37 Things One Architect Knows About It Transformation

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The digital revolution isn't just changing how we live; it's fundamentally altering the very fabric of architecture. This article delves into the multifaceted nature of "IT transformation" within the architectural profession, offering a comprehensive overview of theoretical underpinnings and practical applications. We'll explore 37 key insights, drawing analogies and offering practical advice to guide architects through this critical evolution.

Part 1: Understanding the Landscape

1. Beyond BIM: IT transformation in architecture transcends Building Information Modeling (BIM). It's about integrating technology across the entire design, construction, and operation lifecycle.

2. Data is the New Brick: Just as a bricklayer needs materials, architects need data. This data, sourced from various digital platforms and sensors, informs design decisions, optimizing everything from energy efficiency to material selection.

3. Cloud Computing: The Architect's New Sky: Cloud-based platforms enable collaboration, file sharing, and access to data from anywhere. Think of it as a virtual workspace accessible to all stakeholders.

4. AI as an Architectural Assistant: AI tools are automating tasks, from generating design options to analyzing structural performance. Imagine an intelligent assistant offering design suggestions tailored to specific client needs.

5. IoT: Connecting the Built Environment: Internet of Things (IoT) sensors embed smart features into buildings, enabling real-time monitoring and adaptive management. This is like having a nervous system for the building, constantly monitoring and responding to environmental needs.

6. Virtual Reality (VR) and Augmented Reality (AR): Immersive technologies allow clients to visualize designs before construction, promoting collaboration and client satisfaction. Think of it as a "walk-through" of the building before it's built.

Part 2: Practical Applications and Strategies

7-21. (This section details specific practical applications, expanding on the theoretical aspects above):

Cloud-based collaboration tools for design teams.
Using AI for cost estimation and scheduling.
BIM integration with Building Management Systems (BMS).
Harnessing data analytics for performance optimization.
Implementing VR/AR for client presentations.
Integrating 3D printing into construction workflows.
Employing machine learning for sustainability analysis.
Leveraging drone technology for site surveys and progress monitoring.
Secure data management strategies for architectural firms.
Training and development programs for IT proficiency.
Building a data-driven decision-making culture.

Part 3: Challenges and Considerations

22-31. (This section addresses the challenges architects face):

Data security and privacy concerns.
Data silos and integration complexities.
Resistance to change and adoption of new technology.
Cost of implementing new IT solutions.
The need for skilled personnel.
Keeping up with evolving technology.
Maintaining project control amidst digital workflows.
Ethical considerations of AI in design.
Ensuring accessibility of digital tools for all stakeholders.
The importance of user experience design for IT applications.
Integrating different software platforms seamlessly.

Part 4: The Future of Architectural IT Transformation

32-37. (This forward-looking section paints a future picture):

The rise of personalized design solutions.
Predictive modeling of building performance.
Building automation and self-healing capabilities.
The importance of ethical AI development in the architectural domain.
The role of blockchain in transparency and trust.

Creating digitally resilient design frameworks.
A convergence of art, technology, and the built environment.

Expert FAQs

1. How can architects justify the investment in IT transformation?
2. What are the key skills needed for architects to navigate the digital landscape?
3. How can architectural firms effectively integrate AI and BIM?
4. What are the potential risks of relying heavily on AI in the design process?
5. What measures can be taken to ensure equitable access to these digital tools for all?

Conclusion:

IT transformation isn't just about adopting new tools; it's about embracing a paradigm shift in how architects approach design, construction, and the operation of the built environment. By understanding the principles and proactively adapting to the evolving technology landscape, architects can not only enhance their practice but also shape a more sustainable, efficient, and user-centric future. The digital revolution is offering architects unprecedented opportunities to create truly innovative and impactful designs. This transformation demands a commitment to continuous learning, adaptability, and a nuanced understanding of the ethical considerations interwoven with these advancements.

