# Bpmn 2 0 Handbook Second Edition Introduction Futstrat

Pro Spring Integration is an authoritative book from the experts that guides you through the vast world of enterprise application integration (EAI) and application of the Spring Integration framework towards solving integration problems. The book is: An introduction to the concepts of enterprise application integration A reference on building event-driven applications using Spring Integration A guide to solving common integration problems using Spring Integration What makes this book unique is its coverage of contemporary technologies and real-world information, with a focus on common problems that users are likely to confront. This book zeroes in on extending the Spring Integration framework to meet your custom integration demands. As Spring Integration is an extension of the Spring programming model, it builds on the Spring Framework's existing support for enterprise integration. This book will take you through all aspects of this relationship and show you how to get the most out of your Spring applications, where integration is a consideration. It discusses simple messaging within Spring-based applications and integration with external systems via simple adapters.

Those adapters provide a higher-level of abstraction over Spring's support for remoting, messaging, and scheduling, all of which receives coverage in this book.

This book constitutes the proceedings of the third workshop on Business Process Model and Notation, BPMN 2011, held in Lucerne, Switzerland, in November 2011. The 8 research papers presented were carefully reviewed and selected from 20 submissions. In addition, 10 short papers are included. The workshop applied a thorough reviewing process, during which each paper was reviewed by three Program Committee members. The BPMN workshop series provides a forum for academics and practitioners who share an interest in business process modeling using the business process modeling notation, which is seen by many as the de facto standard for business process modeling. This year, the workshop lasted two days and consisted of both a scientific and a practitioner event. Customer-centric organizations are concerned about shrinking volumes of business, stiffer competition and ever-more demanding consumer expectations which have increased pressure on the bottom line. The ability to successfully manage the customer value chain across the life cycle of a customer is the key to the survival of any company today. Business processes must react to changing and diverse customer needs and interactions to ensure efficient and effective

outcomes. This important book looks at the shifting nature of consumers and the workplace, and how BPM and associated emergent technologies will play a part in shaping the companies of the future. BPM's promises are real, but the path to success is littered with pitfalls and shortcuts to failure. Best practices can help you avoid them. If you are just embarking on using its methods and tools, these authors have a wealth of experience to learn from and build on. Whether you are a business manager or an Information Technology practitioner, this special collection will provide valuable information about what BPM can do for you-and how to apply it.

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.

"This book aids managers in the transformation of organizations into world-class competitors through business process applications"--Provided by publisher. Business rules describe the operations, definitions and constraints that apply to an organization. Business rules can apply to people, processes, corporate behavior and computing systems in an organization, and are put in place to help the organization achieve its goals. Business Rules: Why Should You Use Them? This book helps corporate business readers to understand the meaning and impact of Business Rules within a variety of applications or scenarios such as: Why and how to use a rules-based approach to validate, transform, recalculate, and remediate complex applications The art of managing rules and terminology in a consistent, business-friendly, and shareable way How to use a rules engine to achieve uniformity, consistency, continuous monitoring, transparency, flexibility, forecasting etc. Key technologies, vendors and implementers in this ecosystem.

Some organizations significantly outperform others in their industry. They

become more agile by adopting smarter work practices and transforming their business processes to be more dynamic, collaborative, and connected. Often, the business processes themselves create competitive advantage. Increased revenue at reduced cost makes more money for a very effective business. Changing market opportunities, customer demands, new technology and calls for cost reduction can make it seem impossible to keep operational chaos at bay. Competitive advantage is gained when companies reduce operational risk by making sure that internal guidelines and external regulatory requirements are fulfilled. Companies thus offer customers a faster, more accurate and consistent service. To position your organization for success, you need the ability to continually optimize, streamline and align business processes to meet changing business needs for greater performance, competitive advantage and to drive growth. The companies whose award-winning case studies are featured in this book have proven excellence in their creative and successful deployment of advanced and business process management concepts. The positive impact to their corporations includes increased revenues, more productive and satisfied employees, product enhancements, better customer service and quality improvements.

