Trillions Thriving In The Emerging Information Ecology Peter Lucas

This book sets the stage for understanding how the exponential escalation of digital ubiquity in the contemporary environment is being absorbed, modulated, processed and actively used for enhancing the performance of our built environment. S.M.A.R.T., in this context, is thus used as an acronym for Systems & Materials in Architectural Research and Technology, with a specific focus on interrogating the intricate relationship between information systems and associative material, cultural and socioeconomic formations within the built environment. This interrogation is deeply rooted in exploring inter-disciplinary research and design strategies involving nonlinear processes for developing meta-design systems, evidence based design solutions and methodological frameworks, some of which, are presented in this issue. Urban health and wellbeing, urban mobility and infrastructure, smart manufacturing, Interaction Design, Urban Design & Planning as well as Data Science, as prominent symbiotic domains constituting the Built Environment are represented in this first book in the S.M.A.R.T. series. The spectrum of chapters included in this volume helps in understanding the multivalence of data from a socio-technical perspective and provides insight into the methodological nuances involved in capturing, analysing and improving urban life via data driven technologies. "A clear and crisply written account of machine intelligence, big data and the sharing economy. But McAfee and Brynjolfsson also wisely acknowledge the limitations of their futurology and avoid over-simplification." —Financial Times In The Second Machine Age, Andrew McAfee and Erik Brynjolfsson predicted some of the far-reaching effects of digital technologies on our lives and businesses. Now they've written a guide to help readers make the most of our collective future. Machine | Platform | Crowd outlines the opportunities and challenges inherent in the science fiction technologies that have come to life in recent years, like self-driving cars and 3D printers, online platforms for renting outfits and scheduling workouts, or crowd-sourced medical research and financial instruments.

A sweeping history of the legendary private investment firm Brown Brothers Harriman, exploring its central role in the story of American wealth and its rise to global power Conspiracy theories have always swirled around Brown Brothers Harriman, and not without reason. Throughout the nineteenth century, when America was convulsed by a devastating financial panic essentially every twenty years, Brown Brothers quietly went from strength to strength, propping up the U.S. financial system at crucial moments and catalyzing successive booms, from the cotton trade and the steamship to the railroad, while largely managing to avoid the unwelcome attention that plagued some of its competitors. By the turn of the twentieth century, Brown Brothers was unquestionably at the heart of what was meant by an American Establishment. As America's reach extended beyond its shores, Brown Brothers worked hand in glove with the State Department, notably in Nicaragua in the early twentieth century, where the firm essentially took over the country's economy. To the Brown family, the virtue of their dealings was a given; their form of muscular Protestantism, forged on the playing fields of Groton and Yale, was the acme of civilization, and it was their duty to import that civilization to the world. When, during the Great Depression, Brown Brothers ensured their strength by merging with Averell Harriman's investment bank to form Brown Brothers Harriman, the die was cast for the role the firm would play on the global stage during World War II and thereafter, as its partners served at the highest levels of government to shape the international system that defines the world to this day. In Inside Money, acclaimed historian, commentator, and former financial executive Zachary Karabell offers the first full and frank look inside this institution against the backdrop of American history. Blessed with complete access to the company's archives, as well as a thrilling understanding of the larger forces at play, Karabell has created an X-ray of American power--financial, political, cultural--as it has evolved from the early 1800s to the present. Today, unlike many of its competitors, Brown Brothers Harriman remains a private partnership and a beacon of sustainable capitalism, having forgone the heady speculative upsides of the past thirty years but also having avoided any role in the devastating downsides. The firm is no longer in the command capsule of the American economy, but, arguably, that is to its credit. If its partners cleaved to any one adage over the generations, it is that a relentless pursuit of more can destroy more than it creates.

From the remarkable minds of Sputnik Futures, this visually engaging exploration of the microbes that surround us and how these unseen powerhouses are shaping our future is perfect for readers of I Contain Multitudes and 10% Human. Let's face it, microbes rule the world! Bacteria, fungi, archaea, protozoa, algae, even viruses—these microorganisms may go unseen, but the impact they have on our lives is unmistakable. From panspermia (the bacteria dust from our galaxy) and the microbiomes of our homes and our environments, to emerging research on microbes' role in our social emotions of love and empathy, and the realization that we are a superorganism, made up of trillions of bacteria that may be what makes us "human," the authors take you through a fascinating revelation of how microbial populations play a crucial role in every aspect of our life. Breakthroughs in our understanding of microbes are shaping the frontier of medicine and health, technology, environmentalism, wellness, architecture, and more. Microbes are talking to us, and we are learning to speak to them in turn. For example, did you know: -That the mind and the gut talk to each other? -That your personality may be shaped by your microbiome? -That a lack of biodiversity can make you sick? -That microbes can reverse climate change and reduce plastic waste? -That our first microbes came from the universe, and we are taking our microorganisms back to space? In Thriving with Microbes, the brilliant minds of Sputnik Futures reveal cutting-edge discoveries from biologists, doctors, ecologists, technologists, and thought leaders as they explore the vast network of microorganisms around and within us. With expert voices, bold discoveries, and engaging visuals, this captivating addition to the Alice in Futureland® series is a must-read guide to the vibrant microbial world we inhabit, how it is shaping our individuality, and the miraculous future these microorganisms are showing us.

