

## Pwc Smart Grid Pwc

Meeting today's energy and climate challenges require not only technological advancement but also a good understanding of stakeholders' perceptions, political sensitivity, well-informed policy analyses and innovative interdisciplinary solutions. This book will fill this gap. This is an interdisciplinary informative book to provide a holistic and integrated understanding of the technology-stakeholder-policy interactions of smart grid technologies. The unique features of the book include the following: (a) interdisciplinary approach – by bringing in the policy dimensions to smart grid technologies; (b) global and Asian perspective and (c) learning from national case studies. This book is organised into five sections. Part 1 discusses the historical and conceptual aspects of smart grids. Part 2 introduces the technological aspects and showcase the state of the art of the technologies. Part 3 explores the policy and governance dimensions by bringing in a stakeholder perspective. Part 4 presents a collection of national case studies. Part 5 shares insights and lesson learnt and provide policy recommendations. This book showcases the state-of-the-art R&D developments and policy experiences. This book contributes to a better understanding of governance institution and policy challenges and helps formulate policy recommendations for successful smart grid deployment.

In 15 similarly structured chapters, *Transitioning to Smart Cities: Mapping Political, Economic, and Social Risks and Threats* serves as a primer on smart cities, providing readers with no prior knowledge on smart cities with an understanding of the current smart cities debates. Gathering cutting-edge research and insights from academics, practitioners and policy-makers around the globe, *Transitioning to Smart Cities* identifies and discusses the nascent threats and challenges contemporary urban areas face, highlighting the drivers and ways of navigating these issues in an effective way. Uniquely providing a blend of conceptual academic analysis with empirical insights, *Transitioning to Smart Cities* produces policy recommendations that boost urban sustainability and resilience. With the multiplicity of qualitatively new issues and developments in these debates, *Transitioning to Smart Cities* offer an invaluable framework on current developments shaping today and tomorrow's urban Combines conceptual academic approaches with empirically-driven insights and best practices Offers new approaches and arguments from inter and multi-disciplinary perspectives Provides foundational knowledge and comparative insight from global case-studies that enable critical reflection and operationalization Generates policy recommendations that pave the way to debate and case-based planning

People face a bewildering choice of new organizational design options. New organizational forms are sweeping across businesses, now that information technology enables better communication, both internally and across boundaries. This book helps managers to navigate the new landscape, by providing a concise and practical overview of forms like holacracy, the Spotify-model, platform organizations, multidimensional organizing and ecosystems. It discusses these forms and provides a user guide, showing when they are effective and when to avoid them. Short insightful excursions explain how the organizational revolution affects issues like human resource management, the changing role of middle management, planning and control and self-organization. Finally, the book guides you through the question how to design new forms and how to implement them. Practical examples and enlightening case studies show the struggles and successes you face in working in this new environment. Self-organized, dynamic and externally oriented structures replace hierarchical, predictable and internally oriented structures. The business unit and the matrix that dominated the twentieth century are making way for new forms of organizing. This book is the first complete overview of new organizational forms in the information economy. It is an indispensable guide to profit from the opportunities new organizational forms present.

Communication between man and machine is vital to completing projects in the current day and age. Without this constant connectiveness as we enter an era of big data, project completion will result in utter failure. *Agile Approaches for Successfully Managing and Executing Projects in the Fourth Industrial Revolution* addresses changes wrought by Industry 4.0 and its effects on project management as well as adaptations and adjustments that will need to be made within project life cycles and project risk management. Highlighting such topics as agile planning, cloud projects, and organization structure, it is designed for project managers, executive management, students, and academicians. The internet of things (IoT) enhances customer experience, increases the amount of data gained through connected devices, and widens the scope of analytics. This provides a range of exciting marketing possibilities such as selling existing products and services more effectively, delivering truly personalized customer experiences, and potentially creating new products and services. *Smart Marketing With the Internet of Things* is an essential reference source that discusses the use of the internet of things in marketing, as well as its importance in enhancing the customer experience. Featuring research on topics such as augmented reality, sensor networks, and wearable technology, this book is ideally designed for business professionals, marketing managers, marketing strategists, academicians, researchers, and graduate-level students seeking coverage on the use of IoT in enhancing customer marketing outcomes.

