

From Enterprise Architecture To It Governance Elements Of Effective It Management

This IBM® Redbooks® publication explains how to combine business process management (BPM) and Enterprise Architecture (EA) for better business outcomes. This book provides a unique synergistic approach to BPM and EA, based on a firm understanding of the life cycles of the enterprise and the establishment of appropriate collaboration and governance processes. When carried out together, BPM provides the business context, understanding, and metrics, and EA provides the discipline to translate business vision and strategy into architectural change. Both are needed for sustainable continuous improvement. This book provides thought leadership and direction on the topic of BPM and EA synergies. Although technical in nature, it is not a typical IBM Redbooks publication. The book provides guidance and direction on how to collaborate effectively across tribal boundaries rather than technical details about IBM software products. The primary audience for this book is leaders and architects who need to understand how to effectively combine BPM and EA to drive, as a key differentiator, continuous improvement and transformational change with enterprise scope.

Presents current developments, issues, and trends in enterprise architecture (EA). Provides insights into the impact of effective EA on IT governance, IT portfolio management, and IT outsourcing.

This book is positioned as a first 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 fields. As an introductory book, this book aims to explore the concept of enterprise architecture. At first glance, writing such an introductory book might seem as a straight forward task of setting up a structure and filling 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 field. However, when we started writing this book, and each of us exposed our individual understandings, it became apparent that our understanding of the field 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 our shared drive for understanding and increased insight. We are now even more convinced than before, that the field of 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 realize that the journey is still far from complete. While this introductory book provides an overview of the field of enterprise architecture from the perspective of our insights, many aspects need further refinement.

The Principle Based Enterprise Architecture (PBEA) Method is a proven approach for implementing an enterprise-wide architecture practice in large- and medium-sized technology organizations. The method begins with a set of architecture objectives linked to concepts that matter to the business. It then lays out how to build technology platforms from components we call assets and how to manage those assets over time, through the calculation and management of technical debt. The PBEA method is a pragmatic approach to enterprise technology architecture which is based on the fundamental tenet that technology is never perfect, compromises must be made, and one of the most valuable functions an enterprise architecture group can provide for a company is a method for managing those compromises. We call the cost of these compromises "technical debt". It is essentially the difference between what we should have spent on technology and what we did spend. The PBEA method grew from the experience of watching how large technology organizations function (or do not function as the case may be). You will learn about such essential topics as: Best practices for building, managing, and ultimately evolving an enterprise architecture. Defining principles and golden rules to guide the high-quality creation of the building blocks of products and platforms (assets). Calculating technical debt and assessing the business risk associated with carrying that debt. Identifying and managing the actions required to pay off technical debt and mitigate any associated business risk. If you have witnessed products and platforms 'collapsing under the burden of technical debt', then this book is for you. If you have seen technology organizations fail to learn from their mistakes, then this book is also for you. If you have been involved in the development of products where Version 2 required almost a rewrite of Version 1 or worked in technology organizations that spend an excessive portion of their budget on maintenance, then the PBEA method may provide both insight and benefit. Or if you are an enterprise architect and have witnessed one or more Enterprise Architecture functions get eliminated because they were seen as 'too ivory tower' and too distant from the customer, then this book will provide you with a concrete, fact-based approach for building an enterprise architecture function that is fully aligned with business objectives and that delivers real measurable benefit to the corporation.

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.

Written by expert practitioners who have hands-on experience solving real-world problems for large corporations; Helps enterprise architects make sense of data, systems, software, services, product lines, methodologies, and much more; Provides explanation of theory and implementation with real-world business examples to support key points

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.

This book shows its readers how to achieve the goal of genuine IT governance. The key here is the successful development of enterprise architecture as the necessary foundation. With its capacity to span and integrate business procedures, IT applications and IT infrastructure, enterprise architecture opens these areas up to analysis and makes them rich sources of critical data. Enterprise architecture thereby rises to the status of a crucial management information system for the CIO. The focused analysis of the architecture (its current and future states) illuminates the path to concrete IT development planning and the cost-effective and beneficial deployment of IT. Profit from the author's firsthand experience - proven approaches firmly based in enterprise reality.

