

Engineering Project Dashboard

The Client Role in Successful Construction Projects is a practical guide for clients on how to initiate, procure and manage construction projects and developments. This book is written from the perspective of the client initiating a construction project as part of a business venture and differs from most available construction literature which can externalise the client as a risk to be managed by the design team. The book provides a practical framework for new and novice clients undertaking construction, giving them a voice and enabling them to: Understand the challenges that they and the project are likely to face. Communicate and interact effectively with key stakeholders and professionals within the industry. Understand in straightforward terms where they can have a positive impact on the project. Put in place a client-side due diligence process. Reduce their institutional risk and the risk of project failure. Discover how their standard models are able to co-exist and even transfer to a common client-side procedure for managing a construction project. Written by clients, for clients, this book is highly recommended not only for clients, but for construction industry professionals who want to develop their own skills and enhance their working relationship with their clients. A supporting website for the book will be available, which will give practical examples of the points illustrated in the book and practical advice from specialists in the field.

This volume contains contributions to the XXI International Symposium on Lepton and Photon Interactions at High Energies, held at the Fermi National Accelerator Laboratory. It gives up-to-date reviews of all aspects of particle physics, written by leading practitioners in the field. The review nature of all the articles makes this volume more accessible to students and researchers in other fields of physics. In addition to new experimental data and advances in theory, the future directions and prospects for the field are covered. The proceedings have been selected for coverage in: • Index to Scientific & Technical Proceedings® (ISTP® / ISI Proceedings) • Index to Scientific & Technical Proceedings (ISTP CDROM version / ISI Proceedings) • CC Proceedings — Engineering & Physical Sciences

In a series of essays, this book describes and analyzes the concept and theory of the recent smart city phenomenon from a global perspective, with a focus on its implementation around the world. After defining the concept it then elaborates on the role of Information and Communication Technology (ICT) as an enabler for smart cities, and the role of ICT in the interplay with smart mobility. A separate chapter develops the concept of an urban smart dashboard for stakeholders to measure performance as well as the economic and public value. It offers examples of smart cities around the globe, and two detailed case studies on Genoa and Amsterdam exemplify the book's theoretical and empirical findings, helping readers understand and evaluate the effectiveness and capability of new smart city programs.

Government 3.0 – Next Generation Government Technology Infrastructure and Services Roadmaps, Enabling Technologies & Challenges Springer

"As projects get more complicated, managers stop learning from their experience. It is important to understand how that happens and how to change it.... Fallible estimates: In software development, initial estimates for a project shape the trajectory of decisions that a manager makes over its life. For example, estimates of the productivity of the team members influence decisions about the size of the team, which in turn affect the team's actual output. The trouble is that initial estimates usually turn out to be wrong." (Sengupta, 2008) This book aims directly to increase the awareness among managers and practitioners that estimation is as important as the work to be done in software and systems development. You can manage what you can measure! Readers will find in this book a collection of lessons learned from the worldwide "metrics community," which we have documented and enhanced with our own experiences in the field of software measurement and estimating. Our goal is to support our readers to harvest the benefits of estimating and improve their software development processes. We present the 5 ISO/IEC-acknowledged Functional Sizing Methods with variants, experiences, counting rules, and case studies – and most importantly, illustrate through practical examples how to use functional size measurement to produce realistic estimates. The book is written in a practical manner, especially for the busy practitioner community. It is aimed to be used as a manual and an assistant for everyday work.

