

Enterprise Architecture At Work Modelling Communication And Analysis

Enterprises, from small to large, evolve continuously. As a result, their structures are transformed and extended continuously. Without some means of control, such changes are bound to lead to an overly complex, uncoordinated and heterogeneous and hard to adapt to future changes. Enterprise architecture principles provide a means to direct transformations of enterprises. As a consequence, architecture principles should be seen as the cornerstones of any architecture. In this book, enterprise architecture principles. They provide both a theoretical and a practical perspective on architecture principles. The theoretical perspective involves a brief survey of the general concept of principle as well as an analysis of different flavors of principle as a specific class of normative principles that direct the design of an enterprise, from the definition of its business to its supporting IT. The practical perspective on architecture principles is concerned with an approach to the formalization of these principles as their actual use in organizations. To illustrate their use in practice, several real-life cases are discussed, an application of architecture principles in TOGAF is included, and a catalogue of example architecture principles is provided. With this book, students and researchers specializing in enterprise architecture or business information systems, as well as practitioners who want to understand the foundations underlying their practical daily work.

Driven by the need and desire to reduce costs, organizations are faced with a set of decisions that require analytical scrutiny. Enterprise Architecture A to Z: Frameworks, Business Process Modeling, SOA, and Infrastructure Technology explains the process of planning, administration, and management. To establish a framework for discussion, this book begins by evaluating the role of Enterprise Architecture Planning and Service-Oriented Architecture (SOA) modeling. It provides an extensive review of enterprise architecture framework models. In particular, the book discusses The Open Group Architecture Framework (TOGAF) and the Zachman Architectural Framework (ZAF) in detail, as well as formal architecture standards and all four layers of the framework: the information architecture, the solution architecture, and the technology architecture. The first part of the text focuses on the upper layers of the architecture framework, while the second part focuses on the technology architecture. The book includes an assessment of storage technologies and networking and addresses regulatory and security issues. Additional coverage includes high-speed communication mechanisms such as Ethernet, WAN and Internet communication technologies, broadband, and mobile computing models. Daniel Minoli has written a number of columns and books on the high-tech industry and has many years of technical hands-on and managerial experience at top financial companies and telecom/networking providers. He brings a wealth of experience to these pages. By reviewing the strategies in this book, CIOs, CTOs, and senior managers are empowered by a set of progressive approaches to designing state-of-the-art IT data centers.

This book presents an approach to enterprise architecture, which enables corporations to achieve their business objectives faster. Focusing on the governance of IT in the organization, it provides tangible tools, advice and strategies for improving the process within a corporation that will make a major contribution in driving the business forward and achieve its goals.

This handbook is about methods, tools and examples of how to architect an enterprise through considering all life cycle aspects of Enterprise Entities. It is based on ISO15704:2000, or the GERAM Framework. A wide audience is addressed, from those necessary to design or redesign enterprises, as well as those necessary to structure the implementation into manageable projects.

How to Make It Work

Creating a Foundation for Business Execution

The Practice of Enterprise Modeling

A New Adaptive Systems Approach

Model Driven Architecture

Enterprise, Business-Process and Information Systems Modeling

Achieving enterprise success necessitates addressing enterprises in ways that match the complexity and dynamics of the modern enterprise environment. However, since the majority of enterprise strategic initiatives appear to fail - among which those regarding information technology - the currently often practiced approaches to strategy development and implementation seem more an obstacle than an enabler for strategic enterprise success. Two themes underpin the fundamentally different views outlined in this book. First, the competence-based perspective on governance, whereby employees are viewed as the crucial core for effectively addressing the complex, dynamic and uncertain enterprise reality, as well as for successfully defining and operationalizing strategic choices. Second, enterprise engineering as the formal conceptual framework and methodology for arranging a unified and integrated enterprise design, which is a necessary condition for enterprise success. Jan Hoogervorst's presentation, which is based on both research and his professional background at Sogeti B.V., aims at professionals in the field of management and consulting as well as students in management science and business information systems.

Economies around the globe have evolved into being largely service-oriented economies. Consumers no longer just want a printer or a car, they rather ask for a printing service or a mobility service. In addition, service-oriented organizations increasingly exploit new devices, technologies and infrastructures. Agility is the ability to deal with such changing requirements and environments. Agile ways of working embrace change as a positive force and harness it to the organization's competitive advantage. The approach described in this book focuses on the notion of a service as a piece of functionality that offers value to its customers. Instead of solely looking at agility in the context of system or software development, agility is approached in a broader context. The authors illustrate three kinds of agility that can be found in an agile enterprise: business, process and system agility. These three types of agility reinforce each other and establish the foundation for the agile enterprise. Architecture, patterns, models, and all of the best practices in system development contribute to agile service development and building agile applications. This book addresses two audiences. On the one hand, it aims at agile and architecture practitioners who are looking for more agile ways of working in designing and building business services or who are interested in extending and improving their agile methods by using models and model-based architectures. On the other hand, it addresses students of (enterprise) architecture and software development or service science courses, both in computer science and in business administration.