The historical ways in which electricity was generated in large central power plants and delivered to passive customers through a one-way transmission and distribution network – as everyone knows – is radically changing to one where consumers can generate, store and consume a significant portion of their energy needs energy locally. This, however, is only the first step, soon to be followed by the ability to share or trade with others using the distribution network. More exciting opportunities are possible with the increased digitalization of BTM assets, which in turn can be aggregated into large portfolios of flexible load and generation and optimized using artificial intelligence and machine learning. Examines the latest advances in digitalization of behind-the-meter assets including distributed generation, distributed storage and electric vehicles and – more important – how these assets can be aggregated and remotely monitored unleashing tremendous value and a myriad of innovative services and business models Examines what lies behind-the-

meter (BTM) of typical customers and why managing these assets increasingly matter Describes how smart aggregators with intelligent software are creating value by optimizing how energy may be generated, consumed, stored or potentially shared or traded and between consumers; prosumers and prosumagers (that is, prosumers with storage) Explores new business models that are likely to disrupt the traditional interface between the incumbents and their customers

Solving Urban Infrastructure Problems Using Smart City Technologies is the most complete guide for integrating next generation smart city technologies into the very foundation of urban areas worldwide, showing how to make urban areas more efficient, more sustainable, and safer. Smart cities are complex systems of systems that encompass all aspects of modern urban life. A key component of their success is creating an ecosystem of smart infrastructures that can work together to enable dynamic, real-time interactions between urban subsystems such as transportation, energy, healthcare, housing, food, entertainment, work, social interactions, and governance. Solving Urban Infrastructure Problems Using Smart City Technologies is a complete reference for building a holistic, system-level perspective on smart and sustainable cities, leveraging big data analytics and strategies for planning, zoning, and public policy. It offers in-depth coverage and practical solutions for how smart cities can utilize resident's intellectual and social capital, press environmental sustainability, increase personalization, mobility, and higher quality of life. Brings together experts from academia, government and industry to offer state-of-the-art solutions for urban system problems, showing how smart technologies can be used to improve the lives of the billions of people living in cities across the globe

Demonstrates practical implementation solutions through real-life case studies Enhances reader comprehension with learning aid such as hands-on exercises, questions and answers, checklists, chapter summaries, chapter review questions, exercise problems, and more

This book offers a systematic explanation of cybersecurity protection of electricity supply facilities, including discussion of related costs, relevant standards, and recent solutions. The author explains the current state of cybersecurity in the electricity market, and cybersecurity standards that apply in that sector. He then offers a systematic approach to cybersecurity management, including new methods of cybersecurity assessment, cost evaluation and comprehensive defence. This monograph is suitable for practitioners, professionals, and researchers engaged in critical infrastructure protection.

This book reviews the applications, technologies, standards, and other issues related to Smart Cities. The book is divided into broad topical sections including Vision & Reality, Technologies & Standards, Transportation Considerations, and Infrastructure & Environment. In these sections, authors who are experts in their fields present essential aspects of applications, technologies, requirements, and best-practices. In all cases, the authors have direct, substantive experience with the subject and present an important viewpoint driven by industry or governmental interests; the authors have each participated in the development and/or deployment of constituent technologies, standards, and applications, and share unique perspectives on key areas of the Smart City.

Transforming Climate Finance and Green Investment with Blockchains establishes and analyzes the connection between this revolutionary technology and global efforts to combat climate change. The benefits of blockchain come through various profound alterations, such as the adoption of smart contracts that are set to redefine governance and regulatory structures and transaction systems in coming decades. Each chapter contains a problem statement that describes the challenges blockchain technology can address. The book brings together original visions and insights from global members of the Blockchain Climate Institute, comprising thought leaders, financial professionals, international development practitioners, technology entrepreneurs, and more. This book will help readers understand blockchain technology and how it can facilitate the implementation of the Paris Agreement and accelerate the global transition to a green economy. Provides an authoritative examination of this emerging digital technology and its implications on global climate change governance Includes detailed proposals and thorough discussions of implementation issues that are specific to green economy sectors Relates innovative proposals to existing applications to demonstrate the value add of blockchain technology Covers blockchain for the smarter energy sector, for fraud-free emissions management, to streamline climate investments, and legal frameworks for blockchain-based climate finance

