

Essential Business Process Modeling

Business Process Modeling Notation (BPMN) is a standard, graphical modeling representation for business processes. It provides an easy to use, flow-charting notation that is independent of the implementation environment. An underlying rigor supports the notation-facilitating the translation of business level models into executable models that BPM Suites and workflow engines can understand. Over recent years, BPMN has been widely adopted by Business Process Management (BPM) related products-both the Business Process Analysis and Modeling tool vendors and the BPM Suites. This book is for business users and process modeling practitioners alike. Part I provides an easily understood introduction to the key components of BPMN (put forward in a user-friendly fashion). Starting off with simple models, it progresses into more sophisticated patterns. Exercises help cement comprehension and understanding (with answers available online). Part II provides a detailed and authoritative reference on the precise semantics and capabilities of the standard.

Driven by the need for a closer alignment of business and IT requirements, the role of business process models in the development of enterprise software systems has increased continuously. Similar to other software artifacts, process models are developed and refined in team environments by several stakeholders, resulting in different versions. These versions need to be merged in order to obtain an integrated process model. Existing solutions to this basic problem in the field of software configuration management are mainly limited to textual documents, e.g., source code. This monograph presents a generally applicable framework for process model change management, which provides easy-to-use comparison and merging capabilities for the integration of different process model versions. The framework supports popular modeling languages such as BPMN, BPEL, or UML Activity Diagrams. Differences between process models are represented in terms of intuitive, high-level change operations. Equipped with a sophisticated analysis of dependencies and a semantic-aware computation of conflicts between differences, the framework constitutes a comprehensive and practically usable solution for process model change management in the model-driven development of enterprise software systems.

This volume constitutes the proceedings of the Third IFIP WG 8.1 Working Conference on the Practice of Enterprise Modeling, held in Delft, The Netherlands, during November 9-10, 2010. The goal of the conference is both to foster a better understanding of the practice of enterprise modeling and to improve its theoretical foundations. The 17 papers presented were carefully reviewed and selected from 44 submissions. They reflect the trend for both practitioners and academics to look into domains and conceptualizations addressing dedicated business-oriented topics like business intelligence or domain-driven process families, and thus reach beyond traditional information systems engineering.

This book develops new approaches for the rapid development and flexible adaption of business processes. It investigates how process modelers can be supported by semantic technologies and puts special emphasis on expressiveness and scalability.

Activities performed in organizations are coordinated via communication between the people involved. The sentences used to communicate are naturally structured by subject, verb, and object. The subject describes the actor, the verb the action and the object what is affected by the action. Subject-oriented Business Process Management (S-BPM) as presented in this book is based on this simple structure which enables process-oriented thinking and process modeling. S-BPM puts the subject of a process at the center of attention and thus deals with business processes and their organizational environment from a new perspective, meeting organizational requirements in a much better way than traditional approaches. Subjects represent agents of an action in a process, which can be either technical or human (e.g. a thread in an IT system or a clerk). A process structures the actions of each subject and coordinates the required communication among the subjects. S-BPM provides a coherent procedural framework to model and analyze business processes: its focus is the cooperation of all stakeholders involved in the strategic, tactical, and operational issues, sharing their knowledge in a networked structure. The authors illustrate how each modeling activity through the whole development lifecycle can be supported through the use of appropriate software tools. The presentation style focuses on professionals in industry, and on students specializing in process management or organizational modeling. Each chapter begins with a summary of key findings and is full of examples, hints, and possible pitfalls. An interpreter model, a toolbox, and a glossary summarizing the main terms complete the book. The web site www.i2pm.net provides additional software tools and further material.

Business Process Management (BPM) has become one of the most widely used approaches for the design of modern organizational and information systems. The conscious treatment of business processes as significant corporate assets has facilitated substantial improvements in organizational performance but is also used to ensure the conformance of corporate activities. This Handbook presents in two volumes the contemporary body of knowledge as articulated by the world's leading BPM thought leaders. This first volume focuses on arriving at a sound definition of Business Process Management approaches and examines BPM methods and process-aware information systems. As such, it provides guidance for the integration of BPM into corporate methodologies and information systems. Each chapter has been contributed by leading international experts. Selected case studies complement these views and lead to a summary of BPM expertise that is unique in its coverage of the most critical success factors of BPM.

