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magazine

THE EVOLVING NATURE OF THE EA PROFESSION

Five Paradigm Shifts for Business Architecture Success

Possible Futures for Enterprise Architecture

**The FEAPO Enterprise Architecture Perspective Initiative:
A Common Perspective on Enterprise Architecture**

Best of the Blog: Enabling Organizational Change



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FROM THE EDITOR

The Evolving Nature of the EA Profession

BY GEORGE S. PARAS

The theme for this issue of *Architecture & Governance Magazine* is “The Evolving Nature of the EA Profession.” As a relatively young discipline, enterprise architecture has come a long way. Interest levels continue to be high, as demonstrated by A&G’s readership and the enthusiastic support of our author community. But to be fair, though, universal adoption of EA isn’t as widespread as it should be given its potential. As a result, we see the EA practitioner community pursuing two strategies: One is to double down on education and standards, and to codify EA practices into a consistent and repeatable body of knowledge. The second is to innovate and be progressive by evolving the EA practice into high-value opportunities using new approaches. This editorial board believes that these two ideas are not mutually exclusive and, in fact, are both essential to the success of the profession. In this issue, our contributing authors explore both ideas.



In “Five Paradigm Shifts for Business Architecture Success,” author Jeff Scott explains that the next big opportunity for EA is in business architecture. He makes a strong case for why enterprise architects are the right people for the job and that they should align their thinking and approaches with business priorities. He then offers five specific paradigm shifts for success.

Mark Bodman, in “Possible Futures for Enterprise Architecture,” explores the need to harmonize EA with related disciplines and to address holistic governance. He seconds the need for business architecture and shares some interesting perspectives on the tooling necessary for seamless enterprise management practices.

In support of building a foundational practice for EA, the FEAPO shares its “A Common Perspective of Enterprise Architecture” paper, first published here in A&G. This excellent contribution showcases the work of the FEAPO members in their goal to unify around a set of core ideas central to the practice and professionalism of enterprise architecture.

Thanks for reading A&G! We hope you enjoy this issue. **A&G**

GEORGE S. PARAS is editor-in-chief of A&G and managing director of EAdirections.

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FIVE PARADIGM SHIFTS

for Business Architecture Success

By Jeff Scott

OVERVIEW

Enterprise architects sit at a crossroads. Infrastructure technology is moving to outsourcers and into the cloud. For applications, buy before build is the norm. Endpoint technologies, user interface development, and business process automation are moving into the business domain. Where do enterprise architects go from here? Transitioning from enterprise technology architecture to business architecture is the next big opportunity for EAs, but there is substantial competition. Business analysts, project managers, consultants—and even business managers—are all vying for the increasingly important role of the business architect.

FIVE ENTERPRISE ARCHITECTURE TRUTHS

EAs argue about almost everything, but here are five, rarely articulated, “truths” that the majority of EAs can agree with:

- **Enterprise architects are among the best and brightest members of IT.** After working with thousands of architects and hundreds of EA organizations, I am confident making this statement. CIOs and others chartering EA initiatives pick truly bright and motivated individuals. Are there new skills to learn?

Sure. However, there is no lack of ability, enthusiasm, raw brainpower, or tenacity in enterprise architecture teams.

- **Architects have creative control over defining their role.** It is the rare CIO who has a strong vision for EA. While they get it conceptually, CIOs expect the EA team to define the specifics of how their practice will work and what deliverables it will produce. While other IT professionals have well-defined, often rigidly defined, roles, EAs have the unique (or at least rare) opportunity to start with a blank sheet of paper and define who they want to be.
- **Architects have fewer time dependent deliverables than most organizations, giving them the time they need to develop a high-quality product.** Most of the IT organization's work is tied to specific delivery dates, such as the ones that exist for application development projects, systems conversions, and hardware upgrades. While this is also true for architects attached to these projects, the EA team as a whole has much more latitude in the delivery time frame of EA products and services.
- **Organizations are in desperate need of good architectural design at both the technology and business level.** As corporations acquire, merge, and partner with others, they become larger, geographically distrib-

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uted, and operationally complex. Organizational silos develop, and corporate strategies become more difficult to execute. Frustrated business executives look to IT to reduce, or at least mask, the growing business complexity while the technology itself is becoming more complex to manage.