Popular notions of sustainability in architecture and urbanism idealizes nature as primary over the mediated complexity that is inevitable in a modern city's functioning. More specifically, contemporary ecological debates and models have failed to sufficiently account for the convergence of computers, automation and machine intelligence with the physical and social environments that is gradually emerging in the post-digital condition. The following publication takes an ecological view to interpret critically the micro-ecology of Amazon's automated warehouses which rely on adaptive machine intelligence which is further examined critically within the framework of cybernetic systems. Paradoxically, it also happens to thrive within the logic of the dominant global mode of consumption and production which is capitalism. Most importantly, this relational ecology lies at the intersection of the mediated complexity where the digital and physical worlds meet.

Professionals today, whether they are new or seasoned, need a solid foundation of essential skills in order to keep pace with the speed of change. The American Management Association, the preeminent provider of business education worldwide, trains the majority of the Fortune 500 companies in competitive business skills. Now, for the first time, AMA has assembled the most critical, "must-have" skills for managers and leaders in one handy volume. AMA Business Boot Camp paves the way for readers to: * Motivate, increase morale, and enhance productivity * Manage organizational change * Improve their ability to communicate and influence others * Screen, evaluate, and select corporate strategies * Conduct effective performance reviews * Protect themselves against the pitfalls of intra-organizational politics * And much more Covering everything from management and leadership to project management and strategy, this one-of-kind reference serves as a crash course in the fundamentals required for lasting success.

The legendary Silicon Valley entrepreneur examines how both business and government organizations can harness the power of disruptive technologies. Tom Siebel, the billionaire technologist and founder of Siebel Systems, discusses how four technologies—elastic cloud computing, big data, artificial intelligence, and the internet of things—are fundamentally changing how business and government will operate in the 21st century. While this profound and fast-moving transformation can appear daunting to some, Siebel shows how organizations can not only survive, but thrive in the new digital landscape. In this authoritative yet accessible book, Siebel guides readers through the technologies

driving digital transformation, and demonstrates how they can strategically exploit their powerful capabilities. He shows how leading enterprises such as Enel, 3M, Royal Dutch Shell, the U.S. Department of Defense, and others are applying AI and IoT with stunning results. The human brain has some capabilities that the brains of other animals lack. It is to these distinctive capabilities that our species owes its dominant position. Other animals have stronger muscles or sharper claws, but we have cleverer brains. If machine brains one day come to surpass human brains in general intelligence, then this new superintelligence could become very powerful. As the fate of the gorillas now depends more on us humans than on the gorillas themselves, so the fate of our species then would come to depend on the actions of the machine superintelligence. But we have one advantage: we get to make the first move. Will it be possible to construct a seed AI or otherwise to engineer initial conditions so as to make an intelligence explosion survivable? How could one achieve a controlled detonation? To get closer to an answer to this question, we must make our way through a fascinating landscape of topics and considerations. Read the book and learn about oracles, genies, singletons; about boxing methods, tripwires, and mind crime; about humanity's cosmic endowment and differential technological development; indirect normativity, instrumental convergence, whole brain emulation and technology couplings; Malthusian economics and dystopian evolution; artificial intelligence, and biological cognitive enhancement, and collective intelligence. This SpringerBrief provides a synergistic overview of technology trends by emphasizing five linked perspectives: crowd+cloud machines, extreme cooperation with smart things, scalable context-awareness, drone services for mobile crowds and social links in mobile crowds. The authors also highlight issues and challenges at the intersection of these trends. Topics covered include cloud computing, Internet of Things, mobile and wearable computing, crowd computing, the culture of thing sharing, collective computing, and swarm dynamics. The brief is a useful resource and a starting point for researchers, students or anyone interested in the contemporary computing landscape. Winner of the 2014 AECT Design & Development Outstanding Book Award An Architectural Approach to Instructional Design is organized around a groundbreaking new way of conceptualizing instructional design practice. Both practical and theoretically sound, this approach is drawn from current international trends in architectural, digital, and industrial design, and focuses on the structural and functional properties of the artifact being designed rather than the processes used to design it. Harmonious with existing systematic design models, the architectural approach expands the scope of design discourse by introducing new depth into the conversation and merging current knowledge with proven systematic techniques. An architectural approach is the natural result of increasing technological complexity and escalating user expectations. As the complexity of design problems increases, specialties evolve their own design languages, theories, processes, tools, literature, organizations, and standards. An Architectural Approach to Instructional Design describes the implications for theory and practice, providing a powerful and commercially relevant introduction for all students of instructional design. "Book and man are brilliant, passionate, optimistic and impatient . . . Outstanding." —The Economist The landmark exploration of economic prosperity and how the world can escape from extreme poverty for the world's poorest citizens, from one of the world's most renowned economists Hailed by Time as one of the world's hundred most influential people, Jeffrey D. Sachs is renowned for his work around the globe advising economies in crisis. Now a classic of its genre, The End of Poverty distills more than thirty years of experience to offer a uniquely informed vision of the steps that can transform impoverished countries into prosperous ones. Marrying vivid storytelling with rigorous analysis, Sachs lays out a clear conceptual map of the world economy. Explaining his own work in Bolivia, Russia, India, China, and Africa, he offers an integrated set of solutions to the interwoven economic, political, environmental, and social problems that challenge the world's poorest countries. Ten years after its initial publication, The End of Poverty remains an indispensible and influential work. In this 10th anniversary edition, Sachs presents an extensive new foreword assessing the progress of the past decade, the work that remains to be done, and how each of us can help. He also looks ahead across the next fifteen years to 2030, the United Nations' target date for ending extreme poverty, offering new insights and recommendations. We are facing a future of unbounded complexity. Whether that complexity is harnessed to build a world that is safe, pleasant, humane and profitable, or whether it causes us to career off a cliff into an abyss of mind-numbing junk is an open question. The challenges and opportunities--technical, business, and human--that this technological sea change will bring are without precedent. Entire industries will be born and others will be laid to ruin as our society navigates this journey. There are already many more computing devices in the world than there are people. In a few more years, their number will climb into the trillions. We put microprocessors into nearly every significant thing that we manufacture, and the cost of routine computing and storage is rapidly becoming negligible. We have literally permeated our world with computation. But more significant than mere numbers is the fact we are quickly figuring out how to make those processors communicate with each other, and with us. We are about to be faced, not with a trillion isolated devices, but with a trillion-node network: a network whose scale and complexity will dwarf that of today's Internet. And, unlike the Internet, this will be a network not of computation that we use, but of computation that we live in. Written by the leaders of one of America's leading pervasive computing design firms, this book gives a no-holds-barred insiders' account of both the promise and the risks of the age of Trillions. It is also a cautionary tale of the head-in-the-sand attitude with which many of today's thought-leaders are at present approaching these issues. Trillions is a field guide to the future--designed to help businesses and their customers prepare to prosper, in the information. The book outlines the concept of the Automated City, in the context of smart city research and development. While there have been many other perspectives on the smart city such as the participatory city and the data-centric city, this book focuses on automation for the smart city based on current and emerging technologies such as the Internet of Things, Artificial Intelligence and Robotics. The book attempts to provide a balanced view, outlining the promises and potential of the Automated City as well as the perils and challenges of widespread automation in the city. The book discusses, at some depth, automated vehicles, urban robots and urban drones as emerging technologies that will automate many aspects of city life and operation, drawing on current work and research literature. The book also considers broader perspectives of the future city, in the context of automation in the smart city, including aspirational visions of cities, transportation, new business models, and socio-technological challenges, from urban edge computing, ethics of the Automated City and smart devices, to large scale cooperating autonomous systems in the city. Software is driving most technology today, from PCs to mobile phones to thermostats. Software can evolve quickly, and that factor is driving an accelerating pace of change in technology. Software is also becoming more tightly connected to humans through advances in dealing with speech and human language, as well as being always available through mobile devices. As our connection to technology tightens, it drives rapid cultural evolution, in effect changing what it means to be human. Technological change driven by software also impacts our economy in basic ways, as computer technology drives more aspects of production, marketing, services, and sales. Software advances allow technology to do more tasks formerly requiring humans, creating efficienciesproductivity enhancementsthat can grow the economy. On the other hand, the rapid changes are affecting the economy