Whether you are looking for a way to create efficiencies, analyze the work that is being done, or provide better customer service or innovation, you are ultimately looking for a tool to better understand processes. This book discusses the complete cycle of business process mapping and links business objectives, risks and measures of success to the processes being mapped. A comprehensive guide to well-known workflow patterns: recurrent, generic business process constructs, described from the control-flow, data, and resource perspectives. The study of business processes has emerged as a highly effective approach to coordinating an organization's complex service- and knowledge-based activities. The growing field of business process management (BPM) focuses on methods and tools for designing, enacting, and analyzing business processes. This volume offers a definitive guide to the use of patterns, which synthesize the wide range of approaches to modeling business processes. It provides a unique and comprehensive introduction to the well-known workflow patterns collection—recurrent, generic constructs describing common business process modeling and execution scenarios, presented in the form of problem-solution dialectics. The underlying principles of the patterns approach ensure that they are independent of any specific enabling technology, representational formalism, or modeling approach, and thus broadly applicable across the business process modeling and business process technology domains. The authors, drawing on extensive research done by the Workflow Patterns Initiative, offer a detailed introduction to the fundamentals of business process

modeling and management; describe three major pattern catalogs, presented from control-flow, data, and resource perspectives; and survey related BPM patterns. The book, a companion to the authoritative Workflow Patterns website, will be an essential resource for both academics and practitioners working in business process modeling and business process management. The 22nd International Conference on Conceptual Modeling (ER 2003) returned to Chicago after an absence of 18 years. Chicago, a city well known for its trendsetting and daring architecture, has met the new century with a renewed commitment to open public spaces and human interaction. Thus it provided a fitting venue for ER 2003, the scope of which was expanded to encompass all aspects of conceptual modeling in order to deal with constantly changing information technology and business practices and to accommodate a new openness in connecting systems to each other and to human users. The ER 2003 Program Co-chairs, Il-Yeol Song, Stephen Liddle, and Tok Wang Ling, along with an outstanding Program Committee assembled one of the finest technical programs of this conference series. In keeping with the tradition of previous ER conferences, the program for ER 2003 also included four preconference workshops, two preconference tutorials, two conference tutorials, two panels, and a demos and poster session. The Program Co-chairs, as well as Manfred Jeusfeld and Oscar Pastor (Workshop Co-chairs), Ee-Peng Lim and Tobey Teorey (Tutorial Co-chairs), Avigdor Gal and Elisa Bertino (Panel Co-chairs), and Heinrich Mayr (Demos and Poster Chair), deserve our appreciation for an excellent job. It was a pleasure working with all of them.

Businesses need to adapt constantly, but are often held back by static IT systems. The 'Riva approach to Business Process Management' is a way of analysing the mass of concurrent, collaborative activity that goes on in an organisation, providing a solid basis for developing flexible IT systems that support a business.

This textbook covers the entire Business Process Management (BPM) lifecycle, from process identification to process monitoring, covering along the way process modelling, analysis, redesign and automation. Concepts, methods and tools from business management, computer science and industrial engineering are blended into one comprehensive and inter-disciplinary approach. The presentation is illustrated using the BPMN industry standard defined by the Object Management Group and widely endorsed by practitioners and vendors worldwide. In addition to explaining the relevant conceptual background, the book provides dozens of examples, more than 230 exercises – many with solutions – and numerous suggestions for further reading. This second edition includes extended and completely revised chapters on process identification, process discovery, qualitative process analysis, process redesign, process automation and process monitoring. A new chapter on BPM as an enterprise capability has been added, which expands the scope of the book to encompass topics such as the strategic alignment and governance of BPM initiatives. The textbook is the result of many years of combined teaching experience of the authors, both at the undergraduate and graduate levels as well as in the context of professional training. Students and professionals from both business management and computer science will benefit from the step-by-step style of the textbook and its focus on fundamental concepts and proven methods. Lecturers will appreciate the class-tested format and the additional teaching material available on the accompanying website.