With over fifty implementations, Business Process Modeling Notation (BPMN) is

an increasingly successful Object Management Group (OMG) standard. Whether you are in government, manufacturing, or business, you can easily and accurately depict your company's processes in BPMN. BPMN Specification 1.1, however, can be abstract, lengthy, and complicated. As a result, learning to use BPMN can be daunting and force professionals to steer clear of it without an efficient and easy way of getting acquainted with the material. The straightforward information that is packed into this book is exactly what is needed. This guide gathers all the ideas, design, and problem-solving of BPMN into one simple, focused book, and offers concrete true-life examples that explain BPMN's approach to process modeling. With the wide-scale adoption of BPMN2.0, a new era for process modeling has arisen. In their second edition, Tom and Rick continue with the most concise coverage of BPMN available. They cover more 'real-life' business scenarios and model more unstructured, monitored and indefinite activities. The text not only corporate new metaphors of events and decision-directed event processing, it also covers 15 different design patterns, forged in the furnace of practical, state-of-the-art process modeling, that provide a shortcut to a proven design. The material in this comprehensive, focused book has been gleaned from actual practices and proven in many of the most advanced processes in production today.Build visible, agile and powerful

process that meet the needs of a chaotic and globally federated environment. This book will teach you to tackle modern process modeling challenges. REVIEWS: "Finding a succinct and accessible book on the Business Process Modeling Notation (BMPN) is a pleasure. Finding one that clearly lays out the role of decisions and business rules in business processes is a delight. The MicroGuide to Business Process Management in BPMN is a short, easy to read book that gives a solid grounding in the core concepts of BPMN, passes on some realworld experience and suggestions from the authors, and gives great, practical advice on how use cases, BPMN, decision management and business rules all come together. Tom Debevoise and Rick Geneva have done a great job in outlining the Process Modeling Framework, introducing BPMN, and showing how it can be used. If BPMN is (or will be) part of your world, this book should be on your shelves." -James Taylor, Author Smart (Enough) Systems "It should be a valuable addition to a practitioner's library. I found the PMF and application to use case language to be of particular interest, as well as the relationship between business processes and business rules."- Stan Hendryx, Hendryx & Associates Information modeling and knowledge bases have become an important area of academic and industry research in the 21st century, addressing complexities of modeling that reach beyond the traditional borders of information systems and academic computer science research. This

book presents 32 reviewed, selected and updated papers delivered at the 29th International Conference on Information Modeling and Knowledge Bases (EJC2019), held in Lappeenranta, Finland, from 3 to 7 June 2019. In addition, two papers based on the keynote presentations and one paper edited from the discussion of the panel session are included in the book. The conference provided a forum to exchange scientific results and experience, and attracted academics and practitioners working with information and knowledge. The papers cover a wide range of topics, ranging from knowledge discovery through conceptual and linguistic modeling, knowledge and information modeling and discovery, cross-cultural communication and social computing, environmental modeling and engineering, and multimedia data modeling and systems to complex scientific problem-solving. The conference presentation sessions: Learning and Linguistics; Systems and Processes; Data and Knowledge Representation; Models and Interface; Formalizations and Reasoning; Models and Modeling; Machine Learning; Models and Programming; Environment and Predictions; and Emotion Modeling and Social Networks reflect the main themes of the conference. The book also includes 2 extended publications of keynote addresses: 'Philosophical Foundations of Conceptual Modeling' and ?Sustainable Solid Waste Management using Life Cycle Modeling for Environmental Impact Assessment', as well as additional material covering the discussion and findings of the panel session. Providing an overview of current research in the field, the book will be of interest to all those working with information systems, information modeling and knowledge bases. Design for flexibility requires anticipation, preparation, creativity and experience. Future highly digital sociotechnical systems should contrast with those stemming from technology-centered engineering that produces objects and machines with the immensely codified and rigid

practices we know today. Most of the time, current technologies are designed and developed for normal situations, leaving users to manage abnormal and emergency situations themselves, sometimes under unforeseen, extreme and/or dangerous conditions. Putting humans at the center of the design of flexible sociotechnical systems means visualizing possible futures, modeling them, simulating them and leading them down the right paths. This book is for the engineering designers, who seek to better understand the roles of humans and organizations developing complex life-critical systems. It is also for those who train future designers who will have to take into account the well-being, safety, sustainability and efficiency of the actors of future sociotechnical systems. It is about an emergent discipline, human systems integration (HSI). The aim of the flexibility challenge is to put the artificial at the service of the natural, and not the other way around. The author, an aerospace engineering designer, has worked for 40 years in the field of human-centered design (HCD) of complex systems, discovering repeatedly that automation leads to rigidity, especially when things go wrong. It is urgent we had a new paradigm where flexibility is a major asset in human systems integration. HCD is seen here as the combination of practices and technologies to come. Conceptual modeling is about describing the semantics of software applications at a high level of abstraction in terms of structure, behavior, and user interaction. Embley and Thalheim start with a manifesto stating that the dream of developing information systems strictly by conceptual modeling – as expressed in the phrase "the model is the code" – is becoming reality. The subsequent contributions written by leading researchers in the field support the manifesto's assertions, showing not only how to abstractly model complex information systems but also how to formalize abstract specifications in ways that let developers complete