- **Architecture teams struggle for impact.** Both Gartner and Forrester have data that show a year-after-year EA organizational failure rate of around 40 percent, and this is only part of the story. The majority of “successful” EA teams report struggling to have an impact and gain recognition.

By most standards, enterprise architects have had ample opportunity over the past 20 years to create a wildly successful practice model. Why haven’t they? A large part of the problem is our decades’ old paradigms that encourage more engineering than design thinking. These frameworks and models have served EA poorly in the business technology space and will be devastating as EAs seek to move into business architecture.

It is time for some serious rethinking of the core EA paradigm.

FIVE PARADIGM SHIFTS CRITICAL FOR BUSINESS ARCHITECTURE SUCCESS

So, where do we go from here? What do we need to do? How do we create a successful business architecture practice? We might start with acknowledging the realities of the past and creating a view of business architecture that can seize the opportunities of the future. There

are five thinking shifts necessary to make this transition:

1 Move from principle-centered to strategy-inspired decisioning. The most consistently developed and promoted artifact across EA teams is a set of guiding principles. But do organizations live by them? Rarely! Most organizations treat guiding principles as a set of good intentions—like New Year’s resolutions, they are the things we know would be good for us if only we had the discipline to actually do them. This sets up an unhealthy dynamic that reduces EA’s credibility. Principles are rules that people expect us to live by. We build credibility by demonstrating our adherence to our principles in the face of adversity. No adherence means no credibility.

Architects can easily solve this problem by converting their guiding principles to a set of strategies. No one expects stringent adherence to a strategy. It is a much more flexible construct than a principle with the added benefit of aligning better with the way business leaders think.

2 Move from future state targets to continuous evolution. Enterprise architects put a lot of energy into developing and promoting an architectural future-state view. This made sense in the early days of EA when technology change was relatively slow. Today, with the increasing integration of business and technology, the pace of change has accelerated to a point where this model makes little sense. Executives often have a vision, but it is never as detailed as an architecture future state. Customer acceptance, competitor reaction, regulatory change, and dozens of other unknowns affect the final outcome. Business change is driven by a future vision that is shaped, molded, and modified in small ways every day as the situation changes and the organization learns to adapt. The goal of the business architect is not to methodologically drive the organization to some specified future state. It is to ensure that the organization is one step closer to getting where it wants to be every day.

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3 Move from governance to collaboration. Enterprise architects and industry pundits continue to promote architectural governance as a best practice even though it often has the opposite effect. The vast majority of EAs employ a governance process—but they also express frustration with its lack of effectiveness. EAs' clients are also frustrated, perceiving EA governance as an impediment—something that might be better termed a worst practice. Businesses run on relationships, collaboration, and influence. Architects who transition to an approach guided by influence will be much more successful than those who stick with an authority-based governance model.

4 Move from frameworks to toolboxes. Frameworks can provide a useful structure for solving problems and organizing solutions. If your business architecture is predominately focused on modeling business processes, then a modeling framework might help. But if you see business architecture more broadly as the process of managing business change, frameworks may be more limiting than helpful. Business architecture cannot be as structured or as neatly organized as technology architecture. Business architects need a variety of tools at their disposal to address the wide assortment of problems they encounter. For architects, thinking “outside the box” should become thinking “outside the framework.”

5 Move from IT- to business-centric thinking. The biggest problem with EA being part of IT is not a lack of connection to the business—it is the way the IT context shapes architects' thinking. IT is largely an operational support function. IT leaders focus on stability, risk reduction, budgets, and efficiency. Business leaders are the opposite. They focus on growth, risk management, investments, and effectiveness. Enterprise architects have little understanding of the challenges most business managers face. They have zero control over their customers, competitors, government regulators, or the economy yet are expected



to produce results each and every quarter. To gain an appreciation for the challenge, architects should spend a few days designing an EA function that has to operate like a business, demonstrating customer satisfaction and quarterly growth.