37 Things One Architect Knows About IT Transformation

The architectural landscape is constantly evolving, driven by the relentless march of technology. From cloud computing to AI, the digital revolution demands a fundamental shift in how businesses operate. For architects, this isn't just a trend; it's a core competency. They understand the intricate interplay between technology, business processes, and human experience, making them uniquely positioned to guide IT transformation. This article delves into the 37 things an architect understands about navigating this complex journey.

1. Business Alignment is Paramount:

IT transformation isn't about technology for technology's sake. It's about achieving specific business objectives. An architect understands that a successful transformation hinges on clearly defined business goals, meticulously translated into concrete IT strategies.

(Data Visualization): A simple flowchart illustrating the link between business goals, IT

strategy, and technological implementation.

2. The Importance of the "Why":

A compelling narrative about the "why" behind the transformation is crucial for buy-in from stakeholders. Architects facilitate this by articulating the value proposition of the new systems and how they will improve efficiency, reduce costs, and enhance customer experience.

3. Understanding the Existing System:

A comprehensive understanding of the existing IT infrastructure, including its strengths, weaknesses, and dependencies, is non-negotiable. This includes a deep dive into the current processes, data flows, and security measures.

4. Defining the Future State:

This involves creating a detailed blueprint of the desired IT environment. The architect will meticulously design the new architecture, considering scalability, security, and future-proofing.

5. Gradual vs. Big Bang Approaches:

Architects know that a phased approach to transformation is often more manageable and less disruptive than a "big bang" implementation. Iterative improvements allow for learning and adaptation throughout the process.

6. Risk Management:

IT transformation involves considerable risk. Architects incorporate risk assessment and mitigation strategies into the project plan from the outset.

7. Stakeholder Management:

Effective communication and collaboration are critical. Architects understand the need to engage all relevant stakeholders, ensuring they understand the transformation and their role in it.

(Case Study): Describe a case study of a company successfully implementing a phased approach to cloud migration.

8-37. The 30 Remaining Points (Explained in Condensed Format):

Architecture as a Solution Set: Architects leverage various architectural patterns, frameworks, and design principles for optimal solutions.

Security is Integral: Security is not an afterthought but a fundamental aspect of the design from the start.
Data Strategy Integration: Architects understand that data is the lifeblood of modern businesses and that a robust data strategy must be interwoven with the IT transformation.
Cloud Adoption Strategies: A deeper understanding of cloud architectures, methodologies, and services is imperative.
DevOps Integration: Architects recognize the importance of a DevOps-driven approach to deliver speed, reliability, and agility in software development.
Microservices and API Design: Knowledge of modern architectural styles like microservices and API design is critical.
Scalability & Elasticity: Systems need to adapt to fluctuating demands and growth patterns.
Agile Methodologies: Architects understand the iterative and flexible nature of agile methodologies and integrate them into their plans.
Integration with Existing Systems: Seamless integration with legacy systems is crucial for a smooth transition.
Change Management: Architect's guide and manage the transformation's impact on the organization's personnel, processes, and culture.
Compliance & Regulations: Adherence to industry regulations and legal mandates throughout the entire process.
Monitoring & Reporting: Establishing mechanisms for continuous monitoring, reporting, and performance tracking.
Performance Tuning: Understanding and optimizing system performance.
Testing & Quality Assurance: Rigorous testing procedures for comprehensive validation and defect identification.
Vendor Management: Efficient and effective collaboration with vendors.
Documentation: Maintaining comprehensive documentation to ensure long-term maintainability and support.
Project Management Expertise: Architects leverage strong project management skills for efficient delivery.
Communication and Collaboration: Fostering clear communication and collaboration among stakeholders and teams.
Problem Solving and Troubleshooting: Addressing issues and resolving challenges effectively.

(Data Visualization): A matrix showcasing various architectural styles, their use cases, and associated benefits.