at a pace that is overcoming human abilities to adapt to the job opportunities available and companies ability to adapt to rapid market changes. We are seeing today the impact of that fundamental economic change in persistent unemployment and in stress on some major companies that have historically been solid performers. The Software Society digs into these fundamental trends of softwares impact on our culture and our economy. It explains the trend to use computer intelligence to enhance our human intelligence and discusses its potential and limitations. The book digs into the economic risk caused by automation moving faster than peoples ability to adapt to the change, and suggests solutions to address this danger.

From the visionary bestselling author of The Second World and How to Run the World comes a bracing and authoritative guide to a future shaped less by national borders than by global supply chains, a world in which the most connected powers—and people—will win. Connectivity is the most revolutionary force of the twenty-first century. Mankind is reengineering the planet, investing up to ten trillion dollars per year in transportation, energy, and communications infrastructure linking the world's burgeoning megacities together. This has profound consequences for geopolitics, economics, demographics, the environment, and social identity. Connectivity, not geography, is our destiny. In Connectography, visionary strategist Parag Khanna travels from Ukraine to Iran, Mongolia to North Korea, Pakistan to Nigeria, and across the Arctic Circle and the South China Sea to explain the rapid and unprecedented changes affecting every part of the planet. He shows how militaries are deployed to protect supply chains as much as borders, and how nations are less at war over territory than engaged in tugs-of-war over pipelines, railways, shipping lanes, and Internet cables. The new arms race is to connect to the most markets—a race China is now winning, having launched a wave of infrastructure investments to unite Eurasia around its new Silk Roads. The United States can only regain ground by fusing with its neighbors into a super-continental North American Union of shared resources and prosperity. Connectography offers a unique and hopeful vision for the future. Khanna argues that new energy discoveries and technologies have eliminated the need for resource wars; ambitious transport corridors and power grids are unscrambling Africa's fraught colonial borders; even the Arab world is evolving a more peaceful map as it builds resource and trade routes across its war-torn landscape. At the same time, thriving hubs such as Singapore and Dubai are injecting dynamism into young and heavily populated regions, cyber-communities empower commerce across vast distances, and the world's ballooning financial assets are being wisely invested into building an inclusive global society. Beneath the chaos of a world that appears to be falling apart is a new foundation of connectivity pulling it together. Praise for Connectography "Incredible . . . With the world rapidly changing and urbanizing, [Khanna's] proposals might be the best way to confront a radically different future."—The Washington Post "Clear and coherent . . . a well-researched account of how companies are weaving ever more complicated supply chains that pull the world together even as they squeeze out inefficiencies. . . . [He] has succeeded in demonstrating that the forces of globalization are winning."—Adrian Woolridge, The Wall Street Journal "Bold . . . With an eye for vivid details, Khanna has . . . produced an engaging geopolitical travelogue."—Foreign Affairs "For those who fear that the world is becoming too inward-looking, Connectography is a refreshing, optimistic vision."—The Economist "Connectivity has become a basic human right, and gives everyone on the planet the opportunity to provide for their family and contribute to our shared future. Connectography charts the future of this connected world."—Marc Andreessen, general partner, Andreessen Horowitz "Khanna's scholarship and foresight are world-class. A must-read for the next president."—Chuck Hagel, former U.S. secretary of defense This title has complex layouts that may take longer to download.