Modeling Enterprise Architecture with TOGAF explains everything you need to know to effectively model enterprise architecture with The Open Group Architecture Framework (TOGAF), the leading EA standard. This solution-focused reference presents key techniques and illustrative examples to help you model enterprise architecture. This book describes the TOGAF standard and its structure, from the architecture transformation method to governance, and presents enterprise architecture modeling practices with plenty of examples of TOGAF deliverables in the context of a case study. Although widespread and growing quickly, enterprise architecture is delicate to manage across all its dimensions. Focusing on the architecture transformation method, TOGAF provides a wide framework, which covers the repository, governance, and a set of recognized best practices. The examples featured in this book were realized using the open source Modelio tool, which includes extensions for TOGAF. Includes intuitive summaries of the complex TOGAF standard to let you effectively model enterprise architecture Uses practical examples to illustrate ways to adapt TOGAF to the needs of your enterprise Provides model examples with Modelio, a free modeling tool, letting you exercise TOGAF modeling immediately using a dedicated tool Combines existing modeling standards with TOGAF

Lankhorst and his co-authors present ArchiMate® 3.0, enterprise modelling language that captures the complexity of architectural domains and their relations and allows the construction of integrated enterprise architecture models. They provide architects with concrete instruments that improve their architectural practice. As this is not enough, they additionally present techniques and heuristics for communicating with all relevant stakeholders about these architectures. Since an architecture model is useful not only for providing insight into the current or future situation but can also be used to evaluate the transition from 'as-is' to 'to-be', the authors also describe analysis methods for assessing both the qualitative impact of changes to an architecture and the quantitative aspects of architectures, such as performance and cost issues. The modelling language presented has been proven in practice in many real-life case studies and has been adopted by The Open Group as an international standard. So this book is an ideal companion for enterprise IT or business architects in industry as well as for computer or management science students studying the field of enterprise architecture. This fourth edition of the book has been completely reworked to be compatible with ArchiMate® 3.0, and it includes a new chapter relating this new version to other standards. New sections on capability analysis, risk analysis, and business architecture in general have also been introduced.

Complex Enterprise Architecture

Combining Adaptive Methods and Flexible Solutions

Modelling, Communication and Analysis

Mastering Archimate Edition III

Applying MDA to Enterprise Computing

The Cornerstones of Enterprise Architecture

The book is a primer for practitioners wishing to get to grips with the ArchiMate modelling language. The book's subject is using the ArchiMate(R) modelling language to model Enterprise Architecture (EA) in the form of an Enterprise Architecture Description (EAD). The narrative begins by examining the nature of Enterprise Architecture and the role of modelling. The reader is then progressively guided through the modelling tools offered by the ArchiMate specification, with detailed explanations and examples. This work will be useful to those EA practitioners who use or come into contact with the ArchiMate language on a regular or even infrequent basis, and all those who encounter EA within their business environment for any reason, such as Programme and Project Managers, IT Specialists, Business Analysts and others engaged in business transformation and strategy implementation. The book will also support people studying for certification in the use of the ArchiMate language.

Mastering ArchiMate Edition 3.1 is the fourth edition of a much praised book about the ArchiMate(R) Enterprise Architecture Modeling Language, which is a standard and a Registered Trade Mark of The Open Group. The book gives an introduction to the language, then goes on to show you key aspects of successful modeling, and many different patterns for its use. From Business to Infrastructure, from Risk & Security to Application Exploitation and Maintenance. While the aim of the book is to teach the language, it often also offers necessary background, so that the patterns can make sense to the reader not familiar with a subject. Thus, it also contains introductions to subjects such as virtualization, bitcoin/blockchain, infrastructure as code, processes versus functions, SOA/API, ESB, Terminal Services, etc. It also contains a short introduction to BPMN(TM) in order to describe a linking of both major languages. Forewords by Marc Lankhorst and Jean-Baptiste Sarrodie. Gerben Wierda (1961) is author of Chess and the Art of Enterprise Architecture, and is Lead Architect at APG, one of the largest Fiduciary Managers in the world. Before, he was Lead Architect of the Judiciary of The Netherlands, and Lead Architect of APG Asset Management. He has overseen the construction of one of the largest single ArchiMate models in the world to date. He holds an M.Sc. in Physics from the University of Groningen and an MBA from RSM Erasmus, Rotterdam.