Advantages of IT Transformation from an Architect's Perspective:

Increased Efficiency & Productivity: Streamlined workflows and optimized processes.
Enhanced Scalability: Adaptability to future growth and changing demands.
Improved Security Posture: Robust protection against cyber threats and data breaches.
Data-Driven Decision Making: Access to real-time insights and data analysis.
Enhanced Customer Experience: Improved service offerings and satisfaction.
Cost Optimization: Reduced operational costs through automation and efficiency gains.

Challenges of IT Transformation:

Resistance to Change: Staff members and stakeholders may be resistant to new processes or technologies.

Legacy System Integration Issues: Integrating new technologies with old systems can be complex and time-consuming.

Data Migration Challenges: Moving vast amounts of data can be prone to errors and delays.

Actionable Insights:

Begin by defining clear objectives.
Plan for phased implementation.
Foster strong communication and collaboration.
Embrace agile methodologies.
Develop a comprehensive risk management strategy.
Secure executive sponsorship and buy-in.

Advanced FAQs:

1. How can an architect ensure successful cloud migration? Thorough planning, phased migration, data security measures, and strong vendor management.
2. What role does AI play in IT transformation? AI can automate tasks, improve decision-making, and enhance security.
3. How can architects effectively manage resistance to change? Communicate clearly, provide training, and involve stakeholders in the process.
4. What are the key considerations for choosing the right architecture style? Analyze existing systems, business requirements, and future growth patterns.
5. How can architects ensure long-term maintainability of transformed IT systems? Develop robust documentation, establish a support plan, and encourage a culture of continuous improvement.

Conclusion:

Navigating the complex terrain of IT transformation requires a comprehensive understanding of various factors, from business objectives to technological advancements. Architects bring this holistic perspective, ensuring that the transformation aligns with both current and future business needs. This detailed knowledge empowers them to guide their organizations towards a more robust, adaptable, and successful future.

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2012-07-16 A superb visual reference to the principles of architecture Now including interactive CD-ROM! For more than thirty

years, the beautifully illustrated Architecture: Form, Space, and Order has been the classic introduction to the basic vocabulary of architectural design. The updated Third Edition features expanded sections on circulation, light, views, and site context, along with new considerations of environmental factors, building codes, and contemporary examples of form, space, and order. This classic visual reference helps both students and practicing architects understand the basic vocabulary of architectural design by examining how form and space are ordered in the built environment.? Using his trademark meticulous drawing, Professor Ching shows the relationship between fundamental elements of architecture through the ages and across cultural boundaries. By looking at these seminal ideas, Architecture: Form, Space, and Order encourages the reader to look critically at the built environment and promotes a more evocative understanding of architecture. In addition to updates to content and many of the illustrations, this new edition includes a companion CD-ROM that brings the book's architectural concepts to life through three-dimensional models and animations created by Professor Ching. In addition to updates to content and many of the illustrations this new edition includes a companion CD ROM that brings the books architectural concepts to life through three dimensional models and animations created by Professor Ching

2020-12-15 What can you do with a degree in architecture? Where might it take you? What kind of challenges could you address? Architects After Architecture reframes architecture as a uniquely versatile way of acting on the world, far beyond that of designing buildings. In this volume, we meet forty practitioners through profiles, case studies, and interviews, who have used their architectural training in new and resourceful ways to tackle the climate crisis, work with refugees, advocate for diversity, start tech companies, become leading museum curators, tackle homelessness, draft public policy, become developers, design videogames, shape public discourse, and much more. Together, they describe a future of architecture that is diverse and engaged, expanding the limits of the discipline, and offering new paths forward in times of crisis. Whether you are an architecture student or a practicing architect considering a change, you'll find this an encouraging and inspiring read. Please visit the Architects After Architecture website for more information, including future book launches and events: architectsafterarchitecture.com In this volume we meet forty practitioners through profiles case studies and interviews who have used their architectural training in new and resourceful ways to tackle the climate crisis work with refugees advocate for diversity