"It's our thesis that privacy will be an integral part of the next wave in the technology revolution and that innovators who are emphasizing privacy as an integral part of the product life cycle are on the right track." --The authors of The Privacy Engineer's Manifesto The Privacy Engineer's Manifesto: Getting from Policy to Code to QA to Value is the first book of its kind, offering industry-proven solutions that go beyond mere theory and adding lucid perspectives on the challenges and opportunities raised with the emerging "personal" information economy. The authors, a uniquely skilled team of longtime industry experts, detail how you can build privacy into products, processes, applications, and systems. The book offers insight on translating the guiding light of OECD Privacy Guidelines, the Fair Information Practice Principles (FIPPs), Generally Accepted Privacy Principles (GAPP) and Privacy by Design (PbD) into concrete concepts that organizations, software/hardware engineers, and system administrators/owners can understand and apply throughout the product or process life cycle—regardless of development methodology—from inception to retirement, including data deletion and destruction. In addition to providing practical methods to applying privacy engineering methodologies, the authors detail how to prepare and organize an enterprise or organization to support and manage products, process, systems, and applications that require personal information. The authors also address how to think about and assign value to the personal information assets being protected. Finally, the team of experts offers thoughts about the information revolution that has only just begun, and how we can live in a world of sensors and trillions of data points without losing our ethics or value(s)...and even have a little fun. The Privacy Engineer's Manifesto is designed to serve multiple stakeholders: Anyone who is involved in designing, developing, deploying and reviewing products, processes, applications, and systems that process personal information, including software/hardware engineers, technical program and product managers, support and sales engineers, system integrators, IT professionals, lawyers, and information privacy and security professionals. This book is a must-read for all practitioners in the personal information economy. Privacy will be an integral part of the next wave in the technology revolution; innovators who emphasize privacy as an integral part of the product life cycle are on the right track. Foreword by Dr. Eric Bonabeau, PhD, Chairman, Icosystem, Inc. & Dean of Computational Sciences, Minerva Schools at KGI.

In the 19th century, the world was Europeanized. In the 20th century, it was Americanized. Now, in the 21st century, the world is being Asianized. The "Asian Century" is even bigger than you think. Far greater than just China, the new Asian system taking shape is a multi-civilizational order spanning Saudi Arabia to Japan, Russia to Australia, Turkey to Indonesia—linking five billion people through trade, finance, infrastructure, and diplomatic networks that together represent 40 percent of global GDP. China has taken a lead in building the new Silk Roads across Asia, but it will not lead it alone. Rather, Asia is rapidly returning to the centuries-old patterns of commerce, conflict, and cultural exchange that thrived long before European colonialism and American dominance. Asians will determine their own future—and as they collectively assert their interests around the world, they will determine ours as well. There is no more important region of the world for us to better understand than Asia – and thus we cannot afford to keep getting Asia so wrong. Asia's complexity has led to common misdiagnoses: Western thinking on Asia conflates the entire region with China, predicts imminent World War III around every corner, and regularly forecasts debt-driven collapse for the region's major economies. But in reality, the region is experiencing a confident new wave of growth led by younger societies from

India to the Philippines, nationalist leaders have put aside territorial disputes in favor of integration, and today's infrastructure investments are the platform for the next generation of digital innovation. If the nineteenth century featured the Europeanization of the world, and the twentieth century its Americanization, then the twenty-first century is the time of Asianization. From investment portfolios and trade wars to Hollywood movies and university admissions, no aspect of life is immune from Asianization. With America's tech sector dependent on Asian talent and politicians praising Asia's glittering cities and efficient governments, Asia is permanently in our nation's consciousness. We know this will be the Asian century. Now we finally have an accurate picture of what it will look like.

Fabricated tells the story of 3D printers, humblemanufacturing machines that are bursting out of the factory andinto schools, kitchens, hospitals, even onto the fashion catwalk.Fabricated describes our emerging world of printableproducts, where people design and 3D print their own creations aseasily as they edit an online document. A 3D printer transforms digital information into a physicalobject by carrying out instructions from an electronic design file,or 'blueprint.' Guided by a design file, a 3D printer lays downlayer after layer of a raw material to 'print' out an object.That's not the whole story, however. The magic happens when youplug a 3D printer into today's mind-boggling digitaltechnologies. Add to that the Internet, tiny, low cost electroniccircuitry, radical advances in materials science and biotech andvoila! The result is an explosion of technological and socialinnovation. Fabricated takes the reader onto a rich and fulfillingjourney that explores how 3D printing is poised to impact nearlyevery part of our lives. Aimed at people who enjoy books on business strategy, popularscience and novel technology, Fabricated will providereaders with practical and imaginative insights to the question'how will this technology change my life?' Based on hundreds ofhours of research and dozens of interviews with experts from abroad range of industries, Fabricated offers readers aninformative, engaging and fast-paced introduction to 3D printingnow and in the future.