Every company has a personality. Does yours help or hinder your results? Does it make you fit for growth? Find out by taking the quiz that's helped 50,000 people better understand their organizations at OrgDNA.com and to learn more about Organizational DNA. Just as you can understand an individual's personality, so too can you understand a company's type—what makes it tick, what's good and bad about it. Results explains why some organizations bob and weave and roll with the punches to consistently deliver on commitments and produce great results, while others can't leave their corner of the ring without tripping on their own shoelaces. Gary Neilson and Bruce Pasternack help you identify which of the seven company types you work for—and how to keep what's good and fix what's wrong. You'll feel the shock of recognition ("That's me, that's my company") as you find out whether your organization is:

- Passive-Aggressive ("everyone agrees, smiles, and nods, but nothing changes"): entrenched underground resistance makes getting anything done like trying to nail Jell-O to the wall
- Fits-and-Starts ("let 1,000 flowers bloom"): filled with smart people pulling in different directions
- Outgrown ("the good old days meet a brave new world"): reacts slowly to market developments, since it's too hard to run new ideas up the flagpole
- Overmanaged ("we're from corporate and we're here to help"): more reporting than working, as managers check on their subordinates' work so they can in turn report to their bosses
- Just-in-Time ("succeeding, but by the skin of our teeth"): can turn on a dime and create real breakthroughs but also tends to burn out its best and brightest
- Military Precision ("flying in formation"): executes brilliant strategies but usually does not deal well with events not in the playbook
- Resilient ("as good as it gets"): flexible, forward-looking, and fun; bounces back when it hits a bump in the road and never, ever rests on its laurels

For anyone who's ever said, "Wow, that's a great idea, but it'll never happen here" or "Whew,

we pulled it off again, but I'm tired of all this sprinting," Results provides robust, practical ideas for becoming and remaining a resilient business. Also available as an eBook From the Hardcover edition.

Until recently, the Arctic was almost impossible for anyone other than indigenous peoples and explorers to traverse. Pervasive Arctic sea ice and harsh climatological conditions meant that the region was deemed incapable of supporting industrial activity or a Western lifestyle. In the last decade, however, that longstanding reality has been dramatically and permanently altered. Receding sea ice, coupled with growing geopolitical disputes over Arctic resources, territory, and transportation channels, has stimulated efforts to exploit newly-open waterways, to identify and extract desirable resources, and to leverage industrial, commercial, and transportation opportunities emerging throughout the region. This book presents papers from the NATO Advanced Research Workshop (ARW) Governance for Cyber Security and Resilience in the Arctic. Held in Rovaniemi, Finland, from 27-30 January 2019, the workshop brought together top scholars in cybersecurity risk assessment, governance, and resilience to discuss potential analytical and governing strategies and offer perspectives on how to improve critical Arctic infrastructure against various human and natural threats. The book is organized in three sections according to topical group and plenary discussions at the meeting on: cybersecurity infrastructure and threats, analytical strategies for infrastructure threat absorption and resilience, and legal frameworks and governance options to promote cyber resilience. Summaries and detailed analysis are included within each section as summary chapters in the book. The book provides a background on analytical tools relevant to risk and resilience analytics, including risk assessment, decision analysis, supply chain management and resilience analytics. It will allow government, native and civil society groups, military stakeholders, and civilian practitioners to understand better on how to enhance the Arctic's resilience against various natural and anthropogenic challenges.