2018-06-15 Websites and apps are places where critical parts of our lives happen. We shop, bank, learn, gossip, and select our leaders there. But many of these

places weren’t intended to support these activities. Instead, they're designed to capture your attention and sell it to the highest bidder. Living in Information draws upon architecture as a way to design information environments that serve our humanity. Instead theyre designed to capture your attention and sell it to the highest bidder Living in Information draws upon architecture as a way to design information environments that serve our humanity

2018 About This Book This book, Managing Digital: Concepts and Practices, is intended to guide a practitioner through the journey of building a digital-first viewpoint and the skills needed to thrive in the digital-first world. As such, this book is a bit of an experiment for The Open Group; it isn’t structured as a traditional standard or guide. Instead, it is structured to show the key issues and skills needed at each stage of the digital journey, starting with the basics of a small digital project, eventually building to the concerns of a large enterprise. So, feel free to digest this book in stages — the section Introduction for the student is a good guide. The book is intended for both academic and industry training purposes. This book seeks to provide guidance for both new entrants into the digital workforce and experienced practitioners seeking to update their understanding on how all the various themes and components of IT management fit together in the new world. About The Open Group Press The Open Group Press is an imprint of The Open Group for advancing knowledge of information technology by publishing works from individual authors within The Open Group membership that are relevant to advancing The Open Group mission of Boundaryless Information Flow™. The key focus of The Open Group Press is to publish high-quality monographs, as well as introductory technology books intended for the general public, and act as a complement to The Open Group Standards, Guides, and White Papers. The views and opinions expressed in this book are those of the author, and do not necessarily reflect the consensus position of The Open Group members or staff. So feel free to digest this book in stages the section Introduction for the student is a good guide The book is intended for both academic and industry training purposes

2009-01-06 If engineering is the art and science of technical problem solving, systems architecting happens when you don't yet know what the problem is. The third edition of a highly respected bestseller, The Art of Systems Architecting provides in-depth coverage of the least understood part of systems design: moving from a vague concept and limited resources The third edition of a highly respected bestseller The Art of Systems Architecting provides in depth coverage of the least understood part of systems design moving from a vague concept and limited resources

2015-06-11 Design IT Organizations for Agility at Scale Aspiring digital businesses

need overall IT agility, not just development team agility. In Agile IT Organization Design, IT management consultant and ThoughtWorks veteran Sriram Narayan shows how to infuse agility throughout your organization. Drawing on more than fifteen years' experience working with enterprise clients in IT-intensive industries, he introduces an agile approach to "Business–IT Effectiveness" that is as practical as it is valuable. The author shows how structural, political, operational, and cultural facets of organization design influence overall IT agility—and how you can promote better collaboration across diverse functions, from sales and marketing to product development, and engineering to IT operations. Through real examples, he helps you evaluate and improve organization designs that enhance autonomy, mastery, and purpose: the key ingredients for a highly motivated workforce. You'll find "close range" coverage of team design, accountability, alignment, project finance, tooling, metrics, organizational norms, communication, and culture. For each, you'll gain a deeper understanding of where your organization stands, and clear direction for making improvements. Ready to optimize the performance of your IT organization or digital business? Here are practical solutions for the long term, and for right now. Govern for value over predictability Organize for responsiveness, not lowest cost Clarify accountability for outcomes and for decisions along the way Strengthen the alignment of autonomous teams Move beyond project teams to capability teams Break down tool-induced silos Choose financial practices that are free of harmful side effects Create and retain great teams despite today's "talent crunch" Reform metrics to promote (not prevent) agility Evolve culture through improvements to structure, practices, and leadership—and careful, deliberate interventions Ready to optimize the performance of your IT organization or digital business Here are practical solutions for the long term and for right now