"Regardless of the type of architecture, architecture itself is an organized accumulation of knowledge within a particular domain. While we generally conceive of its representation as a set of diagrams, containing specific notations and taxonomies of symbols and glossary terms, an architecture may actually be represented using anything that can be arranged in a pattern to record information. The earliest forms of architecture relate to architecting buildings, monuments, military disciplines, organized religion, music, storytelling, and various other forms within the arts. These early forms of architecture of course predate computer related architectures by thousands of years. That said, it is worth noting that there are a number of common elements among architectures irrespective of their relative age, such as forms of standardization, reusable structures, the accumulation of knowledge, and providing a context for understanding something. Needless to say, anyone can be an architect in a topic in which they have a deep understanding and appreciation of. While one obvious difference among architects is the amount and variety of pertinent experience, the less obvious difference is the degree to which an architect recognizes the potential forms of standardization, reusable structures, accumulation of knowledge, relationships among the components, and use of architecture as an accelerator to more rapidly understand the context and scope of a particular topic or to rapidly convey it to another. Architectures as a result must be easy to understand"--

Enterprise Architecture (EA) is an essential part of the fabric of a business; however, EA also transcends and transforms technology and moves it into the business space. Therefore, EA needs to be discussed in an integrated, holistic, and comprehensive manner. Only such an integrated approach to EA can provide the foundation for a transformation that readies the business for the myriad enterprise-wide challenges it will face. Highly disruptive technologies such as Big Data, Machine Learning, and Mobile and Cloud Computing require a fine balance between their business and technical aspects as an organization moves forward with its digital transformation. This book focuses on preparing all organizations – large and small – and those wishing to move into them for the impact of leveraging these emerging, disruptive, and innovative technologies within the EA framework.

As the digital economy changes the rules of the game for enterprises, the role of software and IT architects is also transforming. Rather than focus on technical decisions alone, architects and senior technologists need to combine organizational and technical knowledge to effect change in their company's structure and processes. To accomplish that, they need to connect the IT engine room to the penthouse, where the business strategy is defined. In this guide, author Gregor Hohpe shares real-world advice and hard-learned lessons from actual IT transformations. His anecdotes help architects, senior developers, and other IT professionals prepare for a more complex but rewarding role in the enterprise. This book is ideal for: Software architects and senior developers looking to shape the company's technology direction or assist in an organizational transformation Enterprise architects and senior technologists searching for practical advice on how to navigate technical and organizational topics CTOs and senior technical architects who are devising an IT strategy that impacts the way the organization works IT managers who want to learn what's worked and what hasn't in large-scale transformation

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.

An Introduction to Enterprise Architecture is the culmination of several decades of experience that I have gained through work initially as an information technology manager and then as a consultant to executives in the public and private sectors. I wrote this book for three major reasons: (1) to help move business and technology planning from a systems and process-level view to a more strategy-driven enterprise-level view, (2) to promote and explain the emerging profession of EA, and (3) to provide the first textbook on the subject of EA, which is suitable for graduate and undergraduate levels of study. To date, other books on EA have been practitioner books not specifically oriented toward a student who may be learning the subject with little to no previous exposure. Therefore, this book contains references to related academic research and industry best practices, as well as my own observations about potential future practices and the direction of this emerging profession.

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.

This book describes a methodology for architecting, designing, and constructing an enterprise that specifies what to do, but more importantly, how to it, and why you would want to do it that way! The methodological concepts, principles, conventions, and practices presented in this book have been developed and put into practice for over 25 years; and the results are dramatic and worthy of pursuit by any enterprise.

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.