**SMART GRID AND ENABLING TECHNOLOGIES** Discover foundational topics in smart grid technology as well as an exploration of the current and future state of the industry As the relationship between fossil fuel use and climate change becomes ever clearer, the search is on for reliable, renewable and less harmful sources of energy. Sometimes called the "electronet" or the "energy Internet," smart grids promise to integrate renewable energy, information, and communication technologies with the existing electrical grid and deliver electricity more efficiently and reliably. Smart Grid and Enabling Technologies delivers a complete vision of smart grid technology and applications, including foundational and fundamental technologies, the technology that enables smart grids, the current state of the industry, and future trends in smart energy. The book offers readers thorough discussions of modern smart grid technology, including advanced metering infrastructure, net zero energy buildings, and communication, data management, and networks in smart grids. The accomplished authors also discuss critical challenges and barriers facing the smart grid industry as well as trends likely to be of importance in its future development. Readers will also benefit from the inclusion of: A thorough introduction to smart grid architecture, including traditional grids, the fundamentals of electric power, definitions and classifications of smart grids, and the components of smart grid technology An exploration of the opportunities and challenges posed by renewable energy integration Practical discussions of power electronics in the smart grid, including power electronics converters for distributed generation, flexible alternating current transmission systems, and high voltage direct current transmission systems An analysis of distributed generation Perfect for scientists, researchers, engineers, graduate students, and senior undergraduate students studying and working with electrical power systems and communication systems. Smart Grid and Enabling Technologies will also earn a place in the libraries of economists, government planners and regulators, policy makers, and energy stakeholders working in the smart grid field.

In recent years, our world has experienced a profound shift and progression in available computing and knowledge sharing innovations. These emerging advancements have developed at a rapid pace, disseminating into and affecting numerous aspects of contemporary society. This has created a pivotal need for an innovative compendium encompassing the latest trends, concepts, and issues surrounding this relevant discipline area. During the past 15 years, the Encyclopedia of Information Science and Technology has become recognized as one of the landmark sources of the latest knowledge and discoveries in this discipline. The Encyclopedia of Information Science and Technology, Fourth Edition is a 10-volume set which includes 705 original and previously unpublished research articles covering a full range of perspectives, applications, and techniques contributed by thousands of experts and researchers from around the globe. This authoritative encyclopedia is an all-encompassing, well-established reference source that is ideally designed to disseminate the most forward-thinking and diverse research findings. With critical perspectives on the impact of information science management and new technologies in modern settings, including but not limited to computer science, education, healthcare, government, engineering, business, and natural and physical sciences, it is a pivotal and relevant source of knowledge that will benefit every professional within the field of information science and technology and is an invaluable addition to every academic and corporate library.

How to close the gap between strategy and execution Two-thirds of executives say their organizations don't have the capabilities to support their strategy. In Strategy That Works, Paul Leinwand and Cesare Mainardi explain why. They identify conventional business practices that unintentionally create a gap between strategy and execution. And they show how some of the best companies in the world consistently leap ahead of their competitors. Based on new research, the authors reveal five practices for connecting strategy and execution used by highly successful enterprises such as IKEA, Natura, Danaher, Haier, and Lego. These companies: • Commit to what they do best instead of chasing multiple opportunities • Build their own unique winning capabilities instead of copying others • Put their culture to work instead of struggling to change it • Invest where it matters instead of going lean across the board • Shape the future instead of reacting to it Packed with tools you can use for building these five practices into your organization

and supported by in-depth profiles of companies that are known for making their strategy work, this is your guide for reconnecting strategy to execution.

Die Energiewirtschaft steht weltweit vor einer der tiefgreifendsten Veränderungen ihrer Geschichte, welche mit bahnbrechenden Innovationen und dem sich exponentiell entwickelnden Einsatz von künstlicher Intelligenz in den Geschäftsprozessen einhergehen werden. Neben dem Einsatz der künstlichen Intelligenz und KI-gestützten unbemannten Systemen (zu Land, zu Wasser und in der Luft) werden beispielsweise Distributed-Ledger-Technologien, Extended Reality und der 3D-Druck auf der Basis von Cyber-Physischen Systemen und dem Internet of Things sowie von Process Mining, Robotic Process Automation, Data Science und Cloud-Computing in Zukunft ein nachhaltiges Energieversorgungssystem nicht nur entscheidend prägen, sondern auch den Wandel zur Energiewirtschaft 4.0 beschleunigen. Zugleich ist die zunehmend stärkere Vernetzung (Smart Grid, Smart Meter, Smart Home, Smart City) der Energiewirtschaft und ihres Umfelds mit einem wachsenden Risikopotenzial verbunden, welche es im Rahmen einer hochwertigen Cyber-Resilienz künftig insbesondere durch den Einsatz von künstlicher Intelligenz auszubauen gilt. Ohne die Entwicklung und den Einsatz von Innovationen sowie der künstlichen Intelligenz im Rahmen der zunehmend stärker digitalisierten Geschäftsprozesse besteht das Risiko, dass weder die Energiewende erfolgreich umgesetzt noch der Klimawandel bekämpft werden können. Die Publikation thematisiert neben den Grundlagen der klassisch primär analogen Energiewirtschaft den möglichen Paradigmenwechsel, welcher durch Innovationen, disruptive Technologien und digitale Geschäftsmodelle in der Energiewirtschaft geprägt sein wird.