"Provides guidance to those in the airport community who have responsibility for, and stake in, developing, financing, managing, and overseeing an airport capital plan and the individual projects included in it. The handbook provides clear guidance on who should perform each task in the collaborative planning process. It also defines and describes the different ways in which we communicate to ensure effective exchange between internal and external stakeholders"--

For over 20 years, Software Engineering: A Practitioner's Approach has been the best selling guide to software engineering for students and industry professionals alike. The sixth edition continues to lead the way in software engineering. A new Part 4 on Web Engineering presents a complete engineering approach for the analysis, design, and testing of Web Applications, increasingly important for today's students. Additionally, the UML coverage has been enhanced and significantly increased in this new edition. The pedagogy has also been improved in the new edition to include sidebars. They provide information on relevant software tools, specific work flow for specific kinds of projects, and additional information on various topics. Additionally, Pressman provides a running case study called "Safe Home" throughout the book, which provides the application of software engineering to an industry project. New additions to the book also include chapters on the Agile Process Models, Requirements Engineering, and Design Engineering. The book has been completely updated and contains hundreds of new references to software tools that address all important topics in the book. The ancillary material for the book includes an expansion of the case study, which illustrates it with UML diagrams. The On-Line Learning Center includes resources for both instructors and students such as checklists, 700 categorized web references, Powerpoints, a test bank, and a software engineering library-containing over 500 software engineering papers. TAKEAWAY HERE IS THE FOLLOWING: 1. AGILE PROCESS METHODS ARE COVERED EARLY IN CH. 42. NEW PART ON WEB APPLICATIONS --5 CHAPTERS

Project Management for Engineering, Business and Technology is a highly regarded textbook that addresses project management across all industries. First covering the essential background, from origins and philosophy to methodology, the bulk of the book is dedicated to concepts and techniques for practical application. Coverage includes project initiation and proposals, scope and task definition, scheduling, budgeting, risk analysis, control, project selection and portfolio management, program management, project organization, and all-important "people" aspects—project leadership, team building, conflict resolution, and stress management. The systems development cycle is used as a framework to discuss project management in a variety of situations, making this the go-to book for managing virtually any kind of project, program, or task force. The authors focus on the ultimate purpose of project management—to unify and integrate the interests, resources and work efforts of many stakeholders, as well as the planning, scheduling, and budgeting needed to accomplish overall project goals. This sixth edition features: updates throughout to cover the latest developments in project management methodologies; a new chapter on project procurement management and contracts; an expansion of case study coverage throughout, including those on the topic of sustainability and climate change, as well as cases and examples from across the globe, including India, Africa, Asia, and Australia; and extensive instructor support materials, including an instructor's manual, PowerPoint slides, answers to chapter review questions and a test bank of questions. Taking a technical yet accessible approach, this book is an ideal resource and reference for all advanced undergraduate and graduate students in project management courses, as well as for practicing project managers across all industry sectors.

ONE OF A FOUR-BOOK COLLECTION SPOTLIGHTING CLASSIC ARTICLES Five decades of landmark original research findings and reviews Highlighting some of the most important findings reported over the past five decades, this volume features some of the best technical papers published on alumina and bauxite from 1963 to 2011. Papers have been divided into thirteen subject sections for ease of access. Each section has a brief introduction and a list of recommended articles for researchers interested in exploring each subject in greater depth. Only about fifteen percent of the alumina and bauxite papers ever published in *Light Metals* were chosen for this volume. Selection was based on a rigorous review process. Among the papers, readers will find landmark original research findings and expert reviews summarizing current thinking on key topics at the time of publication. From basic research to advanced applications, the articles published in this volume collectively represent our body of knowledge in alumina and bauxite. Students, scientists, and engineers should turn to this volume to discover the historical development of alumina and bauxite research as well as the current state of the science and the technology. Moreover, the papers published in this volume will serve as a springboard for future research and discoveries.

This book constitutes selected, revised and extended papers of the 15th International Conference on Evaluation of Novel Approaches to Software Engineering, ENASE 2020, held in virtual format, in May 2020. The 19 revised full papers presented were carefully reviewed and selected from 96 submissions. The papers included in this book contribute to the understanding of relevant trends of current research on novel approaches to software engineering for the development and maintenance of systems and applications, specifically with relation to: model-driven software engineering, requirements engineering, empirical software engineering, service-oriented software engineering, business process management and engineering, knowledge management and engineering, reverse software engineering, software process improvement, software change and configuration management, software metrics, software patterns and refactoring, application integration, software architecture, cloud computing, and formal methods.

