referenced with Sustainaspeak, Theoryspeak, and Archispeak terms. Illustrated

throughout with sustainable award-winning buildings by e.g. Behnisch, Brooks + Scarpa, EHDD, KieranTimberlake, Lake|Flato, Leddy Mahtum Stacy, SmithGroup, Perkins+Will, ZGF, VMDO, and McDonough + Partners. *Sustainaspeak: A Guide to Sustainable Design Terms* provides a current guide to the sustainable design strategies, terms, and practices needed for the next generation of designers, architects, students, and community leaders to design a carbon-neutral world for future generations.

Sustainability in Transition Jul 31 2022
Sustainability in Transition: Principles for Developing Solutions offers the first in-depth education-focused treatment of how to address sustainability in a comprehensive manner. The textbook is structured as a learning-centered approach to walk students through the process of linking sustainable behavior and decision-making to green innovation systems and triple-bottom-line economic development practices, in order to achieve sustainable change in incremental to transformational ways. All chapters combine theory and practice with the help of global case study and research study examples to illustrate barriers and best practices. Each chapter begins with learning objectives and ends with a check-on-learning section that ties the main points back to the core themes of the book. Chapters include a section focused on measuring progress and a box comparing international research or case studies to the North American focus of the chapter. A list of additional academic sources for students that complement each chapter are included. Building sustainability tools,

techniques and competencies cumulatively with the help of problem- and project-based learning modules, *Sustainability in Transition: Principles for Developing Solutions* is a comprehensive resource for learning sustainability theory and doing sustainability practice. It will be essential reading for advanced undergraduate and graduate level students who have already completed introductory sustainability classes.

Advancements in Sustainable Architecture and Energy Efficiency Nov 03 2022 Thermal comfort and indoor air quality (IAQ) issues have gained significant interest in the scientific and technical community involved in building performance analysis and other related subjects. In terms of thermal comfort, the achievement and maintenance of a thermally acceptable indoor environment is affected by energy costs, and energy poverty is a widespread problem globally. There is a call for energy-efficient architecture for a developed and sustainable world. However, with the use of renewable energy that increased considerably in recent years, new technical challenges arose for the energy sector. Consumers are key players in this context, as flexibility in demand is crucial to cope with the intermittent nature of most renewable energy sources. Active demand-side participation is particularly important to ensure the efficient use of locally and globally available energy. Sustainability, human comfort, and healthy living environments have become top priorities. *Advancements in Sustainable Architecture and Energy Efficiency* explores how housing is a key health factor for individuals and looks at factors such as

air quality, ventilation, hygrothermal comfort, lighting, physical environment, building efficiency, and other areas as important pieces in healthy architecture. It discusses how the poor application of these parameters can directly affect human health and how sustainable architecture provides a solution. Beyond just labeling the important facets of architecture for healthy living, this book will look at different perspectives of energy consumption and demand to ensure sustainable energy, increased energy efficiency, improved energy policies, and reasonable energy costs for homes. This book is ideal for architects, designers, engineers, energy engineers, environmental scientists, practitioners, researchers, academicians, and students interested in architecture that is both conducive to healthy living and energy efficiency.

Blockchain Dec 04 2022 The internet was envisaged as a decentralised global network, but in the past 25 years it has come to be controlled by a few, very powerful, centralised companies. Blockchain is a technological paradigm shift that allows secure, reliable, and direct information transfer between individuals, organisations, and things, so that we can manage, verify, and control the use of our own data. Blockchain also offers a new opportunity for humanity to fix some major problems. It can authenticate data, manage its analysis, and automate its use. With better data comes better decision-making. In this way, Blockchain can contribute to solving climate change, reduce voting fraud, fix our identity systems, improve fair trade, and give the poor an opportunity to improve their lives by monetising their (digital) capital. A world built

upon peer-to-peer transactions and smart contracts can empower individuals and communities. This book offers a fresh perspective with which to consider this transformative technology. It describes how Blockchain can optimise the processes that run our society. It provides practical solutions to global problems and offers a roadmap to incorporate Blockchain in your business. It offers a blueprint for a better world. Filled with easy-to-understand examples, this book shows how Blockchain can take over where the internet has fallen short.

Maintaining Mission Critical Systems in a 24/7 Environment Apr 27 2022 This book is meant to offer Architects, Property Mangers, Facility Managers, Building Engineers, Information Technology Professionals, Data Center Personnel, Electrical & Mechanical Technicians and students in undergraduate, graduate, or continuing education programs relevant insight into the Mission Critical Environment with an emphasis on business resiliency, data center efficiency, and green power technology. Industry improvements, standards, and techniques have been incorporated into the text and address the latest issues prevalent in the Mission Critical Industry. An emphasis on green technologies and certifications is presented throughout the book. In addition, a description of the United States energy infrastructure's dependency on oil, in relation to energy security in the mission critical industry, is discussed. In conjunction with this, either a new chapter will be created on updated policies and regulations specifically related to the mission critical industry or updates to policies and regulations will be woven into most chapters. The

topics addressed throughout this book include safety, fire protection, energy security and data center cooling, along with other common challenges and issues facing industry engineers today.