Blockchain-Based Smart Grids presents emerging applications of blockchain in electrical system and looks to future developments in the use of blockchain technology in the energy market. Rapid growth of renewable energy resources in power systems and significant developments in the telecommunication systems has resulted in new market designs being employed to cover unpredictable and distributed generation of electricity. This book considers the marriage of blockchain and grid modernization, and discusses the transaction shifts in smart grids, from centralized to peer-to-peer structures. In addition, it addresses the effective application of these structures to speed up processes, resulting in more flexible electricity systems. Aimed at moving towards blockchain-based smart grids with renewable applications, this book is useful to researchers and practitioners in all sectors of smart grids, including renewable energy providers, manufacturers and professionals involved in electricity generation from renewable sources, grid modernization and smart grid applications.

Water resource management consists of planning, developing, distributing and managing the available water resources. With increasing urbanization, optimized water management becomes more demanding. This book presents innovative solutions for present as well as future challenges we are facing in water conservation, recycling and reuse.

The latest edition features a new chapter on implementation and operation of an integrated smart grid with updates to multiple chapters throughout the text. New sections on Internet of things, and how they relate to smart grids and smart cities, have also been added to the book. It describes the impetus for change in the electric utility industry and discusses the business drivers, benefits, and market outlook of the smart grid initiative. The book identifies the technical framework of enabling technologies and smart solutions and describes the role of technology developments and coordinated standards in smart grid, including various initiatives and organizations helping to drive the smart grid effort. With chapters written by leading experts in the field, the text explains how to plan, integrate, implement, and operate a smart grid.

This study presents options to fully unlock the world's vast solar PV potential over the period until 2050. It builds on IRENA's global roadmap to scale up renewables and meet climate goals.

Smart Grid and Enabling Technologies John Wiley & Sons

This publication reviews progress made since the 2008 OECD Seoul Declaration for the Future of the Internet Economy and identifies areas for future work.

This book provides a comprehensive exploration of some of the most critical issues regarding the EUs Energy Union policy. Applied European energy policies face a number of challenges ranging from the geopolitics of energy and energy regulation, to climate change, advancing renewable and gas technologies, and consumer empowerment structures. This book takes a multi-dimensional look into some of these vital issues regarding the European energy sector with a special focus on the effects the Energy Union policy has in two sensitive regional systems, Southeastern Europe and the Eastern Mediterranean. Energy, being by definition a multi-disciplinary field, presents a challenge for readers of any specific disciplinary background that need to grasp an overall understanding of the various aspects of this exciting sector. This books objective is to offer the opportunity for readers to get a quality, hands-on overview of the Energy Union by the professionals and academics that interact with it on a daily basis. Michalis Mathioulakis is an Energy Strategy Analyst and the Academic Director of the Greek Energy Forum. He is a research associate at the Institute of International, European and Defence Analyses of the University of Macedonia in Thessaloniki, where he is responsible for the analysis of the energy sector in MENA and the Eastern Mediterranean. He has substantial working experience in the financial sector as a broker and analyst, as well as the private education sector, teaching Finance and Risk Analysis in Executive MBA programs. He is currently providing consulting services regarding energy strategy and energy regulation for Law firms and Consulting firms associated with the energy sector.

Large international corporations and accountants representing international interests require the most up-to-date information regarding tax issues in countries around the world. Corporate Taxes 2003-2004 provides vital information on the corporate implications of the tax systems of over 120 countries.