An updated edition of the best tips and tools to plan, build, and execute a structured test operation In this update of his bestselling book, Rex Black walks you through how to develop essential tools and apply them to your test project. He helps you master the basic tools, apply the techniques to manage your resources, and give each area just the right amount of attention so that you can successfully survive managing a test project! Offering a thorough review of the tools and resources you will need to manage both large and small projects for hardware and software, this book prepares you to adapt the concepts across a broad range of settings. Simple and effective, the tools comply with industry standards and bring you up to date with the best test management practices and tools of leading hardware and software vendors. Rex Black draws from his own numerous testing experiences-- including the bad ones, so you can learn from his mistakes-- to provide you with insightful tips in test project management. He explores such topics as: Dates, budgets, and quality-expectations versus reality Fitting the testing process into the overall development or maintenance process How to choose and when to use test engineers and technicians, contractors and consultants, and external test labs and vendors Setting up and using an effective and simple bug-tracking database Following the status of each test case The companion Web site contains fifty tools, templates, and case studies that will help you put these ideas into action--fast! Healthcare Organizations offer significant opportunities for change and improvement in their overall performance. Hospitals and clinics are generally large, complex, and inefficient, and need serious development in process workflow and management systems, which will ultimately lead to better patient and financial outcomes. The National Academy of Medicine has stated that hospital systems are broken, and that they must begin by "... improving hospital efficiency and patient flow, and using operational management methods and information technologies." In fact, costs and quality are two of the important aspects of the "triple aim" in healthcare. One area that offers significant potential for improvement is through the application of performance improvement methods to patient and process flows. Performance improvement has a significant impact on a hospital's over financial and strategic performance. Performance improvement involves the deployment of quantitative and scientific methods to model and influence the functioning of organizations. Performance improvement professionals are tasked with managing a variety of activities, such as deploying new information technologies, serving as project managers for construction events, re-engineering departmental process workflow, eliminating bottlenecks, and improving the flow and movement of patients between resource-intensive clinical areas. All

of these are high risk, and require use of advanced, sophisticated methods to improve efficiency and quality, while minimizing disruptions from change. This updated edition is a comprehensive and concise guide to performance improvement in healthcare. It describes the management engineering principles focused on designing optimal management and information systems and processes. Case studies and examples are integrated throughout all chapters.

The book covers all stages of process plant projects from initiation to completion and handover by describing the roles and actions of all functions involved. It discusses engineering, procurement, construction, project management, contract administration, project control and HSE, with reference to international contracting and business practices.

This book constitutes the refereed proceedings of the 5th International Conference on Games and Learning Alliance, GALA 2016, held in Utrecht, The Netherlands, in December 2016. The 27 revised regular papers presented together with 14 poster papers were carefully reviewed and selected from 55 submissions. The papers cover topics such as games and sustainability; games for math and programming; games and health; games and soft skills; games and management; games and learning; game development and assessment; and mobile games.

This volume contains contributions to the XXI International Symposium on Lepton and Photon Interactions at High Energies, held at the Fermi National Accelerator Laboratory. It gives up-to-date reviews of all aspects of particle physics, written by leading practitioners in the field. The review nature of all the articles makes this volume more accessible to students and researchers in other fields of physics. In addition to new experimental data and advances in theory, the future directions and prospects for the field are covered. The proceedings have been selected for coverage in: ? Index to Scientific & Technical Proceedings? (ISTP? / ISI Proceedings)? Index to Scientific & Technical Proceedings (ISTP CDROM version / ISI Proceedings)? CC Proceedings ? Engineering & Physical Sciences

This volume constitutes the refereed proceedings of the Third International Conference on Contemporary Computing, IC3 2010, held in Noida, India, in August 2010.