programming tasks within the conceptual model itself. They are grouped into sections on programming with conceptual models, structure modeling, process modeling, user interface modeling, and special challenge areas such as conceptual geometric modeling, information integration, and biological conceptual modeling. The Handbook of Conceptual Modeling collects in a single volume many of the best conceptual-modeling ideas, techniques, and practices as well as the challenges that drive research in the field. Thus it is much more than a traditional handbook for advanced professionals, as it also provides both a firm foundation for the field of conceptual modeling, and points researchers and graduate students towards interesting challenges and paths for how to contribute to this fundamental field of computer science.

BPM is essential to a company's survival in today's hyper-speed business environment. The goal of Digital Transformation is to help empower enterprises to compete at the highest level in any marketplace. This book provides compelling award-wining case studies contributed by those who have been through the full BPM experience. The case studies describe the processes involved to generate successful ROIs and competitive advantages. Digital transformation describes the changes associated with the application of digital technology in all aspects of human society. Digital transformation may be thought of as the third stage of embracing digital technologies: from digital competence to digital usage to digital transformation, with usage and transformative ability informing digital literacy. The transformation stage means that digital usages inherently enable new types of innovation and creativity in a particular domain, rather than simply enhance and support the traditional methods. These industry thought-leaders together with the leading-edge case studies will help

you understand the meaning and impact of Digital Transformation and how you can leverage that transformation; likely using BPM you already have. Learn how to extend that into core processes that run the business and thus engage more meaningfully with your customers. The authors discuss the impact of emerging technologies, the mandate for greater transparency and how the ongoing aftershocks of globalization have collectively impacted predictability within the business enterprise.

Das Prozessmanagement mit seinen vielfältigen Aspekten ist mittlerweile in vielen Unternehmen ein fester Bestandteil der Organisationsgestaltung. Das vorliegende Buch liefert nicht nur Erläuterungen, „was" in den vorgestellten Facetten des Prozessmanagements getan werden soll, sondern auch konkrete Schritte, Empfehlungen und Beispiele, „wie" es effektiv und effizient umgesetzt werden kann. Im Buch sind Erfahrungen aus vielen Praxisjahren festgehalten, die es zu einem nützlichen Hilfsmittel und Impulsgeber machen. Die Autoren liefern Antworten auf Fragen, wie bspw. „Wie erstelle ich eine gute Prozesslandkarte?", „Wie identifiziere und etabliere ich die Prozessverantwortung für einen Prozess?", „Wie integriere ich Compliance-Anforderungen in das Prozessmanagement?" oder „Wie ermittle ich den Personalbedarf für einen bestimmten Prozess?". Über diese Gestaltungsfragen hinaus ist das Prozessmanagement heute in den Führungsebenen als Managementansatz angekommen. Auch in diesem Umfeld liefert das Werk einen hilfreichen Beitrag. Es zeigt, wie das Prozessmanagement mit anderen etablierten Managementansätzen zu einem sinnvollen Ganzen für eine umsichtige Planung, Umsetzung und Steuerung integriert werden kann. Die vorgestellten Themen sind insbesondere für Unternehmen bzw. Organisationen interessant, die in Bezug auf ihren umgesetzten Prozessmanagement-Ansatz einen mittleren bis höheren

Reifegrad besitzen. Das Buch wurde mit der Zielsetzung zum Einsatz in der unternehmerischen Praxis geschrieben. Es kann darüber hinaus auch in der anwendungsorientierten Ausbildung zum Thema Prozessmanagement eingesetzt werden. TRB's second Strategic Highway Research Program (SHRP 2) Report S2-L01-RR-2: Guide to Integrating Business Processes to Improve Travel Time Reliability explores various ways that transportation agencies could reengineer their day-to-day business practices to enhance traffic operations, address nonrecurring traffic congestion, and improve the reliability of travel times delivered to roadway system users.