Leverage digital technologies to achieve competitive advantage through better processes, products, customer relationships and innovation How does Information Technology enable competitive advantage? Digital Disciplines details four strategies that exploit today's digital technologies to create unparalleled customer value. Using non-technical language, this book describes the blueprints that any company, large or small, can use to gain or retain market leadership, based on insights derived from examining modern digital giants such as Amazon and Netflix as well as established firms such as GE, Nike, and UPS. Companies can develop a competitive edge through four digital disciplines—information excellence, solution leadership, collective intimacy, and accelerated innovation—that exploit cloud computing, big data and analytics, mobile and wireline networks, social media, and the Internet of Things. These four disciplines represent the extension and evolution of the value disciplines of operational excellence, product leadership, and customer intimacy originally defined by Michael Treacy and Fred Wiersema in their bestselling business classic The Discipline of Market Leaders. Operational excellence must now encompass information excellence—leveraging automation, information, analytics, and sophisticated algorithms to make processes faster, better, and more cost-effective, as well as to generate new revenue Product leadership must be extended to solution leadership—smart digital products ranging from wind turbines to wearables connected to each other, cloud services, social networks, and partner ecosystems Customer intimacy is evolving to collective intimacy—as face-to-face relationships not only go online, but are collectively analyzed to provide individually targeted recommendations ranging from books and movies to patient-specific therapies Traditional innovation is no longer enough—accelerated innovation goes beyond open innovation to exploit crowdsourcing, idea markets, challenges, and contest economics to dramatically improve processes, products, and relationships This book provides a strategy framework, empirical data, case studies, deep insights, and pragmatic steps for any enterprise to follow and attain market leadership in today's digital era. Digital Disciplines can be exploited by existing firms or start-ups to disrupt established ways of doing business through innovative, digitally enabled value propositionsto win in competitive markets in today's digital era.

This book reveals how a generative design process capitalizes on understanding humans in context to deliver appropriate innovation. A repertoire of design actions and output allows designers to work dynamically in order to create a cascade of new ideas and insights. The Design Matrix, a visual team tool, provides a prescriptive and descriptive guide enabling a range of users to work through a problem and also reflect on past decisions. Several case studies from prior industry collaborative projects show the complexities and tensions that can be tackled through the design process and matrix. Case studies include design and engineering development and production of an 8 Tesla MRI, biomedical projects, medical devices, and consumer products. Other cases with Ford Motor Company and Cognizant Technologies illustrate how using a human-centered design process can shift the business paradigm for new products, services, systems, and social innovations. Each story shows different and distinct aspects that span classic design and engineering problem solving to generative contextual processes which lead to innovative solutions. Describes a studio-based product development pedagogy so readers can understand through past examples how to operationalize their own design, engineering, and innovation processes; Provides specific stories that showcase details of the project work, the contextual insights, and proposed solutions as a result of applying tangible visualizations, collaborative work methods, and framing and reframing of the problem; Uses case studies to demonstrate how to use divergent and convergent design thinking and actions from multiple stages of the design process so this can lead to critical team integration and new contextual insights.

In the Digital Age of the twenty-first century, the question is not if you will be targeted, but when. For an enterprise to be fully prepared for the immanent attack, it must be actively monitoring networks, taking proactive steps to understand and contain attacks, enabling continued operation during an incident, and have a full recovery plan already in place. Are you prepared? If not, where does one begin?Cybersecurity expert Ray Rothrock has provided for businesses large and small a must-have resource that highlights the tactics used by today's hackers, vulnerabilities lurking in networks, and strategies not just for surviving attacks, but actually thriving while under assault. Businesses and individuals will understand better the threats they face, be able to identify and address weaknesses, and respond to exploits swiftly and effectively.From data theft to downed servers, from malware to human error, cyber events can be triggered anytime from anywhere around the globe. Digital Resilience provides the resilience-building strategies your business needs to prevail--no matter what strikes.

Many managers are poorly equipped to succeed in the years to come because their knowledge base is too narrow and the environment they must operate in is becoming too complex. They are fed insights and facts on ever-narrower topics at work, through business publications, and often at university. Their world is becoming so complex that they need to broaden their appreciation for how business is evolving in ways that are not normally considered. The primary objective of this book is to make readers-primarily managers-aware of the critical features of the evolving workplace in which they must succeed. A second

objective is to define many of the behavioral attributes managers need to thrive in the evolving environment described in this book. *updated with new material* 'Digital transformation' and 'disruptive innovation' used to be empty buzzwords serving to justify pointless box-ticking and absurd corporate posturing. And then a global pandemic suddenly forced every kind of organization to embrace genuine, urgent innovation as a matter of survival. But how can we ensure that the non-bullshit version of innovation delivers economic recovery at this crucial moment? Are there strategies we can all adapt from the world's most creative leaders to innovate effectively in our own lives? David Rowan, founding editor-in-chief of WIRED UK, embarked on a twenty country quest to find out. Packed full of tips for anyone looking for radical ways to adapt and thrive in the digital age, this carefully curated selection of stories will prepare you for whatever the future may bring - because the world will never move this slowly again. _____ 'In this remarkable book, David Rowan tells a story of transformation: how an organisation has found a new way of doing things through innovation driven by ruthless entrepreneurial imagination. What is especially useful is that he does not just stick with small startups, let alone dreamy "inventors". He finds innovation in big companies and even within governments.' - Matt Ridley, The Times

The LNCS journal Transactions on Large-Scale Data- and Knowledge-Centered Systems focuses on data management, knowledge discovery, and knowledge processing, which are core and hot topics in computer science. Since the 1990s, the Internet has become the main driving force behind application development in all domains. An increase in the demand for resource sharing across different sites connected through networks has led to an evolution of data- and knowledge-management systems from centralized systems to decentralized systems enabling large-scale distributed applications providing high scalability. This, the 47th issue of Transactions on Large-Scale Data- and Knowledge-Centered Systems, constitutes a special issue focusing on Digital Ecosystems and Social Networks. The 9 revised selected papers cover topics that include Social Big Data, Data Analysis, Cloud-Based Feedback, Experience Ecosystems, Pervasive Environments, and Smart Systems.