Discover how Google Cloud services can help you to reduce operational tasks and focus on delivering business value with your applications Key Features Design, develop, and deploy end-to-end cloud-native applications using Google Cloud services Prepare for the GCP developer exam with the help of a fictitious business case and a Q&A section Get hands-on with implementing code examples of different GCP services in your applications Book Description Google Cloud Platform is one of the three major cloud providers in the industry, exhibiting great leadership in application modernization and data management. This book provides a comprehensive introduction for those who are new to cloud development and shows you how to use the tools to create cloud-native applications by integrating the technologies used by Google. The book starts by taking you through the basic programming concepts and security fundamentals necessary for developing in Google Cloud. You'll then discover best practices for developing and deploying applications in the cloud using different components offered by Google Cloud Platform such as Cloud Functions, Google App Engine, Cloud Run, and other GCP technologies. As you advance, you'll learn the basics of cloud storage and choosing the best options for storing different kinds of data as well as understand what site reliability engineers do. In the last part, you'll work on a sample case study of Hip Local, a community application designed to facilitate communication between people nearby, created by the Google Cloud team. By the end of this guide, you'll have learned how to design, develop, and deploy an end-to-end application on the Google Cloud Platform. What you will learn Get to grips with the fundamentals of Google Cloud Platform development Discover security best practices for applications in the cloud Find ways to create and modernize legacy applications Understand how to manage data and databases in Google Cloud Explore best practices for site reliability engineering, monitoring, logging, and debugging Become well-versed with the practical implementation of GCP with the help of a case study Who this book is for This book is for cloud engineers or developers working or starting to work on Google Cloud Platform and looking to take advantage of cloud-native applications. You'll also find this book useful if you are preparing for the GCP developer exam.

In the 21st century, advancements in the digital world are bringing about rapid waves of change in organizational management. As such, it is increasingly imperative to discover ways for businesses to adapt to changes in the markets and seize various digital marketing opportunities. Improving Business Performance Through Innovation in the Digital Economy is an essential reference source for the latest research on the impact of digital computing. It investigates new economic and entrepreneurial approaches to enhancing community development. Featuring research on topics such as business ethics, mobile technology, and cyber security, this book is ideally designed for knowledge workers, business managers, executives, entrepreneurs, small and medium enterprise managers, academicians, researchers, students, and global leaders seeking coverage on the management of sustainable enterprises.

The value of personal data has traditionally been understood in ethical terms as a safeguard for personality rights such as human dignity and privacy. However, we have entered an era where personal data are mined, traded and monetized in the process of creating added value - often in terms of free services including efficient search, support for social networking and personalized communications. This volume investigates whether the economic value of personal data can be realized without compromising privacy, fairness and contextual integrity. It brings scholars and scientists from the disciplines of computer science, law and social science together with policymakers, engineers and entrepreneurs with practical experience of implementing personal data management. The resulting collection will be of interest to anyone concerned about privacy in our digital age, especially those working in the field of personal information management, whether academics, policymakers, or those working in the private sector. The methods and concepts presented in the bestselling first edition revolutionized the approach to the management and control of Lean companies. Enhanced with extensive end-of-chapter exercises and a CD-ROM with Lean accounting tools, the second edition of this preeminent practitioner's guide is now suitable for classroom use. Practical Lean Accoun

This textbook is specially written keeping in mind the requirements of plant and building industry. Real-world plant and building models have been carefully selected to discuss the tools and concepts in the tutorials of every chapter. You will be able to find various similarities between the models used in this textbook and your current projects. This will allow you to apply the concepts learned in this textbook to your day-to-day work. These real-world models are also made available to the buyers of this textbook. The following are some salient features of this textbook: Free Tutorial on clash test with Point Cloud available by contacting the