Despite the buzz surrounding the cloud computing, only a small percentage of organizations have actually deployed this new style of IT—so far. If you're planning your long-term cloud strategy, this practical book provides insider knowledge and actionable real-world lessons regarding planning, design, operations, security, and application transformation. This book teaches business and technology managers how to transition their organization's traditional IT to cloud computing. Rather than yet another book trying to sell or convince readers on the benefits of clouds, this book provides guidance, lessons learned, and best practices on how to design, deploy, operate, and secure an enterprise cloud based on real-world experience. Author James Bond provides useful guidance and best-practice checklists based on his field experience with real customers and cloud providers. You'll view cloud services from the perspective of a consumer and as an owner/operator of an enterprise private or hybrid cloud, and learn valuable lessons from successful and less-than-successful organization use-case scenarios. This is the information every CIO needs in order to make the business and technical decisions to finally execute on their journey to cloud computing. Get updated trends and definitions in cloud computing, deployment models, and for building or buying cloud services Discover challenges in cloud operations and management not foreseen by early adopters Use real-world lessons to plan and build an enterprise private or hybrid cloud Learn how to assess, port, and migrate legacy applications to the cloud Identify security threats and vulnerabilities unique to the cloud Employ a cloud management system for your enterprise (private or multi-provider hybrid) cloud ecosystem Understand the challenges for becoming an IT service broker leveraging the power of the cloud

Model Driven Architecture (MDA) is a new methodology from OMG that uses modeling languages like UML along with programming languages like Java to build software architectures PriceWatersCoopers' prestigious Technology Center just predicted that MDA will be one of the most important methodologies in the next two years Written by the lead architect of the specification who provides inside information on how MDA has worked in the real world Describes MDA in detail and demonstrates how it can work with existing methodologies and technologies such as UML,MOF, CWM, and Web services

Frameworks, Business Process Modeling, SOA, and Infrastructure Technology

ArchiMate Primer

Cloud Enterprise Architecture

Enterprise Architecture as Strategy

Modelling Enterprise Architectures

Enterprise Architecture Planning

Third edition of the much praised introduction and in-depth book that teaches the leading enterprise architecture modeling language ArchiMate 3. Includes explanations for many subjects that are modeled, such as SOA/API, ESB, Bitcoin/blockchain, Infrastructure as Code, etc. Also contains a BPMN primer. With 380 diagrams.

Architect and design highly scalable, robust, clean and highly performant applications in .NET Core About This Book Incorporate architectural soft-skills such as DevOps and Agile methodologies to enhance program-level objectives Gain knowledge of architectural approaches on the likes of SOA architecture and microservices to provide traceability and rationale for architectural decisions Explore a variety of practical use cases and code examples to implement the tools and techniques described in the book Who This Book Is For This book is for experienced .NET developers who are aspiring to become architects of enterprise-grade applications, as well as software architects who would like to leverage .NET to create effective blueprints of applications. What You Will Learn Grasp the important aspects and best practices of application lifecycle management Leverage the popular ALM tools, application insights, and their usage to monitor performance, testability, and optimization tools in an enterprise Explore various authentication models such as social media-based authentication, 2FA and OpenID Connect, learn authorization techniques Explore Azure with various solution approaches for Microservices and Serverless architecture along with Docker containers Gain knowledge about the recent market trends and practices and how they can be achieved with .NET Core and Microsoft tools and technologies In Detail If you want to design and develop enterprise applications using .NET Core as the development framework and learn about industry-wide best practices and guidelines, then this book is for you. The book starts with a brief introduction to enterprise architecture, which will help you to understand what enterprise architecture is and what the key components are. It will then teach you about the types of patterns and the principles of software development, and explain the various aspects of distributed computing to keep your applications effective and scalable. These chapters act as a catalyst to start the practical implementation, and design and develop applications using different architectural approaches, such as layered architecture, service oriented architecture, microservices and cloud-specific solutions. Gradually, you will learn about the different approaches and models of the Security framework and explore various authentication models and authorization techniques, such as social media-based authentication and safe storage using app secrets. By the end of the book, you will get to know the concepts and usage of the emerging fields, such as DevOps, BigData, architectural practices, and Artificial Intelligence. Style and approach Filled with examples and use cases, this guide takes a no-nonsense approach to show you the best tools and techniques required to become a successful software architect.