Building an Effective Security Program for Distributed Energy Resources and Systems Build a critical and effective security program for DERs Building an Effective Security

Program for Distributed Energy Resources and Systems requires a unified approach to establishing a critical security program for DER systems and Smart Grid applications. The methodology provided integrates systems security engineering principles, techniques, standards, and best practices. This publication introduces engineers on the design, implementation, and maintenance of a security program for distributed energy resources (DERs), smart grid, and industrial control systems. It provides security professionals with understanding the specific requirements of industrial control systems and real-time constrained applications for power systems. This book: Describes the cybersecurity needs for DERs and power grid as critical infrastructure Introduces the information security principles to assess and manage the security and privacy risks of the emerging Smart Grid technologies Outlines the functions of the security program as well as the scope and differences between traditional IT system security requirements and those required for industrial control systems such as SCADA systems Offers a full array of resources— cybersecurity concepts, frameworks, and emerging trends Security Professionals and Engineers can use Building an Effective Security Program for Distributed Energy Resources and Systems as a reliable resource that is dedicated to the essential topic of security for distributed energy resources and power grids. They will find standards, guidelines, and recommendations from standards organizations, such as ISO, IEC, NIST, IEEE, ENISA, ISA, ISACA, and ISF, conveniently included for reference within chapters.

This book will focus on the use of Blockchain 3.0 for sustainable development. This tool is invaluable for achieving transparency and trust, but possibilities to benefit society more broadly are emerging that will bring a bright future for sustainable development, too. The adoption of blockchain in agriculture, healthcare, infrastructure, education, environment, energy, communication will provide revolutionary changes in the digital era.

This volume provides a systematic framework for energy suppliers, policy makers, academics, students, and all others interested in energy security, and analyzes key issues concerning energy, security and sustainability with the help of a wealth of data. While sustainability is the broadest objective, energy security is an important part of it, at the global, national and societal levels. The development of a sustainable, long-term solution to meeting the world's energy needs is a defining issue of our time, since central global challenges that the world faces—poverty alleviation, climate change, and environmental degradation—are directly linked to energy security. The contributions cover key issues in sustainable energy and illustrate that the insecurity of a majority of countries owes to internal factors which have more to do with market forces, inefficient technologies, lack of institutions, environmental insecurity, pricing mechanisms, etc., and less to do with the international situation. The links between energy and development are both direct and indirect. Directly, energy provides several services and utilities to maintain human well-being, and also does so indirectly through stakeholders. This volume addresses both the direct and indirect links and provides sustainable alternatives, helping readers to better grasp the resilience of both socio-economic and resource sub-systems in the process. The issues affecting energy supply and demand, including technology portfolios, environmental considerations and consumer attitudes are thoroughly discussed. One of the critical questions that arises is how to facilitate energy investment. The investment climate and the key issues involved are analyzed, including: the capital flows with reasonable and stable investment frameworks, timely decision-making by governments, and open markets. The broad objective of the volume is to foster a deeper understanding of the concept of energy security and to identify the methods of analysis, policy initiatives and future research needed to generate a balanced pattern of energy use and mitigate its impact on humanity and the environment.

This book focuses on the state of the art in worldwide research on applying optimization approaches to intelligently control charging and discharging of batteries of Plug-in Electric Vehicles (PEVs) in smart grids. Network constraints, cost considerations, the number and penetration level of PEVs, utilization of PEVs by their owners, ancillary services, load forecasting, risk analysis, etc. are all different criteria considered by the researchers in developing mathematical based equations which represent the presence of PEVs in electric networks. Different objective functions can be defined and different optimization methods can be utilized to coordinate the performance of PEVs in smart grids. This book will be an excellent resource for anyone interested in grasping the current state of applying different optimization techniques and approaches that can manage the presence of PEVs in smart grids.