1984-09-13 Aldo Rossi was a practicing architect and leader of the Italian architectural movement La Tendenza and one of the most influential theorists of the twentieth century. The Architecture of the City is his major work of architectural and urban theory. In part a protest against functionalism and the Modern Movement, in part an attempt to restore the craft of architecture to its position as the only valid object of architectural study, and in part an analysis of the rules and forms of the city's construction, the book has become immensely popular among architects and design students. In part a protest against functionalism and the Modern Movement in part an attempt to restore the craft of architecture to its position as the only valid object of architectural study and in part an analysis of the rules and forms of the

2011-07-01 Landscape architect, urban planner, teacher, and social visionary: over the course of a sixty-year career, Lawrence

Halprin (1916-2009) reshaped the spaces we inhabit and our ways of moving through them. The New York Times called him the tribal elder of American landscape architecture and the critic Ada Louise Huxtable credited him with creating what may be one of the most important urban spaces since the Renaissance. His bold use of abstract imagery could evoke the landscape of the American West in a sequence of city squares and fountains, while his plan for repurposing an abandoned factory near San Francisco's Fisherman's Wharf showed how adaptive use of a historic structure could turn commercial development into urban theater. A man who deeply loved cities, he left as one of his most important legacies the five thousand acres of coastline, hedgerows, and meadows that became Sonoma County's environmentally sensitive and enormously influential Sea Ranch. Featuring more than ninety black-and-white and one hundred color reproductions of photographs, plans, and sketchbooks, A Life Spent Changing Places is Halprin's own account of how a young boy who listened to the fireside chats of FDR on the radio became the man who designed the memorial to that president in the nation's capital. It is a book about the invention and reinvention of an extraordinary man over the span of decades and how he helped to reframe the world around him. Featuring more than ninety black and white and one hundred color reproductions of photographs plans and sketchbooks A Life Spent Changing Places is Halprins own account of how a young boy who listened to the fireside chats of FDR on the

2020-04-08 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 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

2016-08-01 Many large enterprises are feeling pressure from the rapid digitalization of the world: digital disruptors attack unexpectedly with brand-new business models; the FaceBook generation has dramatically different user expectations; and a whole slew of new technologies has become available to everyone with a credit card. This is tough stuff for enterprises that have been, and still are, very successful, but are built around traditional technology and organizational structures. Turning the tanker, as the need to transform is often described, has become a board room-level topic in many traditional enterprises. Not as easily done as said. Chief IT Architects and CTOs play a key role in such a digital transformation endeavor. They combine the technical, communication, and organizational skill to understand how a tech stack refresh can actually benefit the business, what being agile and DevOps really mean, and what technology infrastructure is needed to assure quality while moving faster. Their job is not an easy one, though: they must maneuver in an organization where IT is often still seen as a cost center, where operations means run as opposed to change, and where middle-aged middle-management has become cozy neither understanding the business strategy nor the underlying technology. It's no surprise then that IT architects have become some of the most sought-after IT professionals around the globe. This book aims to equip IT architects with the skills necessary to become effective not just in systems architecture, but also in shaping and driving the necessary transformation of large-scale IT departments. In today's world, technical transformation and organizational transformation have become inseparable. Organized into 37 episodes, this book explains: The role and qualities of an architect in a large enterprise How to think about architecture at enterprise scale How to communicate to a variety of stakeholders Organizational structures and systems How to transform traditional organizations Armed with these insights, architects and CTOs will be able to ride the Architect Elevator up and down the organization to instill lasting change. Organized into 37 episodes this book explains The role and qualities of an architect in a large enterprise How to think about architecture at enterprise scale How to communicate to a variety of stakeholders Organizational structures and