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

As technology continues to evolve in organizations, it is vital to understand the impact that these advances will have on different aspects of the business environment as well as the opportunity for further improvement. Effects of IT on Enterprise Architecture, Governance, and Growth explores the influence of emerging technology on different viewpoints associated with contemporary enterprise. Emphasizing an interdisciplinary approach to the comprehension of organizational structure and dynamics, this book is an inclusive reference source for enterprise analysts, business managers, and IT managers, as well as upper-level students interested in a new framework for understanding business enterprise in the new digital era.

"This book is a valuable addition to the reading list of executives, managers, and staff in business, government, and other sectors who seek to keep their enterprises agile and efficient as they manage change, implement new business processes and supporting technologies, and pursue important strategic goals"--Provided by publisher.

This is the only book on holistic (organization-wide) enterprise architecture (EA) that integrates strategic, business, and technology planning. The approach includes detailed information on EA governance, implementation, and use, including an example case study, a new chapter on solution architecture methods, and a new chapter on the use of EA to support organizational restructuring as part of mergers and acquisitions. Written in plain language, this book is recommended for executives, managers, and staff in large, complex public and private sector organizations that are too silo'd and/or have highly dynamic operating environments. No prior knowledge on the subject is needed.

A critical part of any company's successful strategic planning is the creation of an Enterprise Business Architecture (EBA) with its formal linkages. Strategic research and analysis firms have recognized the importance of an integrated enterprise architecture and they have frequently reported on its increasing value to successful companies. Enterpr

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

An up-to-date and comprehensive overview of information and database systems design and implementation. The book provides an accessible presentation and explanation of technical architecture for systems complying with TOGAF standards, the accepted international framework. Covering nearly the full spectrum of architectural concern, the authors also illustrate and concretize the notion of traceability from business goals, strategy through to technical architecture, providing the reader with a holistic and commanding view. The work has two mutually supportive foci. First, information technology technical architecture, the in-depth, illustrative and contemporary treatment of which comprises the core and majority of the book; and secondly, a strategic and business context.

Architect and deliver packaged Force.com applications that cater to enterprise business needs About This Book Explore the lightning framework, advanced application life cycle processes, and testing Use the Force.com platform to build truly integrated, scalable, and robustly engineered applications focused on enterprise-level customer demands Using the Lightning technology to deliver modern and responsive user experiences targeting multiple devices through Lightning Experience and Salesforce1 Mobile. Step-by-step, work on examples to get you building your own ready-to-install packaged application Who This Book Is For This book is for advanced Force.com developers and architects who need to understand the Salesforce platform from the perspective of enterprise-level requirements. A prior understanding of Apex and Visualforce is a must. Those familiar with other enterprise

software ecosystems will also find this book ideal as they adopt Force.com. What You Will Learn Package, install, test, and upgrade an application Define architecture-aligning data storage and functional requirements Develop Apex code that is easy to navigate, self-documenting, testable, robust, and organic Leverage your application's clientagnostic Service layer backbone to support numerous platform areas Get the most from hosting your application within the Lightning Experience and Salesforce1 Mobile clients Apply querying, indexing, and asynchronous best practices Leverage mocking and dependency injection in your Apex tests Explore tips for developing advanced applications In Detail Companies of all sizes have seen the need for Force.com's architectural strategy focused on enabling their business objectives. Successful enterprise applications require planning, commitment, and investment in the best tools, processes, and features available. This book will teach you how to architect and support enduring applications for enterprise clients with Salesforce by exploring how to identify architecture needs and design solutions based on industry standard patterns. There are several ways to build solutions on Force.com, and this book will guide you through a logical path and show you the steps and considerations required to build packaged solutions from start to finish. It covers all aspects, from engineering to getting your application into the hands of your customers, and ensuring that they get the best value possible from your Force.com application. You will get acquainted with extending tools such as Lightning App Builder, Process Builder, and Flow with your own application logic. In addition to building your own application API, you will learn the techniques required to leverage the latest Lightning technologies on desktop and mobile platforms. Style and approach The book takes a straightforward approach, taking apart the Force.com architecture for you to gain a deep understanding of how you can implement the Salesforce platform based on enterprise-level requirements.