This book is a compilation of perspectives provided by several winners of the ASQ Feigenbaum Medal, which is awarded each year to an individual under the age of 35 who has made a significant contribution to the field of Quality. As such, it serves as a valuable reference book in this area. It is primarily based on the medalists' vision to "refresh" and "re-think" the quality concepts that have been used over the past century and the future development of the topic. Maximizing readers' understanding of the ways in which Quality is created, it provides insights from pioneers in this field from around the globe and anticipates how and what Quality will be in the future, as well as how people and organizations can benefit from it today.

A critical exploration of today's global imperative to innovate, by champions, critics, and reformers of innovation. Corporate executives, politicians, and school board leaders agree—Americans must innovate. Innovation experts fuel this demand with books and services that instruct aspiring innovators in best practices, personal habits, and workplace cultures for fostering innovation. But critics have begun to question the unceasing promotion of innovation, pointing out its gadget-centric shallowness, the lack of diversity among innovators, and the unequal distribution of innovation's burdens and rewards. Meanwhile, reformers work to make the training of innovators more inclusive and the outcomes of innovation more responsible. This book offers an overdue critical exploration of today's global imperative to innovate by bringing together innovation's champions, critics, and reformers in conversation. The book presents an overview of innovator training, exploring the history, motivations, and philosophies of programs in private industry, universities, and government; offers a primer on critical innovation studies, with essays that historicize, contextualize, and problematize the drive to create innovators; and considers initiatives that seek to reform and reshape what it means to be an innovator. Contributors Errol Arkilic, Catherine Ashcraft, Leticia Britos Cavagnaro, W. Bernard Carlson, Lisa D. Cook, Humera Fasihuddin, Maryann Feldman, Erik Fisher, Benoît Godin, Jenn Gustetic, David Guston, Eric S. Hintz, Marie Stettler Kleine, Dutch MacDonald, Mickey McManus, Sebastian Pfotenhauer, Natalie Rusk, Andrew L. Russell, Lucinda M. Sanders, Brenda Trinidad, Lee Vinsel, Matthew Wisnioski

Governments and central banks across the developed world have tried every policy tool imaginable, yet our economies remain sluggish or worse. How did we get here, and how can we compete and prosper once more? Daniel Alpert argues that a global labor glut, excess productive capacity, and a rising ocean of cheap capital have kept the Western economies mired in underemployment and anemic growth. We failed to anticipate the impact of the torrent of labor and capital unleashed by formerly socialist economies. Many policymakers miss the connection between global oversupply and the lack of domestic investment and growth. But Alpert shows how they are intertwined and offers a bold, fresh approach to fixing our economic woes. Twitter: @DanielAlpert

Explains the importance of thinking in daily life, discussing how to achieve focus, creativity, and a positive outlook in a technology-driven world.

Intrepid international explorer, biologist, and photographer Mark W. Moffett, "the Indiana Jones of entomology," takes us around the globe on a strange and colorful journey in search of the hidden world of ants. In tales from Nigeria, Indonesia, the Amazon, Australia, California, and elsewhere, Moffett recounts his entomological exploits and provides fascinating details on how ants live and how they dominate their ecosystems through strikingly human behaviors, yet at a different scale and a faster tempo. Moffett's spectacular close-up photographs shrink us down to size, so that we can observe ants in familiar roles; warriors, builders, big-game hunters, and slave owners. We find them creating marketplaces and assembly lines and dealing with issues we think of as uniquely human—including hygiene, recycling, and warfare. Adventures among Ants introduces some of the world's most awe-inspiring species and offers a startling new perspective on the limits of our own perception. • Ants are world-class road builders, handling traffic problems on thoroughfares that dwarf our highway systems in their complexity • Ants with the largest societies often deploy complicated military tactics • Some ants have evolved from hunter-gatherers into farmers, domesticating other insects and growing crops for food

"This book's great service is that it challenges us to consider the ways in which our institutions and systems, and the assumptions, positions and divisions that undergird them, leave us ill prepared for the next crisis."—Robert Rubin, The New York Times Book Review Deftly weaving finance, politics, business, and the global human experience into one tight narrative, a tour-de-force account of 2020, the year that changed everything--from the acclaimed author of Crashed. The shocks of 2020 have been great and small, disrupting the world economy, international relations and the daily lives of virtually everyone on the planet. Never before has the entire world economy contracted by 20 percent in a matter of weeks nor in the historic record of modern capitalism has there been a moment in which 95 percent of the world's economies were suffering all at the same time. Across the world hundreds of millions have lost their jobs. And over it all looms the specter of pandemic, and death. Adam Tooze, whose last book was

universally lauded for guiding us coherently through the chaos of the 2008 crash, now brings his bravura analytical and narrative skills to a panoramic and synthetic overview of our current crisis. By focusing on finance and business, he sets the pandemic story in a frame that casts a sobering new light on how unprepared the world was to fight the crisis, and how deep the ruptures in our way of living and doing business are. The virus has attacked the economy with as much ferocity as it has our health, and there is no vaccine arriving to address that. Tooze's special gift is to show how social organization, political interests, and economic policy interact with devastating human consequences, from your local hospital to the World Bank. He moves fluidly from the impact of currency fluctuations to the decimation of institutions--such as health-care systems, schools, and social services--in the name of efficiency. He starkly analyzes what happened when the pandemic collided with domestic politics (China's party conferences; the American elections), what the unintended consequences of the vaccine race might be, and the role climate change played in the pandemic. Finally, he proves how no unilateral declaration of 'independence" or isolation can extricate any modern country from the global web of travel, goods, services, and finance.