The ArchiMate(R) Specification, a standard of The Open Group, defines an open and independent modeling language for Enterprise Architecture that is supported by different tool vendors and consulting firms. The ArchiMate language enables Enterprise Architects to describe, analyze, and visualize the relationships among business domains in an unambiguous way. This book is the official specification of the ArchiMate 3.1 modeling language from The Open Group. This edition of the standard includes a number of corrections, clarifications, and improvements to the previous edition, as well as several additions. The main changes between Version 3.0.1 and Version 3.1 of the ArchiMate Specification are listed below. In addition to these changes, various other minor improvements in definitions and other wording have been made: ?Introduced a new strategy element: value stream ?Added an optional directed notation for the association relationship ?Improved the organization of the metamodel and associated figures ?Further improved and formalized the derivation of relationships The intended audience is threefold: 1.Enterprise Architecture practitioners, such as architects (e.g., business, application, information, process, infrastructure, and, obviously, enterprise architects), senior and operational management, project leaders, and anyone committed to work within the reference framework defined by the Enterprise Architecture. 2.Those who intend to implement the ArchiMate language in a software tool; they will find a complete and detailed description of the language in this book. - The academic community, on which we rely for amending and improving the language, based on state-of-the-art research results in the Enterprise Architecture field.

This book contains the refereed proceedings of the 12th International Conference on Business Process Modeling, Development and Support (BPMDS 2011) and the 16th International Conference on Exploring Modeling Methods for Systems Analysis and Design (EMMSAD 2011), held together with the 23rd International Conference on Advanced Information Systems Engineering (CAISE 2011) in London, UK, in June 2011. The 22 papers accepted for BPMDS were selected from 61 submissions and cover a wide spectrum of issues related to business processes development, modeling, and support. They are grouped into sections on BPMDS in practice, business process improvement, business process flexibility, declarative process models, variety of modeling paradigms, business process modeling and support systems development, and interoperability and mobility. The 16 papers accepted for EMMSAD were chosen from 31 submissions and focus on exploring, evaluating, and enhancing current information modeling methods and methodologies. They are grouped in sections on workflow and process modeling extensions, requirements analysis and information systems development, requirements evolution and information systems evolution, data modeling languages and business rules, conceptual modeling practice, and enterprise architecture.

Mastering ArchiMate Edition 3.1

Enterprise Architecture

Enterprise Ontology

The Enterprise Cloud

Advanced Information Systems Engineering Workshops

Enterprise Application Architecture with .NET Core

Implement successful and cost-effective enterprise architecture projects. This book provides a new approach to developing enterprise architecture based on the idea of emergent behaviors—where instead of micromanaging system implementation, the enterprise architecture effort establishes clear goals and leaves the details to the implementation teams. System development efforts are measured based on their contribution to achieving business goals instead of implementing specific (possibly outdated) requirements. Most enterprise architecture initiatives employ one of the existing system architecture frameworks such as Zachman or The Open Group Architecture Framework, but these are not well-suited for enterprise architecture in a modern, agile organization. The new approach presented in this book is based on the author's experience with large enterprise architecture efforts. The approach leverages research into complex adaptive systems and emergent behaviors, where a few simple rules result in complex and efficient enterprise behaviors. Simplifying the task of establishing and maintaining the enterprise architecture cuts the costs of building and maintaining the architecture and frees up those resources for more productive pursuits. System implementers are given the freedom to rapidly adapt to changing user needs without the blessing of the enterprise modeling priesthood, and the architecture is transformed from a static pile of obscure models and documents into an operational framework that can be actively used to manage an enterprise's resources to better achieve business goals. The enterprise architect is free to stop focusing on building and maintaining models and start focusing on achieving business goals. What You'll Learn Refocus enterprise architecture on business needs by eliminating most of the enterprise-level models Delegate tasks to the development teams who do system implementation Document business goals, establish strategies for achieving those goals, and measure progress toward those goals Measure the results and gauge whether the enterprise architecture is achieving its goals Utilize appropriate modeling techniques that can be effectively used in an enterprise architecture Who This Book Is For Architecture practitioners and architecture managers: Practitioners are experienced architects who have used existing frameworks such as Zachman, and have experience with formal architecture modeling and/or model-based system engineering; managers are responsible for managing an enterprise architecture project and either have experience with enterprise architecture projects that were ineffective or are looking for a different approach that will be more cost-effective and allow for more organizational agility. Government program managers looking for a different approach to make enterprise architecture more relevant and easier to implement will also find this book of value.