author at deepak@deepakmaini.com. More than 640 pages of in-depth coverage of all modules of Autodesk Navisworks Simulate and Manage, including the new Quantification module. Detailed discussion of Autodesk Navisworks tools and concepts followed by Plant and BIM tutorials. Around 400 pages of tutorials on real-world Plant and Building models. Special tutorial on the animation of the subsea Remotely Operated Vehicle (ROV). Special tutorials showing the Animator and Scriptor scenes with Crane movement and animation. Project-based chapter for the Autodesk Factory Design Suite user. Timeliner simulation linked with animator animations showing construction sequences and movement of objects at the construction site. Detailed coverage of the Clash Detective module and the switchback functionality. Timeliner based clash tests included in tutorials. "What I do" tips describing some real world challenges that Navisworks users face and the author's approach in those situations. Free video showing how to use Autodesk ReCap to reduce the size of Point Cloud data before importing in Autodesk Navisworks available by contacting the author at deepak@deepakmaini.com. End of chapter skill evaluation to review the concepts learnt in the chapter. The following free teaching resources are available for faculty: PowerPoint slides of every chapter in the textbook. Answers to the Class Test Questions. Help for designing the course curriculum.

The National Institutes of Health (NIH) is the primary agency of the United States government responsible for biomedical and public health research. Founded in the late 1870s, NIH has produced extraordinary advances in the treatment of common and rare diseases and leads the world in biomedical research. It is a critical national resource that plays an important role in supporting national security. The 310-acre Bethesda campus supports some 20,000 employees and contractors, and it contains more than 12 million square feet of facilities divided amongst nearly 100 buildings, including the largest dedicated research hospital in the world. The Bethesda campus supports some of the most sophisticated and groundbreaking biomedical research in the world. However, while some new state-of-the-art buildings have been constructed in recent years, essential maintenance for many facilities and the campus overall has been consistently deferred for many years. The deteriorating condition of NIH's built environment is now putting its ability to fulfill its mission at substantial risk. Managing the NIH Bethesda Campus's Capital Assets for Success in a Highly Competitive Global Biomedical Research Environment identifies the facilities in greatest need of repair on the Bethesda campus and evaluates cost estimates to determine what investment is needed for the NIH to successfully accomplish its mission going forward.

Recognized as One of the Best Business Books for 2014 by CIO Magazine Based on interviews with more than 150 CIOs, IT/business executives, and academic thought leaders, *The Strategic CIO: Changing the Dynamics of the Business Enterprise* provides insight, success stories, and a step-by-step methodology to transform your IT organization into a strategic asset that drives customer value, increases revenues, and enhances shareholder wealth. The book details how strategic CIOs from FedEx, Procter & Gamble, McKesson, and other leading companies transformed their organizations. It illustrates the methods these CIOs used to become strategic partners that collaborate effectively within their organizations to leverage information and technology for a competitive advantage. The text will help you assess the key competencies and skills required by IT personnel to partner with your business teams to create new and enhanced products and services that create customer value, increase margin, and enhance shareholder wealth. The book includes powerful methodologies, time-saving templates, proven best practices, and helpful assessments. It also details a four-phase methodology, along with the associated activities and tools, to help your IT organization successfully transform into a strategic IT organization. Gain insight into the four domain competencies and twelve associated skills required to build effective strategic IT organizations. Build your roadmap to success using the transformation methodology described in the text and you will be on your way to making your organization a strategic IT organization. Read Philip Weinzimer's recent article that appeared on CIO.com.

For more than 40 years, Computerworld has been the leading source of technology news and information for IT influencers worldwide. Computerworld's award-winning Web site (Computerworld.com), twice-monthly publication, focused conference series and custom research form the hub of the world's largest global IT media network.

This book constitutes the refereed proceedings of the 7th European Conference on Technology Enhanced Learning, EC-TEL 2012, held in Saarbrücken, Germany, in September 2012. The 26 revised full papers presented were carefully reviewed and selected from 130 submissions. The book also includes 12 short papers, 16 demonstration papers, 11 poster papers, and 1 invited paper. Specifically, the programme and organizing structure was formed through the themes: mobile learning and context; serious and educational games; collaborative learning; organisational and workplace learning; learning analytics and retrieval; personalised and adaptive learning; learning environments; academic learning and context; and, learning facilitation by semantic means.

