

LECTURE 3

The Role of Enterprise Architecture Practice

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In This Lecture

- The need for enterprise architecture in modern organizations
- Benefits of practicing enterprise architecture
- The applicability of enterprise architecture across various industries and organizations
- The historical origin of enterprise architecture and modern EA best practices
- Popular misconceptions related to enterprise architecture and what an EA practice is not

The Need for Enterprise Architecture

- Enterprise architecture is a natural solution to natural problems of modern organizations
- The critical interdependence between business and IT functions requires a disciplined approach to coordinating business and IT plans
- However, business and IT are disparate areas and establishing effective communication between them have always been troublesome
- The emergence of enterprise architecture is a natural reaction to the desperate need to improve collaboration between business and IT stakeholders

Significance of Enterprise Architecture

- Enterprise architecture is here to stay and its importance seemingly is only going to increase in the future because of three ongoing trends:
 - IT systems are getting more sophisticated, comprehensive and diverse
 - The dependence of business on IT is constantly increasing
 - The innovative potential of IT for business is growing
- Enterprise architecture seemingly represents one of the most significant and widely applicable management innovations of the last two decades

Direct Benefits of Enterprise Architecture

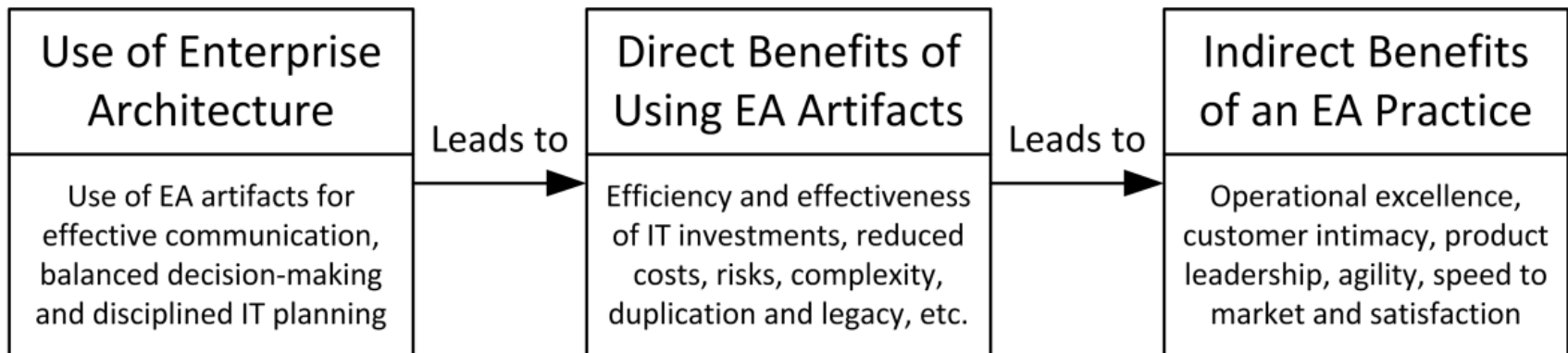
- Direct benefits resulting from the proper usage of particular types of EA artifacts include:
 - Improved effectiveness of IT investments
 - Improved efficiency of IT investments
 - Reduced costs of IT operations
 - Reduced technical and compliance risks
 - Reduced complexity of the IT landscape
 - Increased reuse of available IT assets
 - Reduced numbers of duplicated and legacy systems
 - Increased agility of IT planning
 - Improved speed and quality of the project delivery
 - Improved overall conceptual consistency

Indirect Benefits of Enterprise Architecture

- The direct benefits of utilizing certain types of EA artifacts eventually help organizations achieve overall business and IT alignment
- The improved business and IT alignment leads to numerous indirect organizational benefits including:
 - Better operational excellence, customer intimacy and product leadership
 - Increased speed to enter new markets and overall organizational agility
 - Improved managerial satisfaction

Link Between Direct and Indirect Benefits

The use of enterprise architecture leads to a number of direct benefits, which in turn lead to a number of indirect benefits for organizations



The Value of Enterprise Architecture

- An architecture function is a supporting function and its business value cannot be easily calculated or measured
- Like an HRM function, an architecture function adds no direct business value to the organizational value chain
- Since an EA practice is a continuous activity rather than a one-time project, it is impossible to estimate the return on investment (ROI) from EA efforts
- However, it is arguably impossible to manage thousands, hundreds and even tens of information systems without using enterprise architecture to drive their evolution
- An EA practice is simply not an option any longer

What Organizations Practice EA?

- An EA practice can benefit all organizations employing more than 30-50 IT specialists where IT is used to support main business activities
- Enterprise architecture is practiced in commercial companies and non-profit organizations from diverse industry sectors including banking, agriculture, retail, education, healthcare and public services
- Currently the vast majority of large organizations in developed countries either already practice enterprise architecture or plan to start practicing it in the near future

Historical Origin of Enterprise Architecture

- The widespread commercial adoption of information systems in business began in the late 1950s
- Since then the issue of organization-wide information systems planning gained significant attention
- Since the 1960s consultancies and experts proposed numerous step-by-step **architecture-based planning methodologies**, and later EA frameworks, to translate business strategies into architectural plans for IT, e.g. BSP, Method/1, Information Engineering, EAP, FEAF and TOGAF
- However, none of these formal architecture planning methodologies actually worked successfully in practice