2019-01-31 Use digital experience platforms (DXP) to improve your development productivity and release timelines. Leverage the pre-integrated feature sets of DXPs in your organization's digital transformation journey to quickly develop a personalized, secure, and robust enterprise platform. In this book the authors examine various features of DXPs and provide rich insights into building each layer in a digital platform. Proven best practices are presented with examples for designing and building layers. A special focus is

provided on security and quality attributes needed for business-critical enterprise applications. The authors cover modern and emerging digital trends such as Blockchain, IoT, containers, chatbots, artificial intelligence, and more. The book is divided into five parts related to requirements/design, development, security, infrastructure, and case study. The authors employ proven real-world methods, best practices, and security and integration techniques derived from their rich experience. An elaborate digital transformation case study for a banking application is included. What You'll Learn Develop a digital experience platform from end to end Understand best practices and proven methods for designing overall architecture, user interface and integration components, security, and infrastructure Study real-world cases, including an elaborate digital transformation building an enterprise platform for a banking application Know the open source tools and technology frameworks that can be used to build DXPs Who This Book Is For Web developers, full stack developers, digital enthusiasts, digital project managers, and architects In this book the authors examine various features of DXPs and provide rich insights into building each layer in a digital platform Proven best practices are presented with examples for designing and building layers

2017-01-26 This book reflects the tremendous changes in the telecommunications industry in the course of the past few decades – shorter innovation cycles, stiffer competition and new communication products. It analyzes the transformation of processes, applications and network technologies that are now expected to take place under enormous time pressure. The International Telecommunication Union (ITU) and the TM Forum have provided reference solutions that are broadly recognized and used throughout the value chain of the telecommunications industry, and which can be considered the de facto standard. The book describes how these reference solutions can be used in a practical context: it presents the latest insights into their development, highlights lessons learned from numerous international projects and combines them with well-founded research results in enterprise architecture management and reference modeling. The complete architectural transformation is explained, from the planning and set-up stage to the implementation. Featuring a wealth of examples and illustrations, the book offers a valuable resource for telecommunication professionals, enterprise architects and project managers alike. This book reflects the tremendous changes in the telecommunications industry in the course of the past few decades shorter innovation cycles stiffer competition and new communication products

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2015-12-03 Systems of record (SORs) are engines that generates value for your business. Systems of engagement (SOE) are always evolving and generating new customer-centric experiences and new opportunities to capitalize on the value in the systems of record. The highest value is gained when systems of record and systems of engagement are brought together to deliver insight. Systems of insight (SOI) monitor and analyze what is going on with various behaviors in the systems of engagement and information being stored or transacted in the systems of record. SOIs seek new opportunities, risks, and operational behavior that needs to be reported or have action taken to optimize business outcomes. Systems of insight are at the core of the Digital Experience, which tries to derive insights from the enormous amount of data generated by automated processes and customer interactions. Systems of Insight can also provide the ability to apply analytics and rules to real-time data as it flows within, throughout, and beyond the enterprise (applications, databases, mobile, social, Internet of Things) to gain the wanted insight. Deriving this insight is a key step toward being able to make the best decisions and take the most appropriate actions. Examples of such actions are to improve the number of satisfied clients, identify clients at risk of leaving and incentivize them to stay loyal, identify patterns of risk or fraudulent behavior and take action to minimize it as early as possible, and detect patterns of behavior in operational systems and transportation that lead to failures, delays, and maintenance and take early action to minimize risks and costs. IBM® Operational Decision Manager is a decision management platform that provides capabilities that support both event-driven insight patterns, and business-rule-driven scenarios. It also can easily be used in combination with other IBM Analytics solutions, as the detailed examples will show. IBM Operational Decision Manager Advanced, along with complementary IBM software offerings that also provide capability for systems of insight, provides a way to deliver the greatest value to your customers and your business. IBM Operational Decision Manager Advanced brings together data from different sources to recognize meaningful trends and patterns.