This volume constitutes the proceedings of the Second IFIP WG 8.1 Working Conference on the Practice of Enterprise Modeling, which took place in Stockholm, Sweden, during November 18-19, 2009. The conference series constitutes a dedicated forum where practice of Enterprise Modeling (EM) is addressed by bringing together researchers, users, and practitioners in order to develop a better understanding of the subject, and to improve the practice of EM, as well as to share knowledge and experience. The 17 papers presented were carefully reviewed and selected from 41 submissions. The topics covered are experiences in EM, the process of modeling, EM in information systems development, model quality and reuse, enterprise modeling for service modeling, and new ventures in enterprise modeling.

BPMN 2.0 is the industry standard diagramming language for business process models. The meaning of the business process diagram is the same, regardless of the tool used to create it. But creating models that are correct, complete, and clear demands more than a dictionary of BPMN shapes and symbols. It also requires a methodology for translating process logic consistently into the diagram. And it requires a measure of modeling style as well, conventions that ensure that the process logic is unambiguous from the diagram by itself. In short, "good BPMN" requires a disciplined approach called "method and style." In this book, Bruce Silver explains which BPMN elements process modelers need to understand, in two levels, including exactly where and how to use each element. Level 1 (the Descriptive modeling subclass of BPMN 2.0) is a palette of shapes and symbols largely carried over from traditional flowcharting. Level 2 (the Analytic subclass) expands the palette to be able to describe event-triggered behavior, critical to modeling exception handling. The book explains the real meaning of BPMN's most basic concepts - like activity, process, and end state - essential to using the language correctly, and provides a step-by-step methodology for going from a blank page to a complete end-to-end BPMN model, developed from the top down in a hierarchical structure. From the top-level diagram you can see on a single page exactly how the process starts, its possible end states, what the instance represents, and communications with the Customer, service providers, and other processes. From there you can drill down to see the details of any part of the process.

This book contains the extended and revised versions of selected papers from the Third International Symposium on Business Modeling and Software Design (BMSD 2013), held in Noordwijkerhout, The Netherlands, during July 8-10, 2013. The symposium was organized and sponsored by the Interdisciplinary Institute for Collaboration and Research on Enterprise Systems and Technology (IICREST), in cooperation with the Dutch Research School for Information and Knowledge Systems (SIKS), the Center for Telematics and Information Technology (CTIT), Aristotle University of Thessaloniki (AUTH), and AMAKOTA Ltd. The theme of BMSD 2013 was "Enterprise Engineering and Software Generation." The 13 full and 20 short papers presented at BMSD 2013 were selected from 56 submissions. The eight papers published in this book were carefully reviewed and selected from the 13 full papers. The selection includes papers touching upon a large number of research topics, ranging from more conceptual ones, such as modeling landscapes, process modeling, declarative business rules, and normalized systems to more practical ones, such as business-case development and performance indicators, and from more business-related topics, such as value modeling and service systems, to topics related to information architectures.

Examines a broad range of research and case studies that throws light on potential, social and human factors which determine the success of information technology.

Natural language is one of the most important means of human communication. It enables us to express our will, to exchange thoughts and to document our knowledge in written sources. Owing to its substantial role in many facets of human life, technology for automatically analyzing and processing natural language has recently become increasingly important. In fact, natural language processing tools have paved the way for entirely new business opportunities. The goal of this book is to facilitate the automatic analysis of natural language in process models and to employ this analysis for assisting process model stakeholders. Therefore, a technique is defined that automatically recognizes and annotates process model element labels. In addition, this technique is leveraged to support organizations in effectively utilizing their process models in various ways. The book is organized into seven chapters. It starts with an overview of business process management and linguistics and continues with conceptual contributions on parsing and annotating process model elements, with the detection and correction of process model guideline violations, with the generation of natural language from process models and finally ends with the derivation of service candidates from process models.