Technologists who want their ideas heard, understood, and funded are often told to speak the language of business—without really knowing what that is. This book's toolkit provides architects, product managers, technology managers, and executives with a shared language—in the form of repeatable, practical patterns and templates—to produce great technology strategies. Author Eben Hewitt developed 39 patterns over the course of a decade in his work as CTO, CIO, and chief architect for several global tech companies. With these proven tools, you can define, create, elaborate, refine, and communicate your architecture goals, plans, and approach in a way that executives can readily understand, approve, and execute. This book covers: Architecture and strategy: Adopt a strategic architectural mindset to make a meaningful material impact Creating your strategy: Define the components of your technology strategy using proven patterns Communicating the strategy: Convey your technology strategy in a compelling way to a variety of audiences Bringing it all together: Employ patterns individually or in clusters for specific problems; use the complete framework for a comprehensive strategy

Architectural coordination of enterprise transformation (ACET) integrates and aggregates local information and provides different viewpoints, such as financial, structural, or skill perspectives to the respective stakeholder groups, with the aim of creating a consensus and shared understanding of an enterprise transformation among the stakeholders. Its core purpose is to inform decision-makers with both local and enterprise-wide concerns so that the overall transformation goals can be successfully pursued, i.e. reducing inconsistencies and including local decisions in the overarching goals. This book consists of three major parts, framed by an introduction and a summary. To enable readers to gain a better understanding of the issues involved in real-world enterprise transformations as well as the possible role of architectural coordination and the associated challenges, Part I provides an analysis of status quo of corporate ACET practice. Part II then continues with an exploration of the challenges facing ACET from a theoretical perspective. Based on these challenges, Part III then presents a collection of components for a

possible design theory for ACET. Instead of an integrated method, this collection of components constitutes method fragments that can be arranged in different ways depending on the perspective taken, the actual enterprise architecture management approach, the enterprise transformation type and the transformation's context.

Enterprise Architecture Planning (EAP) is a high-level blueprint for data, applications, and technology that is a cost-effective long-term solution. The authors give you a common-sense approach to EAP, supported by examples of architectures, procedures, checklists, and useful guidelines.

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Archimate(r) 3.1 Specification

A Serious Introduction to the Archimate(r) Enterprise Architecture Modeling Language

Theory and Methodology

Modeling Enterprise Architecture with TOGAF

Fowler

Enterprise architecture defines a firm's needs for standardized tasks, job roles, systems, infrastructure, and data in core business processes. This book explains enterprise architecture's vital role in enabling – or constraining – the execution of business strategy. It provides frameworks, case examples, and more.

This book offers a coherent modeling language that captures the complexity of architectural domains and their relations, allowing the construction of integrated enterprise architecture models. Introduces the ArchiMate(r) language for enterprise architecture.

Cloud Enterprise Architecture examines enterprise architecture (EA) in the context of the surging popularity of Cloud computing. It explains the different kinds of desired transformations the architectural blocks of EA undergo in light of this strategically significant convergence. Chapters cover each of the contributing architectures of EA—business, information, application, integration, security, and technology—illustrating the current and impending implications of the Cloud on each. Discussing the implications of the Cloud paradigm on EA, the book details the perceptible and positive changes that will affect EA design, governance, strategy, management, and sustenance. The author ties these topics together with chapters on Cloud integration and composition architecture. He also examines the Enterprise Cloud, Federated Clouds, and the vision to establish the InterCloud. Laying out a comprehensive strategy for planning and executing Cloud-inspired transformations, the book: Explains how the Cloud changes and affects enterprise architecture design, governance, strategy, management, and sustenance Presents helpful information on next-generation Cloud computing Describes additional architectural types such as enterprise-scale integration, security, management, and governance architectures This book is an ideal resource for enterprise architects, Cloud evangelists and enthusiasts, and Cloud application and service architects. Cloud center administrators, Cloud business executives, managers, and analysts will also find the book helpful and inspirational while formulating appropriate mechanisms and schemes for sound modernization and migration of traditional applications to Cloud infrastructures and platforms.

Software services are established as a programming concept, but their impact on the overall architecture of enterprise IT and business operations is not well-understood. This has led to problems in deploying SOA, and some disillusionment. The SOA Source Book adds to this a collection of reference material for SOA. It is an invaluable resource for enterprise architects working with SOA. The SOA Source Book will help enterprise architects to use SOA effectively. It explains: What SOA is How to evaluate SOA features in business terms How to model SOA How to use The Open Group Architecture Framework (TOGAF™) for SOA SOA governance This book explains how TOGAF can help to make an Enterprise Architecture. Enterprise Architecture is an approach that can help management to understand this growing complexity.

Enterprise Architecture at Work

International Workshops, ICSOC/ServiceWave 2009, Stockholm, Sweden, November 23–27, 2009, Revised Selected Papers

A Serious Introduction to the ArchiMate(R) Enterprise Architecture Modeling Language