It empowers business users to define, manage, and automate repeatable operational decisions. As a result, organizations can create and shape customer-centric business moments. This IBM Redbooks® publication explains the key concepts of systems of insight and how to implement a system of insight solution with examples. It is intended for IT architects and professionals who are responsible for implementing a systems of insights solution requiring event-based context pattern detection and deterministic decision services to enhance other analytics solution components with IBM Operational Decision Manager Advanced. It is intended for IT architects and professionals who are responsible for implementing a systems of insights solution requiring event based context pattern detection and deterministic decision services to enhance other analytics solution

2018-09-20 You can use this book to design a house for yourself with your family; you can use it to work with your neighbors to improve your town and neighborhood; you can use it to design an office, or a workshop, or a public building. And you can use it to guide you in the actual process of construction. After a ten-year silence, Christopher Alexander and his colleagues at the Center for Environmental Structure are now publishing a major statement in the form of three books which will, in their words, lay the basis for an entirely new approach to architecture, building and planning, which will we hope replace existing ideas and practices entirely. The three books are The Timeless Way of Building, The Oregon Experiment, and this book, A Pattern Language. At the core of these books is the idea that people should design for themselves their own houses, streets, and communities. This idea may be radical (it implies a radical transformation of the architectural profession) but it comes simply from the observation that most of the wonderful places of the world were not made by architects but by the people. At the core of the books, too, is the point that in designing their environments people always rely on certain languages, which, like the languages we speak, allow them to articulate and communicate an infinite variety of designs within a forma system which gives them coherence. This book provides a language of this kind. It will enable a person to make a design for almost any kind of building, or any part of the built environment. Patterns, the units of this language, are answers to design problems (How high should a window sill be? How many stories should a building have? How much space in a neighborhood should be devoted to grass and trees?). More than 250 of the patterns in this pattern language are given: each consists of a problem statement, a discussion of the problem with an illustration, and a solution. As the authors say in their introduction, many of the patterns are archetypal, so deeply rooted in

the nature of things that it seemly likely that they will be a part of human nature, and human action, as much in five hundred years as they are today. The three books are The Timeless Way of Building The Oregon Experiment and this book A Pattern Language At the core of these books is the idea that people should design for themselves their own houses streets and communities

2016-05-10 More and more data-driven companies are looking to adopt stream processing and streaming analytics. With this concise ebook, you'll learn best practices for designing a reliable architecture that supports this emerging big-data paradigm. Authors Ted Dunning and Ellen Friedman (Real World Hadoop) help you explore some of the best technologies to handle stream processing and analytics, with a focus on the upstream queuing or message-passing layer. To illustrate the effectiveness of these technologies, this book also includes specific use cases. Ideal for developers and non-technical people alike, this book describes: Key elements in good design for streaming analytics, focusing on the essential characteristics of the messaging layer New messaging technologies, including Apache Kafka and MapR Streams, with links to sample code Technology choices for streaming analytics: Apache Spark Streaming, Apache Flink, Apache Storm, and Apache Apex How stream-based architectures are helpful to support microservices Specific use cases such as fraud detection and geo-distributed data streams Ted Dunning is Chief Applications Architect at MapR Technologies, and active in the open source community. He currently serves as VP for Incubator at the Apache Foundation, as a champion and mentor for a large number of projects, and as committer and PMC member of the Apache ZooKeeper and Drill projects. Ted is on Twitter as @ted_dunning. Ellen Friedman, a committer for the Apache Drill and Apache Mahout projects, is a solutions consultant and well-known speaker and author, currently writing mainly about big data topics. With a PhD in Biochemistry, she has years of experience as a research scientist and has written about a variety of technical topics. Ellen is on Twitter as @Ellen_Friedman. Ideal for developers and non technical people alike this book describes Key elements in good design for streaming analytics focusing on the essential characteristics of the messaging layer New messaging technologies including Apache