The Complete Business Process Handbook is the most comprehensive body of knowledge on business processes with revealing new research. Written as a practical guide for Executives, Practitioners, Managers and Students by the authorities that have shaped the way we think and work with process today. It stands out as a masterpiece, being part of the BPM bachelor and

master degree curriculum at universities around the world, with revealing academic research and insight from the leaders in the market. This book provides everything you need to know about the processes and frameworks, methods, and approaches to implement BPM. Through real-world examples, best practices, LEADing practices and advice from experts, readers will understand how BPM works and how to best use it to their advantage. Cases from industry leaders and innovators show how early adopters of LEADing Practices improved their businesses by using BPM technology and methodology. As the first of three volumes, this book represents the most comprehensive body of knowledge published on business process. Following closely behind, the second volume uniquely bridges theory with how BPM is applied today with the most extensive information on extended BPM. The third volume will explore award winning real-life examples of leading business process practices and how it can be replaced to your advantage. Learn what Business Process is and how to get started Comprehensive historical process evolution In-depth look at the Process Anatomy, Semantics and Ontology Find out how to link Strategy to Operation with value driven BPM Uncover how to establish a way of Thinking, Working, Modelling and Implementation Explore comprehensive Frameworks, Methods and Approaches How to build BPM competencies and establish a Center of Excellence Discover how to apply Social BPM, Sustainable and Evidence based BPM Learn how Value & Performance Measurement and Management Learn how to roll-out and deploy process Explore how to enable Process Owners, Roles and Knowledge Workers Discover how to Process and Application Modelling Uncover Process Lifecycle, Maturity, Alignment and Continuous Improvement Practical continuous improvement with the way of Governance Future BPM trends that will affect business Explore the BPM Body of Knowledge

Business Process Modeling, Simulation and Design covers the design of business processes from a broad quantitative modeling perspective. The text presents a multitude of analytical tools that can be used to model, analyze, understand and ultimately, to design business processes. The range of topics in this text include graphical flowcharting tools, deterministic models for cycle time analysis and capacity decisions, analytical queuing methods, as well as the use of Data Envelopment Analysis (DEA) for benchmarking purposes. And a major portion of the book is devoted to simulation modeling using a state of the art discrete-event simulation package.

"This 10-volume compilation of authoritative, research-based articles contributed by thousands of researchers and experts from all over the world emphasized modern issues and the presentation of potential opportunities, prospective solutions, and future directions in the field of information science and technology"--Provided by publisher.

After a brief introduction to the topic of business process modeling, the book offers a quick-start into model-based business process engineering. After that, the foundations of the modeling languages used are conveyed. Meaningful examples are in the foreground - each of the underlying formalisms is treated only as far as needed. Next the Horus Method is described in detail. The book defines a sequence of activities which finally leads to the creation of a complete business process model. The Horus Method, incidentally, is not bound to the use of the Horus software tools. It can be used with other tools or, if necessary, be used even without tool support. Important application fields of business process engineering are described, where the spectrum ranges from business process reengineering to the development and implementation of information systems. The book concludes with an outlook on the future of business process engineering and highlights current research activities in the area.

This book describes in detail how ARIS methods model and identify business processes by means of the UML (Unified Modeling Language), leading to an information model that serves as the basis for a systematic and intelligent development of application systems. Multiple real-world examples using SAP R/3 illustrate aspects of business process modeling including methods of knowledge management, implementation of workflow systems and standard software solutions, and the deployment of ARIS methods.

TheBPMN2010workshopseriesprovides a forum for academics and practitioners that share an interest in business process modeling using Business Process Modeling Notation (BPMN) which has seen a huge uptake in both academia and industry. It is seen by many as the de facto standard for business process modeling. It has become very popular with business analysts, tool vendors, practitioners, and end users. BPMN promises to bridge business and IT, and brings process design and implementation closer together. BPMN 2010 was the second workshop of the series. It took place October 13–14, 2010 at the Hasso Plattner Institute at the University of Potsdam, Germany. This volume contains six contributed research papers that were selected from 16 submissions. There was a thorough reviewing process, with each paper being reviewed by, on average, four Program Committee members. In addition to the contributed papers, these proceedings contain three short papers and three extended abstracts of the invited keynote talks. In conjunction with the scientific workshop, a practitioners' event took place the day after the workshop. We want to express our gratitude to all those who made BPMN 2010 possible by generously and voluntarily sharing their knowledge, skills, and time. In particular, we thank the Program Committee members as well as the additional reviewers for devoting their expertise and time to ensure the high quality of the workshop's scientific program through an extensive review process. Finally, we are grateful to all the authors who showed their appreciation and support for the workshop by submitting their valuable work to it.