Enterprise architecture requires an understanding of all technologies, strategies, and data consumption throughout the enterprise. To this end, one must strive to always broaden knowledge of existing, as well as emerging trends and solutions. As a trade, this role demands an understanding beyond the specificities of technologies and vendor products

In today's IT architectures, microservices and serverless functions play increasingly important roles in process automation. But how do you create meaningful, comprehensive, and connected business solutions when the individual components are decoupled and independent by design? Targeted at developers and architects, this book presents a framework through examples, practical advice, and use cases to help you design and automate complex processes. As systems are more distributed, asynchronous, and reactive, process automation requires state handling to deal with long-running interactions. Author Bernd Ruecker demonstrates how to leverage process automation technology like workflow engines to orchestrate software, humans, decisions, or bots. Learn how modern process automation compares to business process management, service-oriented architecture, batch processing, event streaming, and data pipeline solutions Understand how to use workflow engines and executable process models with BPMN Understand the difference between orchestration and choreography and how to balance both

Ever-changing business needs have prompted large companies to rethink their enterprise IT. Today, businesses must allow interaction with their customers, partners, and employees at more touch points and at a depth never thought previously. At the same time, rapid advances in information technologies, like business digitization, cloud computing, and Web 2.0, demand fundamental changes in the enterprises' management practices. These changes have a drastic effect not only on IT and business, but also on policies, processes, and people. Many companies therefore embark on enterprise-wide transformation initiatives. The role of Enterprise Architecture (EA) is to architect and supervise this transformational journey. Unfortunately, today's EA is often a ponderous and detached exercise, with most of the EA initiatives failing to create visible impact. The enterprises need an EA that is agile and responsive to business dynamics. Collaborative Enterprise Architecture provides the innovative solutions today's enterprises require, informed by real-world experiences and experts' insights. This book, in its first part, provides a systematic compendium of the current best practices in EA, analyzes current ways of doing EA, and identifies its constraints and shortcomings. In the second part, it leaves the beaten tracks of EA by introducing Lean, Agile, and Enterprise 2.0 concepts to the traditional EA methods. This blended approach to EA focuses on practical aspects, with recommendations derived from real-world experiences. A truly thought provoking and pragmatic guide to manage EA, Collaborative Enterprise Architecture effectively merges the long-term oriented top-down approach with pragmatic bottom-up thinking, and that way offers real solutions to businesses undergoing enterprise-wide change. Covers the latest emerging technologies affecting business practice, including digitization, cloud computing, agile software development, and Web 2.0 Focuses on the practical implementation of EAM rather than theory, with recommendations based on real-world case studies Addresses changing business demands and practices, including Enterprise 2.0, open source, global sourcing, and more Takes an innovative approach to EAM, merging standard top-down and pragmatic, bottom-up strategies, offering real solutions to businesses undergoing enterprise-wide changes

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 examines cost-saving trends in architecture 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 the most widely deployed 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 these models: the business architecture, 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. In this second section, the author presents 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 communications, and chargeback 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 knowledge and practical 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.

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.

This book gathers together a critical body of knowledge on what enterprise architecture (EA) is and how it can be used to better organize the functions of systems across an enterprise for an effective business-IT alignment. The chapters provide a solid foundation for a cross-disciplinary professional practice.

This book provides practical advice on how to develop an enterprise architecture practice. The authors developed different tools and models to support organizations in implementing and professionalizing an enterprise architecture function. Coverage applies these tools and models to a number of different organizations and, as a result, will help readers avoid potential pitfalls and achieve success with enterprise architecture.

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 IT or business architects in industry as well as for computer or management science students studying the field of enterprise architecture.