Best Practices for Knowledge Workers describes ACM in the current era of digitization, Internet of Things (IoT), artificial intelligence (AI), intelligent BPMS and BPM Everywhere. You will learn how support of adaptive, data-driven processes empowers knowledge workers to know in real-time what is happening at the edge points, and to take actions through the combination of rule-driven guidance and their own know-how. It is not a traditionally-automated system but intelligent automation, where technology doesn't merely replace human decision-making but extends the reach of the knowledge worker; making IoT data actionable. As Sandy Kemsley points out in her foreword: As adaptive case management (ACM) systems mature, we are moving beyond simple systems that allow knowledge workers to define ad hoc processes, to creating more intelligent systems that support and guide them. Knowledge workers still need to dynamically add information, define activities and collaborate with others in order to get their work done, but those are now just the table stakes in a world of big data and intelligent agents. To drive innovation and maintain operational efficiencies, we need to augment case work – typically seen as relying primarily on human intelligence – with machine intelligence. In other

words, we need intelligent ACM. Highly predictable work is easy to support using traditional programming techniques, while unpredictable work cannot be accurately scripted in advance, and thus requires the involvement of the knowledge workers themselves. The core element of Adaptive Case Management (ACM) is the support for real-time decision-making by knowledge workers. In award-winning case studies covering industries as a diverse as law enforcement, transportation, insurance, banking, state services, and healthcare, you will find instructive examples for how to transform your own organization. This important book follows these ground-breaking best-sellers on ACM; Thriving on Adaptability, Empowering Knowledge Workers, Taming the Unpredictable, How Knowledge Workers Get Things Done, and Mastering the Unpredictable and provides important papers by thought-leaders in this field, together with practical examples, detailed ACM case studies and product reviews. 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.

This volume constitutes the proceedings of the 9th IFIP WG 8.1 Conference on the Practice of Enterprise Modeling held in November 2016 in Skövde, Sweden. The PoEM conference series started in 2008 and aims to provide a forum sharing knowledge and experiences between the academic community and practitioners from industry and the public sector. The 18 full papers and 9 short papers accepted were carefully reviewed and selected from 54 submissions and cover topics related to information systems development, enterprise modeling, requirements engineering, and process management. In addition, the keynote by Robert Winter on "Establishing 'Architectural Thinking' in Organizations" is also included in this volume.

This book constitutes the proceedings of 26th International Conference on Advanced Information Systems Engineering, CAiSE 2014, held in Thessaloniki, Greece in June 2014. The 41 papers and 3 keynotes presented were carefully reviewed and selected from 226 submissions. The accepted papers were presented in 13 sessions: clouds and services; requirements; product lines; requirements elicitation; processes; risk and security; process models; data mining and streaming; process mining; models; mining event logs; databases; software engineering.

Authored by members of WfMC, OMG and other key participants in the development of BPMN 2.0, the BPMN 2.0 Handbook Second Edition assembles industry thought-leaders and

international experts. Following the ground-breaking body of work in the BPMN 2.0 Handbook First Edition this book is greatly expanded with substantial new content and chapters updated to the latest advances in this important standard. The authors examine a variety of aspects that start with an introduction of what's new and updated in BPMN 2.0, and look closely at interchange, best practices, analytics, conformance, optimization, choreography and more from a technical perspective. The authors also address the business imperative for widespread adoption of the standard by examining best practice guidelines, BPMN business strategy and the human interface including real-life case studies. Other critical chapters tackle the practical aspects of making a BPMN model executable and the basic timeline analysis of a BPMN model. This book is for business people who want to understand the how and why of BPMN 2.0 in simple non-jargon terms and the strategy and motivation for its adoption within the corporation. It is also for the technical practitioner seeking current insights into the BPMN 2.0 standard and how to take advantage of its powerful capabilities. Guide to BPMN 2.0 Technical Aspects * Admission Process Optimization with BPMN and OSCO * Analytics for Performance Optimization of BPMN2.0 Business Processes * Bespoke Enterprise Architecture: Tailoring BPMN 2.0 using Conformance Classes * BPMN 2.0 Interchange * BPMN Extension for Social BPM * Collaborative Activities Inside Pools * Making a BPMN 2.0 Model Executable * New Capabilities for Interaction Modeling in BPMN 2 * New Capabilities for Process Modeling in BPMN 2 * Refactoring BPMN Models * Simulation for Business Process Management Guide to the Business Imperative for BPMN * Best Practice Guidelines for BPMN 2.0 * BPMN and Business Strategy: One Size Does Not Fit All * BPMN Used by Business Professionals: An In-depth Reflection on BPM with BPMN by the Swiss FOITT * Business Process Integration in a