Business Process Management (BPM) has been in existence for decades. It uses, complements, integrates and extends theories, methods and tools from other scientific disciplines like: strategic management, information technology, managerial accounting, operations management etc. During this period the main focus themes of researchers and professionals in BPM were: business process modeling, business process analysis, activity based costing, business process simulation, performance measurement, workflow management, the link between information technology and BPM for process automation etc. More recently the focus moved to subjects like Knowledge Management, Enterprise Resource Planning (ERP) Systems, Service Oriented Architectures (SOAs), Process Intelligence (PI) and even Social Networks. In this collection of papers we present a review of the work and the outcomes achieved in the classic BPM fields as well as a deeper insight on recent advances in BPM. We present a review of business process modeling and analysis and we elaborate on issues like business process quality and process performance measurement as well as their link to all other organizational aspects like human resources management, strategy, information technology (being SOA, PI or ERP), other managerial systems, job descriptions etc. We also present recent advances to BPR tools with special focus on information technology, workflow, business process modeling and human resources management tools. Other chapters elaborate on the aspect of business process and organizational costing and their relationship to business process analysis, organizational change and reorganization. In the final chapters we present some new approaches that use fuzzy cognitive maps and a recently developed software tool for scenario creation and simulation in strategic management, business process management, performance measurement and social networking. The audience of this book is quite wide. The first chapters can be read by

professionals, academics and students who want to get some basic insight into the BPM field whereas the remaining present more elaborate and state of the art concepts methodologies and tools for an audience of a more advanced level.

Ten years ago, groupware bundled with email and calendar applications helped track the flow of work from person to person within an organization. Workflow in today's enterprise means more monitoring and orchestrating massive systems. A new technology called Business Process Management, or BPM, helps software architects and developers design, code, run, administer, and monitor complex network-based business processes BPM replaces those sketchy flowchart diagrams that business analysts draw on whiteboards with a precise model that uses standard graphical and XML representations, and an architecture that allows it converse with other services, systems, and users. Sound complicated? It is. But it's downright frustrating when you have to search the Web for every little piece of information vital to the process. Essential Business Process Modeling gathers all the concepts, design, architecture, and standard specifications of BPM into one concise book, and offers hands-on examples that illustrate BPM's approach to process notation, execution, administration and monitoring. Author Mike Havey demonstrates standard ways to code rigorous processes that are centerpieces of a service-oriented architecture (SOA), which defines how networks interact so that one can perform a service for the other. His book also shows how BPM complements enterprise application integration (EAI), a method for moving from older applications to new ones, and Enterprise Service BUS for integrating different web services, messaging, and XML technologies into a single network. BPM, he says, is to this collection of services what a conductor is to musicians in an orchestra: it coordinates their actions in the performance of a larger composition. Essential Business Process Modeling teaches you how to develop examples of process-oriented applications using free tools that can be run on an average PC or laptop. You'll also learn about BPM design patterns and best practices, as well as some underlying theory. The best way to monitor processes within an enterprise is with BPM, and the best way to navigate BPM is with this valuable book.