This textbook provides a hands-on introduction to enterprise architecture management. It guides the reader through the applications of methods and tools to typical business problems by presenting enterprise architecture frameworks and by sharing experiences from industry. The structure of the book represents the typical stages of the journey of an enterprise architect. Chapter 1 addresses the central question of what to achieve with the introduction of an enterprise architecture. Chapter 2 then introduces concepts and visualizations for business architecture that help with understanding the business. In chapter 3 the development of an application architecture is outlined, which provides transparency on information systems and their business context. Next, chapter 4 presents visual tools to analyze, improve and eventually optimize the application landscape. Chapter 5 discusses both traditional organizational as well as collaborative approaches to enterprise architecture management. Eventually, several established enterprise architecture frameworks like TOGAF, Zachmann, ArchiMate, and IAF are described in chapter 6. The book concludes with a summary and an outlook on future research potential in chapter 7. Based on their experiences through several years of teaching, the authors introduce students step-by-step to enterprise architecture development and management. Their book is intended as a guide for master classes at universities and includes lots of exercises and references for further reading.

Enterprise Architecture is the discipline of managing the complexities of the Business-IT landscape. It has been around since the 1980's, when for the first time computers were connected in networks, and the already serious (and unsolved) problem of the complexity of computer programs for relatively simple business needs turned into the huge problem of large networks of them in complex business landscapes. In spite of many 'best practices' and 'frameworks' that have been introduced, Enterprise Architecture is not a great success. After thirty years, we still have the same problems. Chaos is still everywhere. Projects still fail far too often. In this book, (hidden) assumptions behind the existing approaches to enterprise architecture are challenged, and a more realistic perspective that helps us battle the complexities and unpredictabilities of today's Business-IT landscapes is described. Practical suggestions about enterprise architecture governance and products, based on real-world experience with the described approach, complete the book. From general management to IT professionals, everyone who is confronted with the problem of managing Business-IT landscapes can profit from the insights this book offers. No specialist prior knowledge is required. Gerben Wierda is author of Mastering ArchiMate, and was, amongst other things, Lead Architect of the Judiciary in The Netherlands, Lead Architect of APG Asset Management, and is now Team Coordinator Architecture & Design at APG. He holds an M.Sc in Physics from the University of Groningen and an MBA from RSM Erasmus, Rotterdam.

The basis for an Enterprise Architecture IT project comes from the identification of the changes necessary to implement the enterprise or organisation's strategy, and the growing information needs arising from this, which increases the demand for the development of the IT system. The development of an IT system can be carried out using an urbanisation approach i.e. building an IT system using the metaphor of a city. This concept is based on the fact that in constructing or reorganising information systems, the reconstruction and modernisation involves permanent elements, as are found in a city. Although relatively new, this approach has been successfully employed in a number of projects over the past few years. The practical approach given in this book allows enterprises or organisations trying to safeguard the efficiency of their IT system, while minimising costs and risk, to implement the theory and put it into practice.

"Enterprise Architecture - the Eight Fundamental Factors" is an invaluable guide providing practical advice, examples and case studies that show how successful enterprise architects make a real difference. The fundamental factors described here are true for all enterprise architecture (EA) approaches. You will find them in The Open Group Architecture Framework (TOGAF), the Zachman Framework, and in every other EA methodology or framework. The book provides a combined, integrated EA approach.

It shows exactly how these factors are used in practice, and it demonstrates this with details drawn from a wide-range of typical EA initiatives. The first edition was published in 2003 under the title "Information First."

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, as the handbook covers methods and tools necessary to design or redesign enterprises, as well as those necessary to structure the implementation into manageable projects.