Developing a Blueprint for Data, Applications, and Technology

Enterprise Architecture A to Z

The Practice of Enterprise Architecture

Wouldn't it be great to understand all the data in your organisation? Just imagine being able to define, agree and manage information concepts that impact on business strategy? Then imagine that these information concepts can be linked to the physical database attributes that ultimately are used to create them. That's what this book is about. It focuses on the data model as the foundation for achieving this understanding. This book provides a framework for the enterprise data model, the business reasons behind it and the differences between conceptual, logical and physical data models. The question of how, and why, to use a data model artifact as part of the data governance toolkit for the whole enterprise is also addressed. This publication is not an in-depth manual on how to model data for a new database system or your next design project. It instead focuses at a level above these implementation projects and addresses the issues that organisations typically struggling with such as: * How do we provide a framework within which we can manage our data assets? * How do we develop applications that adhere to a set of data standards; without creating a nightmare of administration and governance that is both unwieldy and unusable? * How can we get business value from our enterprise data? Chapter headings are: * Chapter 1 - Introduction * Chapter 2 - Information and Data * Chapter 3 - Pillars of Value * Chapter 4 - An Overview of Data Modelling * Chapter 5 - Data Architecture * Chapter 6 - The Enterprise Data Model * Chapter 7 - Build the Model one Project at a Time * Chapter 8 - Master Data * Chapter 9 - Data Governance * Chapter 10 - The Enterprise Data Framework This 2nd edition revises the original text to add extra details around key areas such as the enterprise data model framework and the pillars of value. It also improves the quality of the original text.

Architectures for Enterprise Integration describes the latest methods to guide enterprises and consultants, managers and technical personnel through a complete life-cycle of enterprise development. This book is based on the findings of the IFIP/IFAC Task Force and presents the state-of-the-art in enterprise architecture. This book is essential reading for all practising engineers and researchers in manufacturing and engineering management with special interest for those involved in CIM and Enterprise Modelling and Integration.

The ArchiMate® Specification, an Open Group Standard, defines an open and independent modeling language for Enterprise Architecture that is supported by different tool vendors and consulting firms. The ArchiMate language enables Enterprise Architects to describe, analyze, and visualize the relationships among business domains in an unambiguous way. This book is the official specification of the ArchiMate 3.0.1 modeling language from The Open Group. ArchiMate 3.0.1 is a minor update to ArchiMate 3.0, containing the set of corrections from ArchiMate 3.0 Technical Corrigendum No. 1 (U172). This addresses inconsistencies and errors identified since the publication of Version 3.0 in June 2016. The ArchiMate Specification supports modeling throughout the TOGAF® Architecture Development Method (ADM). New features in Version 3 include elements for modeling the enterprise at a strategic level, such as capability, resource, and outcome. It also includes support to model the physical world of materials and equipment. Furthermore, the consistency and structure of the language have been improved, definitions have been aligned with other standards, and its usability has been enhanced in various other ways. The intended audience is threefold: • Enterprise Architecture practitioners, such as architects (e.g., business, application, information, process, infrastructure, and, obviously, enterprise architects), senior and operational management, project leaders, and anyone committed to work within the reference framework defined by the Enterprise Architecture. • Those who intend to implement the ArchiMate language in a software tool; they will find a complete and detailed description of the language in this book. • The academic community, on which we rely for amending and improving the language, based on state-of-the-art research results in the Enterprise Architecture field.

Based on an extensive study of the actual industry best practices, this book provides a systematic conceptual description of an EA practice and offers practically actionable answers to the key questions related to enterprise architecture.

Architectural Coordination of Enterprise Transformation

Modelling Enterprise Architecture Using the ArchiMate Modelling Language

A Practical Guide Using UML and BPMN

A Modern Approach to Business and IT Alignment

Agile Service Development

Software Fortresses

An enterprise architecture tries to describe and control an organisation's structure, processes, applications, systems and techniques in an integrated way. The unambiguous specification and description of components and their relationships in such an architecture requires a coherent architecture modelling language. Lankhorst and his co-authors present such an enterprise modelling language that captures the complexity of architectural domains and their relations and allows the construction of integrated enterprise architecture models. They provide architects with concrete instruments that improve their architectural practice. As this is not enough, they additionally present techniques and heuristics for communicating with all relevant stakeholders about these architectures. Since an architecture model is useful not only for providing insight into the current or future situation but can also be used to evaluate the transition from 'as-is' to 'to-be', the authors also describe analysis methods for assessing both the qualitative impact of changes to an architecture and the quantitative aspects of architectures, such as performance and cost issues. The modelling language and the other techniques presented have been proven in practice in many real-life case studies. So this book is an ideal companion for enterprise IT or business architects in industry as well as for computer or management science students studying the field of enterprise architecture.

The practice of enterprise application development has benefited from the emergence of many new enabling technologies. Multi-tiered object-oriented platforms, such as Java and .NET, have become commonplace. These new tools and technologies are capable of building powerful applications, but they are not easily implemented. Common failures in enterprise applications often occur because their developers do not understand the architectural lessons that experienced object developers have learned. Patterns of Enterprise Application Architecture is written in direct response to the stiff challenges that face enterprise application developers. The author, noted object-oriented designer Martin Fowler, noticed that despite changes in technology--from Smalltalk to CORBA to Java to .NET--the same basic design ideas can be adapted and applied to solve common problems. With the help of an expert group of contributors, Martin distills over forty recurring solutions into patterns.