Powerful forces are reshaping the banking industry. Customer expectations, technological capabilities, regulatory requirements, demographics and economics are together creating an imperative to change. Banks need to get ahead of these challenges and retool to win in the next era. Banks must not only execute on today's imperatives, but also radically innovate and transform themselves for the future. One of 2021's Most Highly Anticipated New Books--Newsweek One of The 20 New Leadership Books--Adam Grant One The Best New Wellness Books Hitting Shelves In January--Shape.com A Next Big Idea Club Nominee Social Chemistry will utterly transform the way you think about "networking." Understanding the contours of your social network can dramatically enhance personal relationships, work life, and even your global impact. Are you an Expansionist, a Broker, or a Convener? The answer matters more than you think. . . . Yale professor Marissa King shows how anyone can build more meaningful and productive relationships based on insights from neuroscience, psychology, and network analytics. Conventional wisdom says it's the size of your network that matters, but social science research has proven there is more to it. King explains that the quality and structure of our relationships has the greatest impact on our personal and professional lives. As she shows, there are three basic types of networks, so readers can see the role they are already playing: Expansionist, Broker, or Convener. This network decoder enables readers to own their network style and modify it for better alignment with their life plans and values. High-quality connections in your social network strongly predict cognitive functioning, emotional resilience, and satisfaction at work. A well-structured network is likely to boost the quality of your ideas, as well as your pay. Beyond the office, social connections are the lifeblood of our health and happiness. The compiled results from dozens of previous studies found that our social relationships have an effect on our likelihood of dying prematurely--equivalent to obesity or smoking. Rich stories of Expansionists like Vernon Jordan, Brokers like Yo-Yo Ma, and Conveners like Anna Wintour, as well as personal experiences from King's own world of connections, inform this warm, engaging, revelatory investigation into some of the most consequential decisions we can make about the trajectory of our lives. President Putin's explicit declaration that the country that makes progress in artificial intelligence will rule the world has launched a new race for dominance. In this era of cognitive competition and total automation, every country understands that it must rapidly adopt AI or go bust. To stay competitive a country must have a strategy. But how should a government proceed? What areas it must focus on? Where should it even start? This book provides answers to these important, yet pertinent, questions and more. Presenting the viewpoints of global experts and thought leaders on key issues relating to AI and

government policies, this book directs us to the future.

Foreword by Bill Gates LinkedIn cofounder, legendary investor, and host of the award-winning Masters of Scale podcast reveals the secret to starting and scaling massively valuable companies. What entrepreneur or founder doesn't aspire to build the next Amazon, Facebook, or Airbnb? Yet those who actually manage to do so are exceedingly rare. So what separates the startups that get disrupted and disappear from the ones who grow to become global giants? The secret is blitzscaling: a set of techniques for scaling up at a dizzying pace that blows competitors out of the water. The objective of Blitzscaling is not to go from zero to one, but from one to one billion –as quickly as possible. When growing at a breakneck pace, getting to next level requires very different strategies from those that got you to where you are today. In a book inspired by their popular class at Stanford Business School, Hoffman and Yeh reveal how to navigate the necessary shifts and weather the unique challenges that arise at each stage of a company's life cycle, such as: how to design business models for igniting and sustaining relentless growth; strategies for hiring and managing; how the role of the founder and company culture must evolve as the business matures, and more. Whether your business has ten employees or ten thousand, Blitzscaling is the essential playbook for winning in a world where speed is the only competitive advantage that matters.

This comprehensive new resource demonstrates how to build smart grids utilizing the latest telecommunications technologies. Readers find practical coverage of PLC and wireless for smart grid and are given concise excerpts of the different technologies, networks, and services around it. Design and planning guidelines are shown through the combination of electricity grid and telecommunications technologies that support the reliability, performance and security requirements needed in smart grid applications. This book covers a wide range of critical topics, including telecommunications for power engineers, power engineering for telecommunications engineers, utility applications projecting in smart grids, technologies for smart grid networks, and telecommunications architecture. This practical reference is supported with in-depth case studies.

In smart grids the formerly separated worlds of energy and telecommunication converge to an interactive and automated energy supply system. Driven by social, legal, and economic pressures, energy systems around the globe are updated with information and communication technology. These investments aim at enhancing energy efficiency, securing affordable energy supply, and mitigate climate change. In Broadband Networks, Smart Grids and Climate Change, renowned scholars and managers from the fields of energy and telecommunication address key questions related to technological, strategic, and regulatory issues revealing consequences and opportunities for businesses evolving with smart grids. In particular, this book analyzes: (1) the effects on climate change protection (2) national energy and broadband politics (3) regulatory approaches and requirements (4) emerging business models