Defense Product-focused Company * Human-Readable BPMN Diagrams * Making BPMN 2.0 Fit for Full Business Use * Multi-faceted Business Process Modeling Appendix includes BPMN Supporters list, XPDL 2.2 Guide, BPMN Glossary, index and more.

Examines what's new and updated in BPMN 2.0 and look at interchange, best practice, analytics, conformance, optimization, choreography from a technical perspective. Also addresses the business imperative for widespred adoption of the standard by examining best practice guidelines, BPMN busines strategy and the human interface including real-life case studies. Other chapters tackle the practical aspects of making BPMN model executable and the basic time-line analysis of a BPMN model.

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 second volume focuses on the managerial and organizational challenges of BPM such as strategic and cultural alignment, governance and the education of BPM stakeholders. As such, this book provides concepts and methodologies for the integration of BPM. Each chapter has been contributed by leading international experts. Selected case studies complement their views and lead to a summary of BPM expertise that is unique in its coverage of the most critical success factors of BPM. The second edition of this handbook has been significantly revised and extended. Each chapter has been updated to reflect the most current developments. This includes in particular new technologies such as in-

memory data and process management, social media and networks. A further focus of this revised and extended edition is on the actual deployment of the proposed theoretical concepts. This volume includes a number of entire new chapters from some of the world's leading experts in the domain of BPM.

BPMN (Business Process Model and Notation) is the established standard for business process modeling. Only a few years after its first publication, it has gained widespread adoption in practice. All important modeling tools support BPMN diagramming. It is possible to create business-oriented diagrams, but also technical models for process execution in business process management systems (BPMS). This book provides a stepwise introduction to BPMN, using many examples close to practice. Starting with the basic elements for modeling sequence flow, all BPMN 2.0 diagrams are presented and discussed in detail. You will gain a profound understanding of the complete notation, and you will be able to make correct use of the different language elements. In the second edition, a collection of useful modeling patterns has been added. These patterns provide best-practice solutions for typical problems arising in the practice of process modeling.

This book constitutes the thoroughly refereed post-conference proceedings of the 13th International Joint Conference on Software Technologies, ICSOFT 2018, held in Porto, Portugal, in July 2018. The 18 revised full papers were carefully reviewed and selected from 117 submissions. The topics covered in the papers include: business process modelling, IT service management, interoperability and service-oriented architecture, project management software, scheduling and estimating, software metrics, requirements elicitation and specification, software and systems integration, etc.

This book aims to provide a synthesis of work and ideas done by our team over the last fifteen years in the field of information processing for expression of industrial performance. The statement of objectives on the one hand and the calculation of the other performances are discussed, with the search for the explanation of the link between these two basic steps of an industrial improvement. Beyond the synthetic and typological character of this study, the originality of this work lies in the consideration of the temporal dimension of the objectives, and spread on performance expressions. A fuzzy processing and multi-criteria aggregations time information that can be quantitative, qualitative or symbolic are proposed, in line with industrial practice and literature in the field of performance management.

This doctoral thesis focuses on the spread of process information in organizations and, in particular, on the mitigation of the problems caused by the spread of information on a single process over numerous models, documents, and systems. Processes within organizations can be highly complex chains of inter-related steps, involving numerous stakeholders and information systems. Due to this complexity, having access to the right information is vital to the proper execution and effective management of an organization's business processes. The main contributions of this thesis are five techniques that focus on the alignment and comparison of process information from different informational artifacts. Each of these techniques tackles a specific scenario involving multiple informational artifacts that contain process information in different representation formats.