THE BOTTOM LINE

Transitioning from enterprise to business architecture is the next big opportunity for enterprise architects, but competition for the role is heating up. Success in this domain requires business leadership collaboration. To gain that collaboration, architects must change their thinking to resonate with business priorities. Successful architects in the future will be those who can shift their thinking away from the traditional architectural models of the past to create a more business aligned point of view. **A&G**

JEFF SCOTT is vice president of business and technology strategy at Accelare, Inc. He works with Fortune 1000 companies on strategy execution effectiveness and organizational change. Scott is an internationally recognized thought leader in the areas of business architecture, strategy design, and organizational innovation. He frequently speaks, writes, and consults on these topics. He currently writes the blog: *The Business Architect*.

POSSIBLE FUTURE

for Enterprise Architecture

By Mark Bodman



As I envision where enterprise architecture will go in the future, parallel activities in meteorology come to mind: how similar the enterprise architecture role is to meteorology and how predicting the future for our occupation is much like predicting the weather. In both meteorology and enterprise architecture, we leverage data, events, historic trends, and patterns to build the models to base decisions on and to realize our expected outcome. Enterprise architects often forget our constituents expect us to answer certain questions with imperfect knowledge. While everyone would like to do their job accurately, imperfect knowledge is the grim reality. I'll address three topics I strongly believe will evolve to fundamentally impact the enterprise architecture role in the next few years:

1. Enterprise architecture and related standards will merge to become mainstream.
2. Enterprise architecture will focus more on business and service architecture, and less about IT.
3. EA tooling will merge and evolve into seamless enterprise management practices.

ENTERPRISE ARCHITECTURE AND RELATED STANDARDS WILL MERGE TO BECOME MAINSTREAM

The outlook for standards in enterprise architecture is promising. There are now many standards and frameworks in play to address slightly different needs and preferences including Zachman, FEA, DODAF, FEAF, PEA, and TOGAF, to name just a few. TOGAF pulled to the front most recently in commercial and some governments, gaining adoption as the leading standard today. Currently at Version 9.1 with more than 26,000 certified architects worldwide, TOGAF adoption continues to grow as a truly global standard with a mature ecosystem of supporting education, practitioners, and tools. Given TOGAF's trends, we can expect this evolution to continue, even slow down, given the large number of stakeholders involved today.

A key area to watch is where TOGAF collides with related or overlapping standards. For example, ITIL addresses overlapping concept with service strategy, design, and transition. ITIL was born from an IT operations point of view, evolving toward business and strategy through ongoing revisions. COBIT, a popular

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IT governance and controls framework, continues to evolve, too, overlapping with both ITIL and TOGAF in key governance topics. Consider the overlaps in ARB (Architectural Review Board) and CAB (Change Advisory Board), for example. It's likely that overlaps between these three standards will continue to evolve and increase, forcing a more comprehensive standard to emerge at some point in the future. At a minimum, better references to one another are needed.

Another area for standards evolution that we can safely predict is the incorporation of business architecture into the standards bodies and frameworks. IT continues to be commoditized by cloud, IaaS, PaaS, and SaaS initiatives that effectively abstract technology implementation from use. Our focus must now orient toward business architecture as a main concern to drive needs for services and technology. Since business funds investments and business decision makers are ultimately responsible for technology investments, it makes sense to close the gaps wherever possible. It astounds me that most IT organizations have little to no business architecture in play, effectively making most current and future technology investment impossible to trace to business outcomes. For this reason, business architecture must become a focus area for standards evolution and EA to be truly relevant to the organization. Currently, both the OMG and Open Group are feverishly defining new business architecture standards. We can expect new standards to emerge that will bring EAs relevance to the business one step closer in the very near future.