Learn the rules to building loyal (and lucrative) digitalfollowings Renegades Write the Rules reveals the innovativestrategies behind the social media success of today's topcelebrities, brands, and sports icons, and how you can follow theirlead. Author Amy Jo Martin is the founder of Digital Royalty and thewoman who pioneered how professional sports integrate social media.In this book she shows how to build a faithful following and beatthe competition clamoring for people's attention by continuallydelivering value - when, where, and how people want it. People wantto be heard, to be involved, to be entertained, to be adventurous,to be informed. Reveals the winning strategies for using social media toachieve dramatic results Shows how to gain influence with social media that requires anunprecedented (and potentially uncomfortable) level ofaccessibility and ongoing affinity Filled with illustrative examples of social media successes(including Dwayne 'The Rock' Johnson, Shaquille O'Neal, and Nike)that show how humanizing a brand through social media leads tomonetization Explores how Amy Jo Martin and other successful entrepreneursare becoming renegades by using social media to innovate theirpersonal and professional lives The book reveals one of the basic rules of digital mediasuccess: Humans connect with humans, not logos and creativetaglines.

Confessional and often hilarious, in Normal Sucks a neuro-diverse writer, advocate, and father meditates on his life, offering the radical message that we should stop trying to fix people and start empowering them to succeed Jonathan Mooney blends anecdote, expertise, and memoir to present a new mode of thinking about how we live and learn—individually, uniquely, and with advantages and upshots to every type of brain and body. As a neuro-diverse kid diagnosed with dyslexia and ADHD who didn't learn to read until he was twelve, the realization that that he wasn't the problem—the system and the concept of normal were—saved Mooney's life and fundamentally changed his outlook. Here he explores the toll that being not normal takes on kids and adults when they're trapped in environments that label them, shame them, and tell them, even in subtle ways, that they are the problem. But, he argues, if we can reorient the ways in which we think about diversity, abilities, and disabilities, we can start a revolution. A highly sought after public speaker, Mooney has been inspiring audiences with his story and his message for nearly two decades. Now he's ready to share what he's learned from parents, educators, researchers, and kids in a book that is as much a survival guide as it is a call to action. Whip-smart, insightful, and utterly inspiring—and movingly framed as a letter to his own young sons, as they work to find their ways in the world—this book will upend what we call normal and empower us all.

The proposal to vaccinate adolescent girls against the human papilloma virus ignited political controversy, as did the advent of fracking and a host of other emerging technologies. These disputes attest to the persistent gap between expert and public perceptions. Complicating the communication of sound science and the debates that surround the societal applications of that science is a changing media environment in which misinformation can elicit belief without corrective context and likeminded individuals are prone to seek ideologically comforting information within their own self-constructed media enclaves. Drawing on the expertise of leading science communication scholars from six countries, The Oxford Handbook of the Science of Science Communication not only charts the media landscape - from news and entertainment to blogs and films - but also examines the powers and perils of human biases - from the disposition to seek confirming evidence to the inclination to overweight endpoints in a trend line. In the process, it draws together the best available social science on ways to communicate science while also minimizing the pernicious effects of human bias. The Handbook adds case studies exploring instances in which communication undercut or facilitated the access to scientific evidence. The range of topics addressed is wide, from genetically engineered organisms and nanotechnology to vaccination controversies and climate change. Also unique to this book is a focus on the complexities of involving the public in decision making about the uses of science, the regulations that should govern its application, and the ethical boundaries within which science should operate. The Handbook is an invaluable resource for researchers in the communication fields, particularly in science and health communication, as well as to scholars involved in research on scientific topics susceptible to distortion in partisan debate.

Accompanied by diagrams and sidebars offering practical steps, visual case studies and first-person essays, this ultimate guide to preparing for the next wave of technology exposes the limitations of current technology to inspire readers to meet the coming technological challenges.

Describes the state of postwar development policy in Africa that has channeled billions of dollars in aid but failed to either reduce poverty or increase growth, offering a hopeful vision of how to address the problem.