2012 Jolt Award finalist! Pioneering the Future of Software Test Do you need to get it right, too? Then, learn from Google. Legendary testing expert James Whittaker, until recently a Google testing leader, and two top Google experts reveal exactly how Google tests software, offering brand-new best practices you can use even if you're not quite Google's size...yet! Breakthrough Techniques You Can Actually Use Discover 100% practical, amazingly scalable techniques for analyzing risk and planning tests...thinking like real users...implementing exploratory, black box, white box, and acceptance testing...getting usable feedback...tracking issues...choosing and creating tools...testing "Docs & Mocks," interfaces, classes, modules, libraries, binaries, services, and infrastructure...reviewing code and refactoring...using test hooks, presubmit scripts, queues, continuous builds, and more. With these techniques, you can transform testing from a bottleneck into an accelerator—and make your whole organization more productive!

Inexperienced software developers - such as fresh graduates - shape the future of software engineering as a practice. Supporting these novice developers in becoming high quality engineers is a key objective of our engineering community. Yet, inexperienced developers have considerable trouble in applying the fundamentals of systematic software testing in industrial settings. Gaps in testing skills arise from inherent attributes of systematic testing itself and environmental attributes, such as the educational setting in universities. Frustrated, practitioners have long since devised cost intensive workarounds. In this thesis, this problem situation is qualitatively analyzed in great detail, leveraging insights from three Grounded Theory studies. Employing Everett M. Rogers' 'Theory of the Diffusion of Innovation', strategic improvements to the onboarding situation are presented. Lastly, tool support for the strategies developed in this thesis is presented and evaluated.

Sustainable development within urban and rural areas, transportation systems, logistics, supply chain management, urban health, social services, and architectural design are taken into consideration in the cohesive network models provided in this book. The ideas, methods, and models presented consider city landscapes and quality of life conditions based on mathematical network models and optimization. Interdisciplinary Works from prominent researchers in mathematical modeling, optimization, architecture, engineering, and physics are featured in this volume to promote health and well-being through design. Specific topics include: - Current technology that form the basis of future living in smart cities - Interdisciplinary design and networking of large-scale urban systems - Network communication and route traffic optimization - Carbon dioxide emission reduction - Closed-loop logistics chain management and operation - Modeling the effect urban

environments on aging - Health care infrastructure - Urban water system management - Architectural design optimization Graduate students and researchers actively involved in architecture, engineering, building physics, logistics, supply chain management, and mathematical optimization will find the interdisciplinary work presented both informative and inspiring for further research.

This book develops and applies an integrated socio-economic assessment of multi-use offshore platforms in European marine locations. The sites assessed regard infrastructures in the North Sea, the Baltic Sea, the Mediterranean Sea and the Atlantic coast. The assessment uses the results from the natural and engineering sciences as inputs, boundaries and constraints to the socio-economic analysis. The content of the book develops in a step-by-step, coherent and integrated manner. The presentation and the discussion on the methodology are followed by the detailed assessment of specific multi-use offshore platforms. A detailed risk analysis follows in which the results of the socio-economic assessment are integrated. This is complemented with sensitivity analysis. The book, offers insights that result from a multi-disciplinary approach which combines a broad range of expertise in hydraulics, wind engineering, aquaculture, renewable energy, marine environment, project management, socio-economics and governance. The analysis follows views and assessment of world experts from all relevant disciplines from academia, big companies and potential investors that have joined forces in the MERMAID project (vliz.be/projects/mermaidproject). The book is a valuable reading for academics, technicians, policy-makers and relevant stakeholders.