The field of Business Process Management (BPM) is marred by a seemingly endless sequence of (proposed) industry standards. Contrary to other fields (e.g., civil or electronic engineering), these standards are not the result of a widely supported consolidation of well-understood and well-established concepts and practices. In the BPM domain, it is frequently the case that BPM vendors opportunistically become involved in the creation of proposed standards to exert or maintain their influence and interests in the field. Despite the initial fervor associated with such standardization activities, it is no less frequent that vendors either choose to drop their support for standards that they earlier championed on an opportunistic basis or elect only to partially support them in their commercial offerings. Moreover, the results of the standardization processes themselves are a concern. BPM standards tend to deal with complex concepts, yet they are never properly defined and all-too-often not informed by established research. The result is a plethora of languages and tools, with no consensus on concepts and their implementation. They also fail to provide clear direction in the way in which BPM standards should evolve. One can also observe a dichotomy between the "business" side of BPM and its "technical" side. While it is clear that the application of BPM will fail if not placed in a proper business context, it is equally clear that its application will go nowhere if it remains merely a motivational exercise with schemas of business processes hanging on the wall gathering dust. This practical book describes the key operations of ARIS Toolset - the market leading Business Process Modelling Tool. Based on his experience of using ARIS in British Telecommunications plc, the author describes practical ways of using the tool. Using screen shots and plenty of practical examples, Rob Davis shows how ARIS can be used to model business processes. Throughout the book Davis provides readers with tips and short-cuts, enabling users to start modelling quickly and effectively. He also provides insights into the ARIS concepts, and tells readers about the benefits and trade-offs of using the tool in alternative ways. Unlike other books, this practical guide tackles issues found in real projects.

Business Process Modeling, Simulation and Design, Third Edition provides students with a comprehensive coverage of a range of analytical tools used to model, analyze, understand, and ultimately design business processes. The new edition of this very successful textbook includes a wide range of approaches such as graphical flowcharting tools, cycle time and capacity analyses, queuing models, discrete-event simulation, simulation-optimization, and data mining for process analytics. While most textbooks on business process management either focus on the intricacies of computer simulation or managerial aspects of business processes, this textbook does both. It presents the tools to design business processes and management techniques on operating them efficiently. The book focuses on the use of discrete event simulation as the main tool for analyzing, modeling, and designing effective business processes. The integration of graphic user-friendly simulation software enables a systematic approach to create optimal designs.

Business Process Change, 3rd Edition provides a balanced view of the field of business process change. Bestselling author Paul Harmon offers concepts, methods, cases for all aspects and phases of successful business process improvement. Updated and added for this edition is new material on the development of business models and business process architecture development, on integrating decision management models and business rules, on service processes and on dynamic case management, and on integrating various approaches in a broad business process management approach. New to this edition: How to develop business models and business process architecture How to integrate decision management models and business rules New material on service processes and on dynamic case management Learn to integrate various approaches in a broad business process management approach Extensive revision and update addresses Business Process Management Systems, and the integration of process redesign and Six Sigma Learn how all the different process elements fit together in this best first book on business process, now completely updated Tailor the presented methodology, which is based on best practices, to your organization's specific needs Understand the human aspects of process redesign Benefit from all new detailed case studies showing how these methods are implemented

This book constitutes the thoroughly refereed post-workshop proceedings of nine international workshops held in Hoboken, NJ, USA, in conjunction with the 8th International

Conference on Business Process Management, BPM 2010, in September 2010. The nine workshops focused on Reuse in Business Process Management (rBPM 2010), Business Process Management and Sustainability (SusBPM 2010), Business Process Design (BPD 2010), Business Process Intelligence (BPI 2010), Cross-Enterprise Collaboration, People, and Work (CEC-PAW 2010), Process in the Large (IW-PL 2010), Business Process Management and Social Software (BPMS2 2010), Event-Driven Business Process Management (edBPM 2010), and Traceability and Compliance of Semi-Structured Processes (TC4SP 2010). In addition, three papers from the special track on Advances in Business Process Education are also included in this volume. The overall 66 revised full papers presented were carefully reviewed and selected from 143 submissions.

Corporations accumulate a lot of valuable data and knowledge over time, but storing and maintaining this data can be a logistic and financial headache for business leaders and IT specialists. Uncovering Essential Software Artifacts through Business Process Archaeology introduces an emerging method of software modernization used to effectively manage legacy systems and company operations supported by such systems. This book presents methods, techniques, and new trends on business process archeology as well as some industrial success stories. Business experts, professionals, and researchers working in the field of information and knowledge management will use this reference source to efficiently and effectively implement and utilize business knowledge.