The result is an indispensable handbook of solutions that are applicable to any enterprise application platform. This book is actually two books in one. The first section is a short tutorial on developing enterprise applications, which you can read from start to finish to understand the scope of the book's lessons. The next section, the bulk of the book, is a detailed reference to the patterns themselves. Each pattern provides usage and implementation information, as well as detailed code examples in Java or C#. The entire book is also richly illustrated with UML diagrams to further explain the concepts. Armed with this book, you will have the knowledge necessary to make important architectural decisions about building an enterprise application and the proven patterns for use when building them. The topics covered include · Dividing an enterprise application into layers · The major approaches to organizing business logic · An in-depth treatment of mapping between objects and relational databases · Using Model-View-Controller to organize a Web presentation · Handling concurrency for data that spans multiple transactions · Designing distributed object interfaces

This book introduces a new approach for modeling large enterprise systems: the software fortress model. In the software fortress model, an enterprise architecture is viewed as a series of self-contained, mutually suspicious, marginally cooperating software fortresses interacting with each other through carefully crafted and meticulously managed treaty relationships. The software fortress model is an intuitive, simple, expressive approach that maps readily to existing technologies such as .NET and Java 2 Enterprise Edition (J2EE). This book is designed to meet an immediate need to define, clarify, and explain the basics of this new modeling methodology for large enterprise software architectures. "Software Fortresses is your essential roadmap to all aspects of software fortresses. Key topics include: The fundamental concepts and terminology of software fortresses Documentation techniques, including Fortress Ally Responsibility Cards (based on Class Responsibility Cards) and Sequence Ally Diagrams (based on UML's Class Sequence Diagrams) The proper use of drawbridges to provide fortress interoperability The innovative software fortress model for enterprise security Correct design approaches to fortress walls, which keep intruders out, and to guards, which let allies in. The role of loosely coupled and tightly coupled transactions in a software fortress architecture Design and technology issues associated with the six major software fortress types This book is a must-read for all enterprise software professionals, whether you are a manager seeking to rein in run-away enterprise system complexity, an architect seeking to design interoperable, scalable, and highly secure systems, a consultant expected to give advice on how .NET and J2EE fit into the enterprise space, an implementer wanting to understand how your system relates to a larger enterprise architecture, or a business analyst needing to know that your system requirements will be translated into a successful software implementation. 0321166086B12202002

If one thing catches the eye in almost all literature about (re)designing or (re)engineering of enterprises, it is the lack of a well-founded theory about their construction and operation. Often even the most basic notions like "action" or "process" are not precisely defined. Next, in order to master the diversity and the complexity of contemporary enterprises, theories are needed that separate the stable essence of an enterprise from the variable way in which it is realized and implemented. Such a theory and a matching methodology, which has passed the test of practical experience, constitute the contents of this book. The enterprise ontology, as developed by Dietz, is the starting point for profoundly understanding the organization of an enterprise and subsequently for analyzing, (re)designing, and (re)engineering it. The approach covers numerous issues in an integrated way: business processes, in- and outsourcing, information systems, management control, staffing etc.

Researchers and students in enterprise engineering or related fields will discover in this book a revolutionary new way of thinking about business and organization. In addition, it provides managers, business analysts, and enterprise information system designers for the first time with a solid and integrated insight into their daily work.

CAiSE 2011 International Workshops, London, UK, June 20-24, 2011, Proceedings

Best Practices for Transforming Legacy IT

Handbook on Enterprise Architecture

ArchiMate® 2.0 Specification

Technology Strategy Patterns

Enterprise Governance and Enterprise Engineering

This book constitutes the refereed proceedings of the International Workshops on Service-Oriented Computing, ICSOC/ServiceWave 2009, held in Stockholm, Sweden, in November 2009. The book includes papers of workshops on trends in enterprise architecture research (TEAR 2009), SOA, globalization, people, and work (SG-PAW), service oriented computing in logistics (SOC-LOG), non-functional properties and service level agreements management in service oriented computing (NFPSLAM-SOC 09), service monitoring, adaptation and beyond (MONA+), engineering service-oriented applications (WESOA09), and user-generated services (UGS2009). The papers are organized in topical sections on business models and architecture; service quality and service level agreements track; and service engineering track.