This book presents a rich compilation of real-world cases on digitalization, aiming to share first-hand insights from renowned organizations and to make digitalization tangible. With all economic and societal sectors being challenged by emerging technologies, the digital economy is highly volatile, uncertain, complex, and ambiguous. It confronts established organizations with substantial challenges and opportunities. Against this backdrop, this book reports on best practices and lessons learned from organizations that succeeded in tackling the challenges and seizing the opportunities of the digital economy. It illustrates how twenty organizations leveraged their capabilities to create disruptive innovation, to develop digital business models, and to digitally transform themselves. These cases stem from various industries (e.g. automotive, insurance, consulting, and public services) and countries, covering the many facets that digitalization may have. As all case descriptions follow a unified template, they are easily accessible for readers and provide insightful examples for practitioners as well as interesting cases for researchers, teachers, and students. Almost every organization is trying to figure out how best to respond to the opportunities and threats posed by digitalization. This book provides valuable lessons from those organizations that have already begun their digital transformation journey. Michael D. Myers, Professor of Information Systems, University of Auckland Digitalization Cases provides firsthand insights into the efforts of renowned companies. The presented actions, results, and lessons learned are a great inspiration for managers, students, and academics. This book gives real pointers on the how and where to start. Anna Kopp, Head of IT Germany, Microsoft The cases compiled in the second volume of Digitalization Cases show how disruption can actively be managed. Further, long-term insights from extended success stories of the first edition highlight that courage to change pays off well. This book represents a motivation for organizations to drive their digital transformation journeys actively. Markus Richter, State Secretary at the Federal Ministry of the Interior, Building and Community and Federal Government Commissioner for Information Technology, Germany

Demonstrating the latest research and analysis in the area of through-life engineering services (TES), this book utilizes case studies and expert analysis from an international array of practitioners and researchers – who together represent multiple manufacturing sectors: aerospace, railway and automotive – to maximize reader insights into the field of through-life engineering services. As part of the EPSRC Centre in Through-life Engineering Services program to support the academic and industrial community, this book presents an overview of non-destructive testing techniques and applications and provides the reader with the information needed to assess degradation and possible automation of through-life engineering service activities. The latest developments in maintenance-repair-overhaul (MRO) are presented with emphasis on cleaning technologies, repair and overhaul approaches and planning and digital assistance. The impact of these technologies on sustainable enterprises is also analyzed. This book will help to support the existing TES community and will provide future studies with a strong base from which to analyze and apply technological trends to real world examples.

The pervasiveness of and universal access to modern Information and Communication Technologies has enabled a popular new paradigm in the dissemination of information, art, and ideas. Now, instead of relying on a finite number of content providers to control the flow of information, users can generate and disseminate their own content for a wider audience. Open Source Technology: Concepts, Methodologies, Tools, and Applications investigates examples and methodologies in user-generated and freely-accessible content available through electronic and online media. With applications in education, government, entertainment, and more, the technologies explored in these volumes will provide a comprehensive reference for web designers, software developers, and practitioners in a wide variety of fields and disciplines.

Tunnels and Underground Cities: Engineering and Innovation meet Archaeology, Architecture and Art contains the contributions presented at the World Tunnel Congress 2019 (Naples, Italy, 3-9 May 2019). The use of underground space is continuing to grow, due to global urbanization, public demand for efficient transportation, and energy saving, production and distribution. The growing need for space at ground level, along with its continuous value increase and the challenges of energy saving and achieving sustainable development objectives, demand greater and better use of the underground space to ensure that it supports sustainable, resilient and more liveable cities. This vision was the source of inspiration for the design of the logos of both the International (ITA) and Italian (SIG) Tunnelling Association. By placing key infrastructures underground – the black circle in the logos – it will be possible to preserve and enhance the quality of the space at ground level – the green line. In order to consider and value underground space usage together with human and social needs, engineers, architects, and artists will have to learn to collaborate and develop an interdisciplinary design approach that addresses functionality, safety, aesthetics and quality of life, and adaptability to future and varied functions. The 700 contributions cover a wide range of topics, from more traditional subjects connected to technical challenges of design and construction of underground works, with emphasis on innovation in tunneling engineering, to less conventional and archetypically Italian themes such as archaeology, architecture, and art. The book has the following main themes: Archaeology, Architecture and Art in underground construction; Environment sustainability in underground construction; Geological and geotechnical knowledge and requirements for project implementation; Ground improvement in underground constructions; Innovation in underground engineering, materials and equipment; Long and deep tunnels; Public communication and awareness; Risk management, contracts and financial aspects; Safety in underground construction; Strategic use of underground space for resilient cities; Urban tunnels. Tunnels and Underground Cities: Engineering and Innovation meet Archaeology, Architecture and Art is a valuable reference text for tunneling specialists, owners, engineers, architects and others involved in underground planning, design and building around the world, and for academics who are interested in underground constructions and geotechnics.