This book endeavors to help further lift the discipline of EA by providing a reference architecture for an EA function and taking an EA approach to its analysis and documentation. By doing so it aims to demonstrate, explain and rationalize why and how to do and manage good, proper and successful EA. **** The book outlines the key drivers and components of an EA function, including the influences on and objectives of EA and the business and technology processes and resources required and used to address and achieve these. **** At the end of each architectural layer section of the book, tips and suggestions are provided on how to identify and assess what is important when one architects both the enterprise and EA function from that layer's perspective. **** For example, keeping on point and avoiding being pushed into related, but non-EA activities; buying time to do things properly while still being responsive and agile to changes in enterprise drivers; fitting into the organization's governance structure; building a capability not just delivering a series of non-repeatable, point-sensitive EA services are just some of the many challenges facing Enterprise Architects that the book deals with. **** As a reference architecture typically describes a complete target architecture, and a complete architecture can take a long time to develop and fine tune, more than can be expected within a single release or project or within the time frame that initial outcomes are required by EA stakeholders and customers, the book takes a look at the different capability increments or themes that might be pursued to meet the differing EA needs and expectations of different enterprises. **** To ensure the reference architecture incorporates best practices in EA, it is built on the concepts and principles of EA outlined in Dr Scott Bernard's book, 'An Introduction to Enterprise Architecture, EA3', and his EA training program and certification courses. Both of which in turn build on the EA experiences and practices of EA practitioners over near to three decades. **** While there are a number of useful and informative EA frameworks and books available guiding organizations on what EA should deliver, organizations and individuals are still left without the one thing that they themselves espouse for the enterprise at large, a target architecture. One that can be used to guide the alignment of EA to the enterprise and that can maximize the effectiveness of the planning and oversight and the formation and execution of EA. This leaves many decisions to be made in the absence of sound, communicable, measurable and transparent views as to why and what to strive for when doing EA. "In this book, Vivek Kale makes an important contribution to the theory and practice of enterprise architecture ... this book captures the breadth and depth of information that a modern enterprise architecture must address to effectively support an agile enterprise. This book should have a place in every practicing architect's library." —John D. McDowall, Author of Complex Enterprise Architecture Digital Transformation of Enterprise Architecture is the first book to propose Enterprise Architecture (EA) as the most important element (after Business Models) for digital transformation of enterprises. This book makes digital transformation more tangible by showing the rationale and typical technologies associated with it, and these technologies in turn reveal the essence of digital transformation. This book would be useful for analysts, designers and developers of future-ready agile application systems. This book proposes that it is the perennial quest for interoperability & portability, scalability, availability, etc., that has directed and driven the evolution of the IT/IS industry in the past 50 years. It is this very quest that has led to the emergence of technologies like service-oriented, cloud, and big data computing. In addition to the conventional attributes of EA like interoperability, scalability and availability, this book identifies additional attributes of mobility, ubiquity, security, analyticity, and usability. This pragmatic book: Identifies three parts effort for any digital transformation: Business Models, Enterprise Architectures and Enterprise Processes. Describes eight attributes of EA: interoperability, scalability, availability, mobility, ubiquity, security, analyticity, and usability. Explains the corresponding technologies of service-oriented, cloud, big data, context-aware, Internet of Things (IoT), blockchain, soft, and interactive computing. Briefs on auxiliary technologies like integration, virtualization, replication, spatio-temporal databases, embedded systems, cryptography, data mining, and interactive interfaces that are essential for digital transformation of enterprise architecture. Introduces interactive interfaces like voice, gaze, gesture and 3D interfaces. Provides an overview of blockchain computing, soft computing, and customer interaction systems. Digital Transformation of Enterprise Architecture proposes that to withstand the disruptive digital storms of the future, enterprises must bring about digital transformation, i.e. a transformation that affects an exponential change (amplification or attenuation) in any aspect of the constituent attributes of EA. It proposes that each of these technologies (service-oriented, cloud, big data, context-aware, IoT, blockchain, soft, and interactive computing) bring about digital transformation of the corresponding EA attribute viz. interoperability, scalability, availability, mobility, ubiquity, security, analyticity, and usability.

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 environment that is hard to manage 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, Greefhorst and Proper focus on the role of 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 principles. Architecture principles are regarded 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 formulation of architecture principles, as well 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 broad coverage, the authors target 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.

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