ENTERPRISE ARCHITECTURE WILL FOCUS MORE ON BUSINESS AND SERVICE ARCHITECTURE, AND LESS ABOUT IT

This prediction is based on numerous observations over the past few years from analysts reporting through first-hand experiences with a handful of customers leading business transformations today. I imagine a world where an organization can be expressed as a series of holistic models such as the Business Motivation Model. EAs can



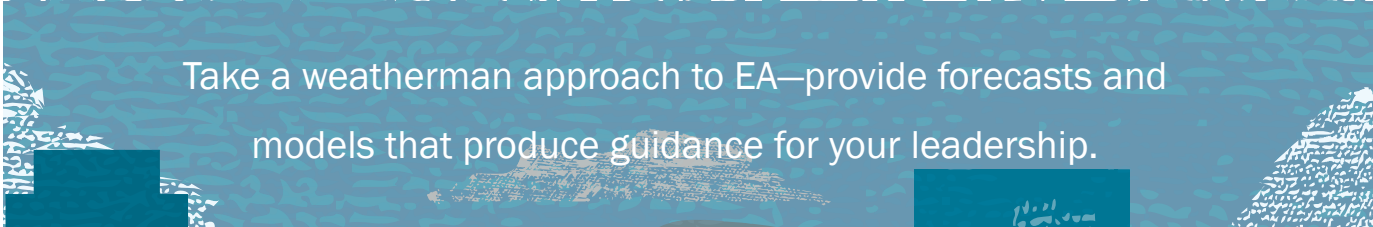
make changes to the model then test the outcomes and impacts in analytics and what-if scenarios. A complete understanding of impacts and alternatives will be necessary. Today, these exercises are rather disparate. I would characterize

most of them as fire drills with all hands on deck to plan or execute.

Another area that will evolve is services modeling, supporting a better modeling scenario for connecting business and resources in a more abstract and contractual perspective. A full-service oriented management paradigm is the critical step to enable an agile organization, similar to how SOA fundamentally changed development to be more agile and configurable for application development. Services defined at the business, applications, information, and infrastructure levels and that express their capabilities in consumer terms can make this possible. Some services can continue to be sourced within an organization, while others will need to be sourced externally as decided upon by core vs. contextual analysis (a key driver).

Service portfolio and catalog management will become the most critical enabler for the business architecture, providing necessary viewpoints to determine the services necessary to achieve a desired business outcome for the business model now and the future. It will become increasingly important to reconfigure businesses quickly, employing the right services that deliver expected business capabilities. Business competition is evolving and changing more rapidly today than ever, and it's not going to slow down. Entirely new markets are emerging from nowhere, threatening traditional market players in every industry. Time to market, quick feedback, and failing or succeeding fast trump lengthy investments in the information age. Service-oriented management abstracts implementation from needs, allowing a rapid reconfiguration without the baggage of understanding service internals. Today's immature service modeling standards will need to be improved.

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Take a weatherman approach to EA—provide forecasts and models that produce guidance for your leadership.

EA TOOLING WILL MERGE AND EVOLVE INTO SEAMLESS ENTERPRISE MANAGEMENT PRACTICES

Tools used by enterprise architects have evolved from largely niche players in the market to being acquired by larger software portfolio players with the most aggressive investments from IBM and Software AG, each of which has started to integrate EA tooling into its larger tools ecosystems. Software AG purchased IDS Scheer in 2009 and Alfabet in 2013. Looking at broader trends, it's clear that integrated EA planning to execution and delivery is occurring in the tools space.

Continuing the trend, we can expect modeling and analysis activities to seamlessly integrate business design through operational implementation with fewer steps and delays, approaching an almost real-time return on investment from a business outcome point of view. While fully integrated scenarios remain elusive today, abilities to deliver this story is just around the corner.

In the past few years, the TOSCA standard has evolved to address the use cases above DMTF with vendors such as IBM and HP participating. They have recently demonstrated their ability to deploy the same solution from a model in their respective cloud platforms. Enterprise architecture and downstream tools are closing gaps to front-end these traditionally disparate steps into a seamless value stream. There are many efforts breaking down traditional silos and accelerating activities, such as in agile development methodologies or DevOps for example.

One last area to watch is how “Big Data” plays a role in enterprise architecture tools. We are only beginning to grasp how to leverage large, unstructured data sets in traditional jobs such as marketing and business intelligence. I envision a time where modeling the enterprise can take advantage of unstructured data, too, such as archived project documents, older Visio diagrams, requirement repositories, and even executive MBOs to understand the enterprise's current and future direction.