This book is positioned as a rst in a series of books on enterprise architecture needed for a Master of Enterprise Architecture program, and is targeted both at university students and practitioners with a drive to increase their understanding of these elds. As an introductory book, this book aims to explore the concept of enterprise architecture. At rst glance, writing such an introductory book might seem as a straight forward task of setting up a structure and lling in “the blanks.” However, writing this book turned out to be a pleasant journey of discovery. Based on our past experiences, each of us had a clear understanding of enterprise architecture, based on several years of experience and insight in the eld. However, when we started writing this book, and each of us exposed our individual understandings, it became apparent that our understanding of the eld differed in several ways. This prompted several discussions leading to an abundance of new insights. Without exception, these discussions took place in a pleasant and open atmosphere, fueled by your shared drive for understanding and increased insight. We are now even more convinced than before, that the eld enterprise architecture is a true multi-disciplinary profession. In the resulting book, we would like to share our insights, while also hoping to continue our discussions, now also involving you as a reader. We also realise that the journey is still far from complete. While this introductory book provides an overview of the eld of enterprise architecture from the perspective of our insights, many aspects need further re nement.

This volume constitutes the proceedings of the 8th IFIP WG 8.1 Conference on the Practice of Enterprise Modeling held in November 2015 in Valencia, Spain. 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 23 short papers accepted were carefully reviewed and selected from 72 submissions and are organized in eight sections on Evolving Enterprises, Securing Enterprises, Making Empirical Studies, Investigating Enterprise Methods, Acquiring User Information, Managing Risks and Threats, Engineering Methods, and Making Decisions in Enterprises.

This book constitutes the thoroughly refereed proceedings of ten international workshops held in London, UK, in conjunction with the 23rd International Conference on Advanced Information Systems Engineering, CAiSE 2011, in June 2011. The 59 revised papers were carefully selected from 139 submissions. The ten workshops included Business/IT Alignment and Interoperability (BUSITAL), Conceptualization of Modelling Methods (CMM), Domain Specific Engineering (DsE@CAiSE), Governance, Risk and Compliance (GRCS), Integration of IS Engineering Tools (INISSET), System and Software Architectures (IWSSA), Ontology-Driven Information Systems Engineering (ODISE), Ontology, Models, Conceptualization and Epistemology in Social, Artificial and Natural Systems (ONTOSE), Semantic Search (SSW), and Information Systems Security Engineering (WISSE).

Architecture as Strategy

SOA Source Book

8th IFIP WG 8.1. Working Conference, PoEM 2015, Valencia, Spain, November 10-12, 2015, Proceedings

ArchiMate® 3.0.1 Specification

12th International Conference, BPMDS 2011, and 16th International Conference, EMMSAD 2011, held at CAiSE 2011, London, UK, June 20-21, 2011. Proceedings

Architectures for Enterprise Integration

An enterprise architecture tries to describe and control an organisation's structure, processes, applications, systems and techniques in an integrated way. The unambiguous specification and description of components and their relationships in such an architecture requires a coherent architecture modelling language. Lankhorst and his co-authors present such an enterprise modelling language that captures the complexity of architectural domains and their relations and allows the construction of integrated enterprise architecture models. They provide architects with concrete instruments that improve their architectural practice. As this is not enough, they additionally present techniques and heuristics for communicating with all relevant stakeholders about these architectures. Since an architecture model is useful not only for providing insight into the current or future situation but can also be used to evaluate the transition from 'as?is' to 'to?be', the authors also describe analysis methods for assessing both the qualitative impact of changes to an architecture and the quantitative aspects of architectures, such as performance and cost issues. The modelling language presented has been proven in practice in many real-life case studies and has been adopted by The Open Group as an international standard. So this book is an ideal companion for enterprise architects in industry as well as for computer or management science students studying the field of enterprise architecture.

ArchiMate®, an Open Group Standard, is an open and independent modeling language for Enterprise Architecture that is supported by different tool vendors and consulting firms. ArchiMate provides instruments to enable enterprise architects to describe, analyze, and visualize the relationships among business domains in an unambiguous way. This book provides the official specification of ArchiMate 2.0 from The Open Group. ArchiMate 2.0 is an upwards-compatible evolution from ArchiMate 1.0 adding new features, as well as additional feedback. The ArchiMate 2.0 Standard supports modeling throughout the TOGAF® Architecture Development Method (ADM). The intended audience is threefold: Enterprise Architecture practitioners, such as architects (e.g., application, information, process, in- and obviously, enterprise architects), senior and operational management, project leaders, and anyone committed to work within the reference framework defined by the Enterprise Architecture. Those who intend to implement ArchiMate in a software tool; they will find a complete and detailed description of the language in this book. The academic community, on which we rely for amending and improving the language based on state-of-the-art research results in the architecture field.

Service-Oriented Computing. ICSOC/ServiceWave 2009 Workshops

The Enterprise Data Model

Dynamic Enterprise Architecture

Architecture Principles

Creating Value by Informed Governance