This book contains the refereed proceedings of the 16th International Conference on Business Process Modeling, Development and Support, BPMDS 2015, and the 20th International Conference on Exploring Modeling Methods for Systems Analysis and Design, EMMSAD 2015, held together with the 27th International Conference on Advanced Information Systems Engineering (CAiSE 2015) in Stockholm, Sweden, in June 2015. The 17 full papers accepted for BPMDS were selected from 43 submissions and cover a wide spectrum of issues related to business process development, modeling, and support. They are grouped into topical sections on enabling value creation, human-centric paradigms, mining for processes, declarative approaches, understanding and sharing, quality and security issues, and new areas for BPMDS. The 12 full and three short papers accepted for EMMSAD were chosen from 33 submissions and focus on exploring, evaluating, and enhancing modeling methods and methodologies for the analysis and design of information systems, enterprises, and business processes. They are grouped into topical sections on fundamental issues in modeling, requirements and regulations, enterprise and software ecosystem modeling, information and process model quality, meta-modeling and domain-specific modeling and model composition, modeling of architecture and design, and novel applications of modeling.

Information systems have become a critical part of the infrastructure of most, if not all, businesses, government organizations, and even individual households. To be useful, an information system must integrate and align with the way the business conducts its operations. By necessity this means that information systems construction requires an understanding of the organization's procedures, operations, and processes. Articulating, modeling, and managing business processes and workflows are pre-conditions to successful automation. Business processes are part of the fabric of the business and represent a strategic and critical intellectual asset that needs to be understood and proactively managed. Processes are often cross-functional and involve multiple systems, software applications, and human assets - including employees, customers, partners, and vendors. Processes must be formally defined and documented so that they can be practiced uniformly and consistently across the organization. Explicit articulation of processes is essential so that the processes truly become intellectual property of the organization rather than being tied to a specific individual. Business process modeling (or BPM for short) is the activity of eliciting, documenting, modeling, and analyzing work procedures within an organization. To be successful, the business analyst must possess the necessary modeling skills and business knowledge to carry out these responsibilities. The first step in business process management is capturing and articulating the processes. This is done through process modeling. Once processes have been documented, then the organization can think about optimizing and eventually automating the processes. Optimization is done through a combination of manual analysis as well as automated simulation. This book describes the PROMAP methodology for articulating and modeling business processes. PROMAP is practical and based on over 20 years of experience in modeling.

Business process modelling is referred to as a complex, time consuming, and error prone task. The correction and improvement of badly designed process models becomes increasingly expensive in the later phases of the process management life cycle. This thesis develops the principles of guided process modelling and provides a contribution towards simplifying process modelling activities. The general research question this thesis answers is what are the difficulties in the usage of process modelling tools and which methods, techniques, and tools can guide users in modelling processes to target the existing problems. The question is addressed by following a research methodology of design sciences. Amongst others, it includes a detailed analysis of the research problem, a definition of the objective, the design and development of solutions, and an evaluation of the developed concepts. In summary, the thesis presents innovative concepts to support modellers and provides a step towards end-user enablement in process modelling.

Creating business process models that can be shared effectively across the business - and between business and IT - demands more than a digest of BPMN shapes and symbols. It requires a step-by-step methodology for going from a blank page to a complete process diagram. It also requires consistent application of a modeling style, so that the modeler's meaning is clear from the diagram itself. Author Bruce Silver explains not only the meaning and proper usage of the entire BPMN 2.0 palette, but calls out the working subset that you really need to know. He also reveals the hidden assumptions of core concepts left unexplained in the spec, the key to BPMN's deeper meaning. The book addresses BPMN at three levels, with primary focus on the first two. Level 1, or descriptive BPMN, uses a basic working set of shapes and symbols to meet the needs of

business users doing process mapping. Level 2, or analytical BPMN, is aimed at business analysts and architects. It takes advantage of BPMN's expressiveness for detailing event and exception handling, key to analyzing and improving process performance and quality. Level 3, or executable BPMN, is brand new in BPMN 2.0. Here the XML underneath the diagram shapes becomes an executable design can be deployed to a process engine to automate the process. The method and style detailed in the book aligns these three levels, facilitating business-IT collaboration throughout the process lifecycle. Inside the book you'll find discussions, illustrated with over 100 examples, about: The questions BPMN asks, and does not ask The meaning of basic concepts like starting and completing, sending and receiving, waiting and listening Subprocesses and hierarchical modeling style The five basic steps in creating Level 1 models Event and exception-handling patterns Branching and merging patterns Level 2 modeling method Elements of BPMN style: element usage and diagram composition

"Explains everything you need to know about BPM, including: Business Process Execution Language (BPEL), the leading BPM standard; a look at all of the standards that play a role in BPM ... ; BPM architecture and theory; Comprehensive examples; [and] Design patterns and best practices." - cover.