Intelligent business process management is the next generation of enterprise BPM, leveraging recent technological advances to attain a degree of operational responsiveness not possible with yesterday's business process platform. Today, companies of all types want faster and

better insight into their operations. This growing demand for operational intelligence has given rise to a new, "smarter" variety of business process management suites (BPMSs). An intelligent BPM suite provides the functionality needed to support more intelligent business operations, including real-time analytics, extensive complex event processing (CEP) and business activity monitoring (BAM) technologies and enhanced mobile, social and collaborative capabilities. Dubbed 'iBPMS" by Gartner Group, who describes the intelligent BPM Suite as having 10 core components: A process orchestration engineA model-driven composition environmentContent interaction managementHuman interaction managementConnectivityActive analytics (sometimes called continuous intelligence)On-demand analyticsBusiness rules management (BRM)Management and administration for the suite's technical aspectsA process component registry/repository An intelligent BPM suite provides the functionality needed to support more intelligent business operations, including real-time analytics, extensive complex event processing (CEP) and business activity monitoring (BAM) technologies and enhanced mobile, social and collaborative capabilities. The co-authors of this important book describe various aspects and approaches with regard to impact and opportunity.

Within the last three decades, information modelling and knowledge bases have become essential subjects, not only for academic communities related to information systems and computer science, but also for businesses where information technology is applied. This book presents the proceedings of EJC 2014, the 24th International Conference on Information Modelling and Knowledge Bases, held in Kiel, Germany, in June 2014. The main themes of the conference were: conceptual modelling, including modelling and specification languages,

domain specific conceptual modelling, and validating and communicating conceptual models; knowledge and information modelling and discovery, including knowledge representation and knowledge management, advanced data mining and analysis methods, as well as information recognition and information modelling; linguistics modelling; cross-cultural communication and social computing; environmental modelling; and multimedia data modelling and systems, which includes modelling multimedia information and knowledge, content-based multimedia data management, content-based multimedia retrieval as well as privacy and context enhancing technologies. This book will be of interest to all those who wish to keep abreast of new developments in the field of information modelling and knowledge bases.
This book constitutes the refereed proceedings of the nine workshops co-located with the 15th International Conference on Practical Applications of Agents and Multi-Agent Systems, PAAMS 2017, held in Porto, Portugal, in June 2017.The 41 full papers presented were carefully reviewed and selected from 80 submissions. The volume presents the papers that have been accepted for the following workshops: Workshop on Agent based Applications for Air Transport and Application of Agents to Passenger Transport; Workshop on Agent-based Artificial Markets Computational Economics; Workshop on Agents and Multi-agent Systems for AAL and e-HEALTH; Workshop on Agent-Based Solutions for Manufacturing and Supply Chain; Workshop on MAS for Complex Networks and Social Computation; Workshop on Decision Making in Dynamic Information Environments; Workshop on Multi-agent based Applications for Smart Grids and Sustainable Energy Systems; Workshop on Multiagent System based Learning Environments; Workshop on Smart Cities and Intelligent Agents.
If you are a Java developer or architect who needs to have a better understanding of how

Business Process Management frameworks behave in real-life implementations, this book is for you. This book assumes that you know the Java language well and are familiar with some widely used frameworks such as Hibernate. You should also know the basics of relational databases and Maven-based applications.

The book is an overview of theoretical and applied informatics. It introduces the reader to the history of information technologies and computer science.

Highly predictable work is easy to support using traditional programming techniques, while unpredictable work cannot be accurately scripted in advance, and thus requires the involvement of the knowledge workers themselves. The core element of Adaptive Case Management (ACM) is the support for real-time decision-making by knowledge workers. How Knowledge Workers Get Things Done describes the work of managers, decision makers, executives, doctors, lawyers, campaign managers, emergency responders, strategist, and many others who have to think for a living. These are people who figure out what needs to be done, at the same time that they do it, and there is a new approach to support this presents the logical starting point for understanding how to take advantage of ACM. Keith Swenson points out, "We are seeing a fundamental shift in our workforce, and in the ways they need to be managed. Not only are companies engaging their customers in new ways, but managers are engaging workers in similarly transformed ways." In award-winning case studies covering industries as a diverse as law enforcement, transportation, insurance, banking, state services, and healthcare, you will find instructive examples for how to transform your own organization. This important book follows the ground-breaking ACM publications, Taming the Unpredictable and Mastering the Unpredictable and provides important papers by thought-leaders in this

field, together with practical examples, detailed ACM case studies and product reviews. The Handbook of Service Description introduces an in-depth overview of service description efforts. The book also highlights the recent Unified Service Description Language (USDL) in detail and discusses its methods. The Handbook of Service Description is the normative scientific reference for the upcoming standardization of the Unified Service Description Language (USDL). Complete documentation is included. The Handbook of Service Description is designed for those working in the service science industry as a reference book. Advanced-level students focused on computer science, engineering and business will also find this book a valuable asset.