2021-09-28 In this business bestseller, how companies can adapt in an era of continuous disruption: a guide to responding to such acute crises as COVID-19. Gold Medalist in Business Disruption/Reinvention. When COVID-19 hit, businesses had to respond almost instantaneously--shifting employees to remote work, repairing broken supply chains, keeping pace with dramatically fluctuating customer demand. They were forced to adapt to a confluence of multiple disruptions inextricably linked to a longer-term, ongoing digital disruption. This

book shows that companies that use disruption as an opportunity for innovation emerge from it stronger. Companies that merely attempt to weather the storm until things go back to normal (or the next normal), on the other hand, miss an opportunity to thrive. The authors, all experts on business and technology strategy, show that transformation is not a one-and-done event, but a continuous process of adapting to a volatile and uncertain environment. Drawing on five years of research into digital disruption--including a series of interviews with business leaders conducted during the COVID-19 crisis--they offer a framework for understanding disruption and tools for navigating it. They outline the leadership traits, business principles, technological infrastructure, and organizational building blocks essential for adapting to disruption, with examples from real-world organizations. Technology, they remind readers, is not an end in itself, but enables the capabilities essential for surviving an uncertain future: nimbleness, scalability, stability, and optionality. They were forced to adapt to a confluence of multiple disruptions inextricably linked to a longer term ongoing digital disruption This book shows that companies that use disruption as an opportunity for innovation emerge from it stronger

2021-03-09 Strategy is the difference between making a wish and making it come true. Most books on cloud computing either stay at a very high level, offer simplistic recipes, or dive deep into vendor-specific product details. This book helps you fill the very large space in between: aligning technology change with organizational transformation, making architectural decisions, and communicating trade-offs to diverse stakeholders. The book balances structured decision models with real-life anecdotes, both harvested from half a decade of defining and implementing cloud strategies for major organizations. Today's enterprises need a more nuanced strategy than simply proclaiming cloud first! A strategy isn't something you can copy-paste from a recipe book or from another organization, though: diverse starting points, objectives, and constraints imply different choices and trade-offs. So, rather than offering proven-3-step-recipes or touting shallow success stories, this book helps you chart your own strategy by helping you ask the right questions and connecting the dots between the many facets of cloud computing. Your journey will cover why cloud lives in the first derivative, why it's not just about infrastructure, how to organize for successful cloud migrations, understanding hybrid and multi-cloud architectures without vendor jargon, designing cloud-native applications, and optimizing for cost-efficient and resilient operations. Being free of jargon and product pitches, this book is a valuable guide for: Enterprise and cloud architects who are tasked with defining and communicating a credible cloud strategy Consultants and advisors who rely on

evocative decision models to guide their clients' cloud journey IT executives who want to harvest the full benefits of cloud computing Business executives who align organizational changes with the technical transformation NOTE: This book is currently available on Amazon as a print book only. The DRM-free ebook in all formats and more information are available at CloudStrategyBook.com Being free of jargon and product pitches this book is a valuable guide for Enterprise and cloud architects who are tasked with defining and communicating a credible cloud strategy Consultants and advisors who rely on evocative decision

2021-09-23 There are no easy decisions in software architecture. Instead, there are many hard parts--difficult problems or issues with no best practices--that force you to choose among various compromises. With this book, you'll learn how to think critically about the trade-offs involved with distributed architectures. Architecture veterans and practicing consultants Neal Ford, Mark Richards, Pramod Sadalage, and Zhamak Dehghani discuss strategies for choosing an appropriate architecture. By interweaving a story about a fictional group of technology professionals--the Sysops Squad--they examine everything from how to determine service granularity, manage workflows and orchestration, manage and decouple contracts, and manage distributed transactions to how to optimize operational characteristics, such as scalability, elasticity, and performance. By focusing on commonly asked questions, this book provides techniques to help you discover and weigh the trade-offs as you confront the issues you face as an architect. Analyze trade-offs and effectively document your decisions Make better decisions regarding service granularity Understand the complexities of breaking apart monolithic applications Manage and decouple contracts between services Handle data in a highly distributed architecture Learn patterns to manage workflow and transactions when breaking apart applications With this book youll learn how to think critically about the trade offs involved with distributed architectures