This book contains the refereed proceedings of the 13th International Conference on Business Process Modeling, Development and Support (BPMDS 2012) and the 17th International Conference on Exploring Modeling Methods for Systems Analysis and Design (EMMSAD 2012), held together with the 24th International Conference on Advanced Information Systems Engineering (CAiSE 2012) in Gdańsk, Poland, in June 2012. The 17 papers accepted for BPMDS were selected from 48 submissions and cover a wide spectrum of issues related to business process development, modeling, and support. They are grouped into sections on business process in the cloud, advanced BPM in an organizational context, similarity, variations and configuration, BPM and requirements engineering, humans and business process models, and BPM technologies using computational methods. The 13 papers accepted for EMMSAD were chosen from 28 submissions and focus on exploring, evaluating, and enhancing current information modeling methods and methodologies. They are grouped in sections on modeling of enterprise architecture, modeling facts and rules, business process modeling, modeling of non-functional requirements, safety modeling and analysis, quality of models and modeling languages, and supporting the learning of conceptual modeling.

This text is concerned with the evaluation of developments in terms of modelling techniques, and their use in the domain of benchmarking, business process and re-engineering This book includes a set of selected papers from the first "International Conference on Enterprise Information Systems," (ICEIS'99) held in SeÛtbal, Portugal, from 27 to 30 March 1999. ICEIS focuses on real world applications and aims at becoming a major point of contact between research scientists, engineers and practitioners in the area of business applications of information systems. This year four simultaneous tracks were held, covering different aspects related to enterprise computing, including: Systems Analysis and Specification, Database Technology and its Applications, Artificial Intelligence and Decision Support Systems, and Internet and Intranet Computing. Although ICEIS'99 received more than 200 submissions, only 96 papers were accepted for oral presentation and only 24 were selected for inclusion in this book. These numbers demonstrate stringent quality criteria and the intention of maintaining a high quality forum for future editions of this conference. A number of additional keynote lectures, case studies and technical tutorials were also held. These presentations, by specialists in different knowledge areas made an important contribution to increase the overall quality of the Conference, and are partially expressed in the first two papers of the book.

This book covers the whole spectrum of modeling goals to achieve optimal quality in the process model developed. It focuses on how to balance quality considerations across all semiotic levels when models are used for different purposes, and is based on SEQUAL, a framework for understanding the quality of models and modeling languages, which can take into account all main aspects relating to the quality of models. Chapter 1 focuses on the theoretical foundations, introducing readers to the topics of business processes and business process modeling, as well as the most important concept underlying the modeling of business processes. In turn, Chapter 2 addresses the quality of models in general and business process models in particular. Chapter 3 contains a specialization of SEQUAL for quality of business process models. In Chapter 4, examples of the practical uses of business process models are provided, together with the results of detailed case studies on how to achieve and maintain quality in business process models. Chapter 5 presents a process modeling value framework that demonstrates how to achieve more long-term and higher return on investment with regard to (business) process and enterprise models. Lastly, Chapter 6 reviews the main points of the book and discusses the potential for business process modeling in the future through its combination with other types of modeling. The book has two intended audiences. It is primarily intended for computer science, software engineering and information system students at the postgraduate level who want to know more about business process modeling and the quality of models in preparation for professional practice. The second audience consists of professionals with extensive experience in and responsibilities related to the development and evolution of process-oriented information systems and information systems methodologies in general, who need to formalize and structure their practical experience or update their knowledge as a way to improve their professional activity. The book also includes a number of real-world case studies that make it easier to grasp the main theoretical concepts, helping readers apply the approaches described.

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