Doing so removes painstaking activities to gather and map information into useful modeling notation. Since every organization has a deeply rooted unique lingua-franca of its business, preserving context using inference engines would accelerate enterprise architect tasks.

Expect mobile and social evolutions to impact enterprise architecture, too, most likely in feedback, collaboration, and what-if planning exercises. One large financial firm I worked with has already created an iPad application used by IT executives to view enterprise architecture, provide feedback, and collaborate. While it's rare to see this level of maturity, it exists and provides an indication of things to come.

IN SUMMARY

Enterprise architecture can expect to be influenced by the same forces influencing any practice today. Standards will continue to evolve, merge, and become more commonplace as we are educated on cross-job requirements. As our practice changes under our feet, I encourage you to get involved, help our practice standards evolve, and step outside your comfort zone. Take a weatherman approach to EA—provide forecasts and models that produce guidance for your leadership. Don't expose models directly; focus more on the desired outcomes your leadership is looking for and produce recommendations that can help ensure a successful business outcome. Enterprise architecture has real potential to become the integral component for planning to delivery for any organization. To do so, we must each get involved, embrace evolution, and aspire to close gaps between activities. It's an exciting time to be an enterprise architecture. Enjoy the ride! **A&G**

MARK BODMAN is an enterprise architect at HP Software.

Enabling Organizational Change

BY COREY BALKO

If someone tells you they like change, they are lying to themselves and to you. No one likes change. Change is hard. Change requires effort. What if you have been in an organization for many years and suddenly everything that you have known and come to expect at the office is about to be turned upside down? How are you going to react? What are you going to do about it?

EMBRACE ORGANIZATIONAL CHANGE

Organizations undergo organizational change or a transformation for many reasons such as:

- New leadership
- Customer demands
- Economic or political pressures
- Value transparency

It is up to you—will you be an enabler of the change or a stumbling block? The change is going to happen with or without you, so why not be a team player and make it the most seamless it can be for the organization?

THE 800-POUND GORILLA

All organizations have a culture, which describes the psychology, attitudes, experiences, beliefs, and values of an organization.

When an organization is asked to change, part of its culture has to change as well. Don't underestimate

the culture. Just like an 800-pound gorilla, organizational culture cannot be ignored. The success of organizational change is highly dependent upon how you handle the culture. Use it to your advantage, but how?

COMMUNICATION, COMMUNICATION, COMMUNICATION

If you are proposing a change to the organization or leading the effort, the following steps can help you generate excitement and inclusion:

- Work with the executive sponsors to identify the stakeholders.
- Find out as much as you can about them and how they currently fit into the organization.
- Communicate the purpose in simple terms.
- Empathize with them.
- Explain what's in it for them.
- Allow them to participate in the change so they can feel like they are part of the change and not just the recipient of it.

It's easy to come in as an outsider and prescribe a massive change to the way an organization operates or is aligned, but it will be a colossal failure if you go in with a



“listen to me, I'm the expert” attitude. Remember, people do things for reasons that may not be clear to you. For example, a team within your organization may have decided to use a tool that may not be the best solution from a best practice standpoint. What you may not know is that the budget dollars came from the leadership

responsible for that team or the executive sponsorship that manages the team. So rather than going in saying they have done it all wrong, congratulate them for being creative and fulfilling a need under less-than-ideal situations.

Embrace change! Help your organization identify the areas where change is needed and help IT communicate the business value. **A&G**

COREY BALKO, director of Enterprise Portfolio Management Practice, is an industry-recognized expert that has stewarded savings of over a half billion dollars and reduced the number of applications by 75 percent in a Fortune 50 company. Corey is a fitness fanatic that not only loves to pump iron but also enjoys long-distance running.

THE FEAPO ENTERPRISE ARCHITECTURE PERSPECTIVE INITIATIVE

What is enterprise architecture and what value does it bring to an organization? The answers to these questions often spark debate. In order for enterprise architecture to evolve into a true profession, like accounting or engineering, broad agreement on the nature and benefits of the profession must be reached.