This book presents a cross-disciplinary approach to smart grids, offering an invaluable basis for understanding their complexity and potential, and for discussing their technical, legal, economic, societal, psychological and security aspects. Smart grids are a complex phenomenon involving new, active roles for consumers and prosumers, novel social, political and cultural practices, advanced ICT, new markets, security of supply issues, the informational turn in energy, valuation of assets and investments, technological innovation and (de)regulation. Furthermore, smart grids offer new interfaces, in turn creating hybrid fields: with the increasing use of electric vehicles and electric transportation, smart grids represent the crossroads of energy and mobility. While the aim is to achieve more sustainable production, transportation and use of energy, the importance of smart grids actually has less to do with electricity, heat or gas, and far more with transforming the infrastructure needed to deliver energy, as well as the roles of its owners, operators and users. The immediate goal is to contribute positively to a sustainable world society. The chapters are revised and expanded texts based upon lectures delivered at the Groningen Energy Summer School 2014. Questions for further discussion at the end of each chapter highlight the key themes that emerge. The book offers an indispensable resource for researchers, professionals and companies in the power supply industry, and for students seeking to broaden and deepen their understanding of smart grids.

This report examines Korea's urban policies and offers customised policy recommendations based on the OECD publication, Compact City Policies (2012).

The OECD Territorial Review of the Chicago Tri-State metropolitan area assesses the region's capacity to contribute effectively to regional and national economic performance and quality of life.

The increased use of technology is necessary in order for industrial control systems to maintain and monitor industrial, infrastructural, or environmental processes. The need to secure and identify threats to the system is equally critical. Securing Critical Infrastructures and Critical Control Systems: Approaches for Threat Protection provides a full and detailed understanding of the vulnerabilities and security threats that exist within an industrial control system. This collection of research defines and analyzes the technical, procedural, and managerial responses to securing these systems.

The scope of the research presented includes semantic-based integration of data services in smart grids achieved through following the proposed (S2)In-approach developed corresponding to design science guidelines. This approach identifies standards and specifications, which are integrated in order to build the basis for the (S2)In-architecture. A process model is introduced in the beginning, which serves as framework for developing the target architecture. The first step of the process stipulates to define requirements for smart grid ICT-architectures being derived from established studies and divided into two classes: architecture and non-functional requirements (NFR). Based on the architecture requirements, the following specifications have been basically selected: The IEC CIM representing a domain-specific data model, the OPC UA being a communication standard with special respects to information modeling, and WSMO as an approach to realize the concept of Semantic Web Services. The next step specifies to develop both, a semantic information model (integration of CIM and OPC UA) and semantic services (integration of CIM and WSMO). These two components are then combined to obtain the target architecture, which allows precise descriptions of services as well as their combination and semi-automatic execution. Finally, the NFR are considered in order to evaluate the architecture based on simulated, representative use cases.

Here is a comprehensive introductory discussion of Earth, energy, and the environment in an integrated manner that will lead to an appreciation of our complex planet. The book looks at Earth from the perspective of a livable planet and elaborates on the surface and subsurface processes and the various energy cycles where energy is transformed and stored in the planet's various spheres. The chapters discuss the interactions between the different parts of Earth—how energy is exchanged between the atmosphere, hydrosphere, biosphere, and geosphere, and how they impact the environment in which we live.

The advent of the emerging fifth generation (5G) networks has changed the paradigm of how computing, electronics, and electrical (CEE) systems are interconnected. CEE devices and systems, with the help of the 5G technology, can now be seamlessly linked in a way that is rapidly turning the globe into a digital world. Smart cities and internet of things have come to stay but not without some challenges, which must be discussed. The Handbook of Research on 5G Networks and Advancements in Computing, Electronics, and Electrical Engineering focuses on current technological innovations as the world rapidly heads towards becoming a global smart city. It covers important topics such as power systems, electrical engineering, mobile communications, network, security, and more. This book examines vast types of technologies and their roles in society with a focus on how each works, the impacts it has, and the future for developing a global smart city. This book is ideal for both industrial and academic researchers, scientists, engineers, educators, practitioners, developers, policymakers, scholars, and students interested in 5G technology and the future of engineering, computing, and technology in human society.