Labelling the Economy Feb 06 2023 This collected volume analyses labelling as a political and economic operation. It gathers contributions that focus on various domains, including the agri-food sector, the construction sector, eco-labelling, retail, health public policies and the energy sector, considering the use of labels for various objectives, such as providing legal and technical data on consumption products, certifying their quality, and indicating the approval of professional or political authorities. These practices are tied to both public and private interventions that make civic concerns visible and aim to govern them. The book considers 'labelling the economy' as an operation that introduces political questions into the economic realm, while also importing economic modes of reasoning into governance interventions. In doing so, the book considers the sociotechnical apparatus on which any label relies as a nexus where economic and political considerations are brought together.

Competitive Digital Innovation Oct 02 2022 Innovative digital technologies are forcing companies to rethink how they compete. The focus of digital innovation in business has shifted from internal transformation within firms to their market interface and ecosystems. While opportunities for innovation in internal operations are well established, it's less clear how to leverage technology at the market interface. This often has

strategic implications, and the goal of this book is help you connect digital innovation to business strategy. By understanding how to leverage digital technologies, you can redefine your market-facing business processes, your products, services and even your business models and stay competitive in today's hybrid markets. This book provides a coherent and comprehensive approach to not just survive but rather thrive in the 21st Century global marketplace. With global, real-world examples and original frameworks, this is an ideal book for executives and anyone who wants to understand digital strategy. Highly practical but infused with rigorous research, it shows you how your business can use digital technologies to compete in today's hybrid markets.

Routledge Handbook of Sustainability Indicators Oct 22 2021 This handbook provides researchers and students with an overview of the field of sustainability indicators (SIs) as applied in the interdisciplinary field of sustainable development. The editors have sought to include views from the center ground of SI development but also divergent ideas which represent some of the diverse, challenging and even edgy observations which are prominent in the wider field of SI thinking. The contributions in this handbook: • clearly set out the theoretical background and history of SIs, their origins, roots and initial goals • expand on the disciplines and modalities employed to develop SIs of various kinds • assess the various ways in which SI data are gathered and the availability (over space and time) and quality issues that surround them • explore the multiplex world of SIs as

expressed in agencies around the world, via examples of SI practice and the lessons that have emerged from them • critically review the progress that SIs have made over the last 30 years • express the divergence of views which are held about the value of SIs, including differing theories on their efficacy, efficiency and ethics • explore the frontier of contemporary SI thinking, reviewing ante/post and systemic alternatives This multidisciplinary and international handbook will be of great interest to researchers, students and practitioners working in sustainability research and practice.

How To Win Work Mar 15 2021 You are a great designer, but no-one knows. Now what? This indispensable book, written by one of the most influential marketers in architecture, will demystify Public Relations and marketing for all architects, whether in large practices or practicing as sole practitioners. It bridges the distance between architects and marketing by giving practical tips, best practice and anecdotes from an author with 20 years' experience in architecture marketing. It explains all aspects of PR and Business Development for architects: for example, how to write a good press release; how to make a fee proposal; how to prepare for a pitch. It gives examples of how others do it well, and the pitfalls to avoid. In addition, it discusses more general aspects which are linked to PR and BD, such as being a good employer, ethics for architects and the challenges when working abroad. Featuring vital insights from a wide variety of architects, from multinational practices to small offices, this book

is an essential companion to any architectural office.

Contemporary Problems of Architecture and Construction May 05 2020 Contemporary Problems of Architecture and Construction 2020 includes contributions on various complex issues and aspects of engineering and construction of buildings and structures, protection, reconstruction and restoration of architecture, as well as intellectualization of energy and safety systems functioning urban development. The contributions were presented at the eponymous conference (ICCPAC 2020, St Petersburg, Russia, November 25-26, 2020), and cover a wide range of topics: Urban development: problems of urban construction and architecture Engineering, construction and operation of buildings and structures Implementation of building information modeling (BIM) and geo-information systems (GIS) technologies in the construction industry Energy efficiency of buildings and maintenance systems Engineering technologies of sustainable nature management and environmental protection Intellectualization and algorithmization of large cities road safety systems functioning Economics and management in construction and public utility services. Contemporary Problems of Architecture and Construction 2020 will be of interest to academics and professionals involved in the urban development, engineering technologies, architecture and construction, economics and management in construction industry.

Retrofit for Purpose Jan 01 2020 Retrofit for Purpose examines a range of state-of-the-art non-domestic retrofit projects. Its chapters explore

common challenges, offer practical solutions and provide a clarion-call to architects and clients for better, smarter retrofit. Twelve case studies focus as much on the transformation of usability and image as on the improvements in the energy and resource use of non-domestic buildings. While an essay section places these projects into a wider context, suggesting that despite the importance of sharing and analysing data, there is more to retrofit than just energy efficiency. The authors take a range of other retrofit variables: from client ambition to tenure, budget, use type, age, context, fashion and fiscal arrangements and assess how retrofit can be made affordable, how it fits in with wider government policy and how performance can be measured.