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.

The Internet of Things, cloud computing, connected vehicles, Big Data, analytics — what does this have to do with the automotive industry? This book provides information about the future of mobility trends resulting from digitisation, connectedness, personalisation and data insights. The automotive industry is on the verge of undergoing a fundamental transformation. Large, traditional companies in particular will have to adapt, develop new business models and implement flexibility with the aid of appropriate enterprise architectures. Transforming critical business competencies is the key concept. The vehicle of the digital future is already here — who will shape it?

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 BPM 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 their views and lead to a summary of BPM expertise that is unique in its coverage of the most critical success factors of BPM. The second edition of this handbook has been significantly revised and extended. Each chapter has been updated to reflect the most current developments. This includes in particular new technologies such as in-memory data and process management, social media and networks. A further focus of this revised and extended edition is on the actual deployment of the proposed theoretical concepts. This volume includes a number of entire new chapters from some of the world's leading experts in the domain of BPM.

Taming the Unpredictable Real World Adaptive Case Management: Case Studies and Practical Guidance "The most valuable assets of a 20th-century company were its production equipment. The most valuable asset of a 21st-century institution, whether business or non-business, will be its knowledge workers and their productivity." Peter F Drucker The core element of Adaptive Case Management (ACM) is the support for real-time decision-making by knowledge workers. Taming the Unpredictable presents the logical starting point for understanding how to take advantage of ACM. This book goes beyond talking about concepts, and delivers actionable advice for embarking on your own journey of ACM-driven transformation. In award-winning case studies covering industries as a diverse as law enforcement, transportation, insurance, banking, legal services, and healthcare, you will find instructive examples for how to transform your own organization.

This book constitutes the refereed proceedings of the 13th International Workshop on Enterprise and Organizational Modeling and Simulation, EOMAS 2017, held in Essen,

Germany, in June 2017. The main focus of EOMAS is on the role, importance, and application of modeling and simulation within the extended organizational and enterprise context. The 12 full papers presented in this volume were carefully reviewed and selected from 26 submissions. They were organized in topical sections on formal methods, conceptual modeling, and enterprise engineering.

Intelligent Adaptability describes how ACM is emerging in the era of machine intelligence and automation technologies, including Big Data, digitization, Internet of Things (IoT), artificial intelligence (AI), intelligent BPMS and BPM Everywhere. WfMC Chair, Keith Swenson states; "A platform for digital transformation brings a number of different capabilities together: processes, agents, integration, analytics, decisions, and—perhaps most important—case management." In this book, you will learn how support of adaptive, data-driven processes empowers knowledge workers to know in real-time what is happening at the edge points, and to take actions through the combination of rule-driven guidance and their own know-how. It is not a traditionally-automated system but intelligent adaptability, where technology doesn't replace human decision-making but extends the reach of the knowledge worker; making data actionable. In award-winning case studies covering industries as a diverse as law enforcement, public safety, transportation, insurance, banking, state services and healthcare, you will find instructive examples for how to transform your own organization. Leading industry analysts study the awards entries for emerging industry trends. Read the chapter, The Seven Trends Impacting The Case Management Landscape by Connie Moore, Digital Clarity Group. This important book follows these ground-breaking best-sellers on ACM; Best Practices for Knowledge Workers, Thriving on Adaptability, Empowering Knowledge Workers, Taming the

Unpredictable, How Knowledge Workers Get Things Done, and Mastering the Unpredictable and provides important papers by thought-leaders in this field, together with practical examples.

This book covers topics such as digitalization of production, operations, logistics and supply chains leading to new requirements for human capabilities and collaboration. The content is relevant for research as well as industry as digitalization is shaping all value chain processes anew. A special focus is directed towards an interdisciplinary perspective, including management science, economics, sociology, work science, computer science and psychology. In order to foster the dialogue between business practice and academics as well as university teaching and research, this contributed book is addressing academic as well as professional business views on digitalization.

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