Modern EA Best Practices

- Genuine EA best practices emerged and matured *in industry* as numerous system planners tried to address the problem of business and IT alignment
- The emergence of consistent EA best practices is a natural reaction of industry, rather than a deliberate product of some consultants, gurus or “fathers”
- EA methodologies and frameworks might have inspired current EA best practices, but did not define them
- Although the concept of enterprise architecture is associated with popular EA frameworks, e.g. TOGAF, Zachman and FEAF, all these frameworks have nothing to do with the actual EA best practices

What an EA Practice Is Not

- Since the early 2000s enterprise architecture has been a “hot”, widely discussed and overly hyped topic
- As a result, many descriptions of an EA practice available today are unsubstantiated, misleading, unrealistic or even completely fictitious
- Therefore, it is important to understand what an EA practice is not

Not a Purely Technical Planning

- An EA practice should not be confused with a purely technical planning accomplished inside IT departments
- The general purpose of an EA practice is to bridge the gap between business planning and IT planning and thereby improve business and IT alignment
- Successful EA practices require to be closely integrated with business planning
- The separate planning of IT disconnected from business planning can lead only to misalignment

Not a One-Size-Fits-All Methodology

- There are no easily replicable one-size-fits-all approaches or universal step-by-step methodologies for organizing a successful EA practice
- Though EA practices follow the same high-level patterns described in this course, they are always idiosyncratic in many lower-level details, e.g. specific EA artifacts, roles of architects or peculiarities of EA-related processes
- EA practices cannot be copied from other organizations, but need to be established in-house and then continuously adapted to specific organizational needs
- In this light, this course should be considered as purely descriptive, rather than prescriptive in nature

Not an Automated Planning

- An EA practice does not make the planning in organizations happen automatically
- An EA practice itself is unable to translate the business strategy into specific information systems in an automated semi-mechanical manner
- EA artifacts are merely the tools that help different actors make better planning decisions
- The planning work is carried out only by human actors, not by EA artifacts
- EA artifacts only facilitate, but not automate information systems planning

Not a Substitute for Competence

- An EA practice is unable to transform incompetent decisions and actions into competent ones
- An EA practice cannot help develop winning business strategies to incompetent business executives
- An EA practice cannot help develop successful IT strategies to incompetent IT leaders
- An EA practice cannot help implement IT solutions to incompetent IT specialists
- An EA practice, though facilitates information systems planning and delivery, is unable to compensate for the incompetence of involved actors

Not a Work of Dedicated Experts

- An EA practice requires involvement and participation of multiple business and IT stakeholders in planning
- Architectural planning cannot be carried out by an isolated group of architects on behalf of the whole organization
- Any plans are useless unless all their stakeholders understand how they were developed, why and how they should be modified when circumstances change
- Architectural plans produced by architects on behalf of their real stakeholders typically end up laying on shelves

Not a One-Time Planning Project

- An EA practice is a continuous organizational activity requiring constant communication and collaboration between various actors, not a one-time planning project
- The ongoing process of planning and communication itself is more important than the actual plans represented by EA artifacts produced as an outcome of this process
- An EA practice implies intensive organizational learning and matures over time as its main stakeholders learn to cooperate by means of using EA artifacts
- Heaps of EA artifacts describing the ideal future produced as a one-shot planning effort usually end up laying on shelves

Not a Technology-Specific Practice

- An EA practice is a technology-agnostic and vendor-neutral practice that is not related to any particular technologies, technical approaches or paradigms
- An EA practice facilitates information systems planning regardless of what specific systems, products or technologies are used
- The primary focus of an EA practice is not technologies but people
- The role of an EA practice is to help make optimal decisions regarding the selection of appropriate systems, products, technologies and approaches

Not an Enterprise Modeling

- An EA practice should not be confused with enterprise modeling
- EA practices include not only and not so much modeling
- An EA practice is a much more complex and broader activity than just modeling
- All EA artifacts created as part of an EA practice are developed in a pragmatic manner for specific aims
- Creating holistic models is not the goal of an EA practice
- Sophisticated diagrams are incomprehensible to business stakeholders and have only a limited application

Not an Enterprise Engineering

- An EA practice should not be confused with enterprise engineering
- An EA practice does not imply any rigid analysis-synthesis procedures similar to traditional engineering
- Compared to “hard” engineering, an EA practice can be considered as a “soft” organic planning approach
- Real organizations are complex living systems that cannot be designed with traditional engineering methods
- Enterprise engineering can be considered only as a utopian idea unfit for the real world

Not an Implementation of EA Frameworks

- An EA practice should not be confused with implementing popular EA frameworks, e.g. TOGAF, Zachman, FEAF and DoDAF
- EA frameworks are only *management fads* unrelated to successful EA practices
- All the attempts to follow the actual recommendations of EA frameworks in practice result in failures
- Popular EA frameworks can be considered only as proven anti-patterns
- Successful EA practices do not resemble EA frameworks neither in specific details, nor even in general ideas

Lecture Summary

- Enterprise architecture is a natural solution to natural problems of modern organizations bringing numerous benefits, e.g. increased effectiveness and reduced cost
- Enterprise architecture is widely applicable, industry-agnostic and can benefit all organizations employing at least 30-50 IT specialists
- Modern EA best practices emerged some time ago, evolved over the years, matured to their current state in industry and are not related to EA frameworks
- An EA practice should not be confused with enterprise modeling, enterprise engineering, purely technical and automated planning as well as one-shot planning efforts

In the Next Lecture

- The next lecture will descend to the next level of detail and explain the core mechanisms of an EA practice, including its documents, actors and processes, based on the close analogy between enterprise architecture and city planning practices

QUESTIONS?

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