Sustainable Construction Aug 20 2021 SUSTAINABLE CONSTRUCTION DISCOVER THE LATEST EDITION OF THE LEADING TEXTBOOK ON SUSTAINABLE CONSTRUCTION AND GREEN BUILDING In the newly revised Fifth Edition of Sustainable Construction: Green Building Design and Delivery, the late Dr. Charles J. Kibert delivers a rigorous overview of the design, construction, and operation of high-performance green buildings. In the leading textbook on sustainable building, the author provides thoroughly updated information on everything from materials selection to building systems. Updated to reflect the latest building codes and standards, including LEED v4.1, the book offers readers coverage of international green building codes and standards, biomimicry, ecological design, focused assessment systems like SITES, EDGE, WELL, and Fitwell, and sustainable construction resilience. Readers will learn to think critically

about all aspects of green building and benefit from the inclusion of: A thorough introduction to sustainable construction, including the landscape for green buildings, sustainable development, sustainable design, and the rationale for high-performance green buildings An exploration of the foundations of green buildings, including biomimicry and ecological design, basic concepts and vocabulary, and the green building movement Practical discussions of ecological design, including a historical perspective, contemporary ecological design In-depth examinations of high-performance green building assessment, including focused assessment systems and international building assessment systems Perfect for upper level undergraduate and graduate level students in architecture, architectural technology, civil engineering, and construction management, Sustainable Construction is also an indispensable resource for anyone studying for the LEED Green Associate exam, as well as industry professionals and building owners.

Reinventing Green Building Jan 05 2023 Buildings and their associated systems are the largest source of greenhouse gases in the world. The 2030 Challenge aims to produce zero-net energy from new North American construction by 2030 while achieving a 50 percent reduction in carbon emissions from existing buildings. With less than 4 percent of commercial and residential structures in the United States and Canada certified by 2015, we seem destined to fall catastrophically short of this target. Reinventing Green Building combines a unique, insider's critique of the current state of affairs with a potent vision

for the future. This highly visual, data-driven analysis brings together the wisdom of today's leading practitioners including: Up-to-date information on green building issues, energy economics, and new technology Dramatic new approaches to certification system design and user experience Creative, outside-the-box solutions using the Internet of Things, big data analytics, and cloud-based technologies for building management The green building revolution has failed to fulfill its promise to transform the marketplace in a meaningful way. Smart, simple, and sustainable: Reinventing Green Building presents a new approach to certification, designed to radically cut costs while dramatically increasing marketplace acceptance integrating true climate mitigation and better building performance. Jerry Yudelson, dubbed "The Godfather of Green" by Wired magazine in 2011, has many years of professional experience in the green building field, elected as a LEED Fellow and having served as the president of the Green Building Initiative. He is the author of thirteen books in the field, including Dry Run, Choosing Green, and Green Building A-Z.

Internet of Things for Facility Management Mar 27 2022 This book proposes strategies for FM services optimization and innovation, based on innovative models of IoT application and big data management within FM processes, able to support FM stakeholders in: orienting and managing big data flows and their sources (sensor, RFID, etc.); changing FM services demand/offer and developing new approaches to FM agreements; drawing new supply chains based on network approaches; and outlining new profiles of

competences for FM stakeholders. The book demonstrates that FM stakeholders (e.g. Real Estate owners, FM providers, service suppliers, etc.) increasingly need new support tools for understanding the features of the current offer of innovative ICT solutions in order to become promoters of FM innovation, and it provides them with an analytical-procedural framework useful for defining and implementing IoT-based FM services.

Energy Efficiency in Buildings Jul 19 2021

Buildings are one of the main causes of the emission of greenhouse gases in the world. Europe alone is responsible for more than 30% of emissions, or about 900 million tons of CO₂ per year. Heating and air conditioning are the main cause of greenhouse gas emissions in buildings. Most buildings currently in use were built with poor energy efficiency criteria or, depending on the country and the date of construction, none at all. Therefore, regardless of whether construction regulations are becoming stricter, the real challenge nowadays is the energy rehabilitation of existing buildings. It is currently a priority to reduce (or, ideally, eliminate) the waste of energy in buildings and, at the same time, supply the necessary energy through renewable sources. The first can be achieved by improving the architectural design, construction methods, and materials used, as well as the efficiency of the facilities and systems; the second can be achieved through the integration of renewable energy (wind, solar, geothermal, etc.) in buildings. In any case, regardless of whether the energy used is renewable or not, the efficiency must always be taken into account. The most profitable and clean

energy is that which is not consumed.

*Sustainable Urban Development Volume 4 Jun 17 2021
This new book explores how the professions responsible for enhancing the built environment's sustainability seek to deliver this new agenda, offering multi-perspective case studies and discussion to argue for a rethinking of the role of urban development professional. Showing how sustainability is rapidly becoming the norm for practitioners, the authors consider new types of professional knowledge, relationships between planning systems and property development, links between public and private sector organisations, ideas about long term responsibilities and new working practices for engaging with the public.*

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