You receive an e-mail. It contains an offer for a complete personal computer system. It seems like the retailer read your mind since you were exploring computers on their web site just a few hours prior.... As you drive to the store to buy the computer bundle, you get an offer for a discounted coffee from the coffee shop you are getting ready to drive past. It says that since you're in the area, you can get 10% off if you stop by in the next 20 minutes.... As you drink your coffee, you receive an apology from the manufacturer of a product that you complained about yesterday on your Facebook page, as well as on the company's web site.... Finally, once you get back home, you receive notice of a special armor upgrade available for purchase in your favorite online video game. It is just what is needed to get past some spots you've been struggling with.... Sound crazy? Are these things that can only happen in the distant future? No. All of these scenarios are possible today! Big data. Advanced analytics. Big data analytics. It seems you can't escape such terms today. Everywhere you turn people are discussing, writing about, and promoting big data and advanced analytics. Well, you can now add this book to the discussion. What is real and what is hype? Such attention can lead one to the suspicion that perhaps the analysis of big data is something that is more hype than substance. While there has been a lot of hype over the past few years, the reality is that we are in a transformative era in terms of analytic capabilities and the leveraging of massive amounts of data. If you take the time to cut through the sometimes-over-zealous hype present in the media,

you'll find something very real and very powerful underneath it. With big data, the hype is driven by genuine excitement and anticipation of the business and consumer benefits that analyzing it will yield over time. Big data is the next wave of new data sources that will drive the next wave of analytic innovation in business, government, and academia. These innovations have the potential to radically change how organizations view their business. The analysis that big data enables will lead to decisions that are more informed and, in some cases, different from what they are today. It will yield insights that many can only dream about today. As you'll see, there are many consistencies with the requirements to tame big data and what has always been needed to tame new data sources. However, the additional scale of big data necessitates utilizing the newest tools, technologies, methods, and processes. The old way of approaching analysis just won't work. It is time to evolve the world of advanced analytics to the next level. That's what this book is about. Taming the Big Data Tidal Wave isn't just the title of this book, but rather an activity that will determine which businesses win and which lose in the next decade. By preparing and taking the initiative, organizations can ride the big data tidal wave to success rather than being pummeled underneath the crushing surf. What do you need to know and how do you prepare in order to start taming big data and generating exciting new analytics from it? Sit back, get comfortable, and prepare to find out!

This book explains the concept of adding value and shows staff at libraries and other organizations why they need to take steps now to ensure they are adding new value to their communities—whether it be a local town or neighborhood, a faculty and student body, or a school. • Helps managers and administrators create long-range plans for sustainability and growth • Offers real-life models of libraries that have successfully implemented concepts of the value-added organization • Fills a gap in the literature as the only book written specifically for librarians on the topic of adding value • Presents important information and guidance for those who work in all types of libraries, archives, and museums as well as administrators, board members, and other stakeholders who are interested in the future of these vital community resources • Includes color charts, website screenshots, and other visual representations that clarify key concepts and points

A monumental, genre-defying novel that David Mitchell calls "Michel Faber's second masterpiece," The Book of Strange New Things is a masterwork from a writer in full command of his many talents. It begins with Peter, a devoted man of faith, as he is called to the mission of a lifetime, one that takes him galaxies away from his wife, Bea. Peter becomes immersed in the mysteries of an astonishing new environment, overseen by an enigmatic corporation known only as USIC. His work introduces him to a seemingly friendly native population struggling with a dangerous illness and hungry for Peter's teachings—his Bible is their "book of strange new things." But Peter is rattled when Bea's letters from home become increasingly desperate: typhoons and earthquakes are devastating whole countries, and governments are crumbling. Bea's faith, once the guiding light of their lives, begins to falter. Suddenly, a separation measured by an otherworldly distance, and defined both by one newly discovered world and another in a state of collapse, is threatened by an ever-widening gulf that is much less quantifiable. While Peter is reconciling the needs of his congregation with the desires of his strange employer, Bea is struggling for survival. Their trials lay bare a profound meditation on faith, love tested beyond endurance, and our responsibility to those closest to us. Marked by the same bravura storytelling and precise language that made The Crimson Petal and the White such an international success, The Book of Strange New Things is extraordinary, mesmerizing, and replete with emotional complexity and genuine pathos.

"Carefully distinguishing between big data and open data, and exploring various data infrastructures, Kitchin vividly illustrates how the data landscape is rapidly changing and calls for a revolution in how we think about data." - Evelyn Ruppert, Goldsmiths, University of London "Deconstructs the hype around the 'data revolution' to carefully guide us through the histories and the futures of 'big data.' The book skilfully engages with debates from across the humanities, social sciences, and sciences in order to produce a critical account of how data are enmeshed into enormous social, economic, and political changes that are taking place." - Mark Graham, University of Oxford Traditionally, data has been a scarce commodity which, given its value, has been either jealously guarded or expensively traded. In recent years, technological developments and political lobbying have turned this position on its head. Data now flow as a deep and wide torrent, are low in cost and supported by robust infrastructures, and are increasingly open and accessible. A data revolution is underway, one that is already reshaping how knowledge is produced, business conducted, and governance enacted, as well as raising many questions concerning surveillance, privacy, security, profiling, social sorting, and intellectual property rights. In contrast to the hype and hubris of much media and business coverage, The Data Revolution provides a synoptic and critical analysis of the emerging data landscape. Accessible in style, the book provides: A synoptic overview of big data, open data and data infrastructures An introduction to thinking conceptually about data, data infrastructures, data analytics and data markets A critical discussion of the technical shortcomings and the social, political and ethical consequences of the data revolution An analysis of the implications of the data revolution to academic, business and government practices

TrillionsThriving in the Emerging Information EcologyJohn Wiley & Sons

What determines whether complex life will arise on a planet, or even any life at all? Questions such as these are investigated in this groundbreaking book. In doing so, the authors synthesize information from astronomy, biology, and paleontology, and apply it to what we know about the rise of life on Earth and to what could possibly happen elsewhere in the universe. Everyone who has been thrilled by the recent discoveries of extrasolar planets and the indications of life on Mars and the Jovian moon Europa will be fascinated by Rare Earth, and its implications for those who look to the heavens for companionship.

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