The capability and use of IT and web based energy information and control systems has expanded from single facilities to multiple facilities and organizations with buildings located throughout the world. This book answers the question of how to take the mass of available data and extract from it simple and useful information which can determine what actions to take to improve efficiency and productivity of commercial, institutional and industrial facilities. The book also provides insight into the areas of advanced

applications for web based EIS and ECS systems, and the integration of IT/web based information and control systems with existing BAS systems.

The ever expanding market need for information on how to apply project management principles and the PMBOK® contents to day-to-day business situations has been met by our case studies book by Harold Kerzner. That book was a spin-off from and ancillary to his best selling text but has gained a life of its own beyond adopters of that textbook. All indications are that the market is hungry for more cases while our own need to expand the content we control, both in-print and online would benefit from such an expansion of project management "case content". The authors propose to produce a book of cases that compliment Kerzner's book. A book that offers cases beyond the general project management areas and into PMI®'s growth areas of program management and organizational project management. The book will be structured to follow the PMBOK in coverage so that it can not only be used to supplement project management courses, but also for self study and training courses for the PMP® Exam. (PMI, PMBOK, PMP, and Project Management Professional are registered marks of the Project Management Institute, Inc.)

Historically, technological change has had significant effect on the locus of administrative activity, cost of carrying out administrative tasks, the skill sets needed by officials to effectively function, rules and regulations, and the types of interactions citizens have with their public authorities. Next generation Public Sector Innovation will be "Government 3.0" powered by innovations related to Open and big data, administrative and business process management, Internet-of-Things and blockchains for public sector innovation to drive improvements in service delivery, decision and policy making and resource management. This book provides fresh insights into this transformation while also examining possible negative side effects of the increasing openness of governments through the adoption of these new innovations. The goal is for technology policy makers to engage with the visions of Government 3.0 . Researchers should be able to critically examine some of the innovations described in the book as the basis for developing research agendas related to challenges associated with the adoption and use of some of the associated technologies. The book serves as a rich source of materials from leading experts in the field that enables Public administration practitioners to better understand how these new technologies impact traditional public administration paradigms. The book is suitable for graduate courses in Public Sector Innovation, Innovation in Public Administration, E-Government and Information Systems. Public sector technology policy makers, e-government, information systems and public administration researchers and practitioners should all benefit from reading this book.

The overwhelming majority of a software system's lifespan is spent in use, not in design or implementation. So, why does conventional wisdom insist that software engineers focus primarily on the design and development of large-scale computing systems? In this collection of essays and articles, key members of Google's Site Reliability Team explain how and why their commitment to the entire lifecycle has enabled the company to successfully build, deploy, monitor, and maintain some of the largest software systems in the world. You'll learn the principles and practices that enable Google engineers to make systems more scalable, reliable, and efficient—lessons directly applicable to your organization. This book is divided into four sections: Introduction—Learn what site reliability engineering is and why it differs from conventional IT industry practices Principles—Examine the patterns, behaviors, and areas of concern that influence the work of a site reliability engineer (SRE) Practices—Understand the theory and practice of an SRE's day-to-day work: building and operating large distributed computing systems Management—Explore Google's best practices for training, communication, and meetings that your organization can use

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