Today individual organizations offer many perspectives on enterprise architecture, but there is no widely accepted international perspective on enterprise architecture from a consortium of organizations. This lack of conformity contributes to the discrepancy in definition and confusion about the field.

We, at the Federation of Enterprise Architecture Professional Organizations (FEAPO), believe that in order for enterprise architecture to evolve into a globally recognized profession, we must reach an agreement on a general perspective for the field of enterprise architecture.

The Federation of Enterprise Architecture Professional Organizations, at the urging of many of its members, agreed in the spring of 2012 to produce this paper to describe the field of enterprise architecture and the value that the enterprise architecture function brings to an organization. The focus of this paper is to provide a unified perspective of enterprise architecture to a wide-ranging audience, not just to the architects themselves, but also to the people who interact with the architects, and others who want to learn about enterprise architecture. After producing a vision for the paper, a small working team created an online survey and requested participation from each of the FEAPO member organizations. The goal of the survey was to capture each organization's perspective in a number of areas of enterprise architecture and compare the similarities and differences.

The results of the survey were compiled, synthesized, discussed, and distilled into a first draft of this paper. So much data was gathered from this survey that it was decided to develop a series of papers on the enterprise architecture profession that will progressively dive deeper into different aspect of this evolving field. This paper is the first of this planned series.

The paper was organized around the major themes or question areas that the survey attempted to understand.

The paper was then circulated to the FEAPO member organizations for further comment. These comments were compiled, integrated, discussed, and distilled into a second draft of the paper. The second draft was then sent to an external group of reviewers for additional comment. These comments were compiled, integrated, discussed, and distilled into a third draft of the paper. This paper will also serve as the foundational information for enterprise architecture in Wikipedia.

This paper is the product of this process but is far from complete. The goal for this initial paper was not complete agreement nor perfection (neither of which is possible) but rather something that all FEAPO member organizations "could live with" as an initial step in a much longer process. This paper will continue to evolve, and new versions will be released in the years to come. FEAPO encourages the reader to view this paper in this light—the first step of a much longer journey. We also encourage all that are interested to become involved in the FEAPO working group that will evolve this paper and become part of this step in the evolution of the profession.

Founded in 2011, FEAPO is an association of organizations whose members have an active interest in the practice and professionalism of enterprise architecture. FEAPO provides a forum to facilitate collaboration among EA-related organizations, to work toward a better integrated community, and to present "one face" for the advancement of the enterprise architecture profession. The advent of FEAPO is welcomed the world over due to a strong desire among practitioners and organizations to professionalize and advance the discipline of enterprise architecture. For more information, please visit: <http://feapo.org/>

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A COMMON PERSPECTIVE ON ENTERPRISE ARCHITECTURE

A Paper Developed and Endorsed by
The Federation of Enterprise Architecture
Professional Organizations

INTRODUCTION

According to Michael Porter (Porter, 2008), more than 80 percent of organizations do not successfully execute their business strategies. He estimates that in over 70 percent of these cases, the reason was not the strategy itself, but ineffective execution. Poor strategy execution is the most significant management challenge facing public and private organizations in the 21st century, according to Gartner (Lapkin & Young, 2011).

There are many reasons for the failure of an organization to bring its strategies to life. Escalating complexity and rapid change have made the development and execution of effective strategy increasingly difficult (Kaplan & Norton, 2006). The field of enterprise architecture (EA) has rapidly evolved to address these challenges.

Enterprise architecture, as a formalized practice, is less than 20 years old (Greefhorst & Propper, 2009). As with any profession or practice, there are many definitions, perspectives, and schools of thought surrounding enterprise architecture. This paper addresses a shared goal among enterprise architects to evolve the practice from a fragmented, often poorly understood field to a “real profession,” on par with well-established professions such as accounting and engineering.

This paper provides a high-level description of enterprise architecture and what it can do for an organization, removing much of the jargon that often surrounds such efforts. It was written to provide insight into what enterprise architects do, what kind of skills are needed, and what results an organization should expect from their enterprise architecture efforts. Note that details of how to establish an enterprise architecture practice within your organization will be covered in a future paper.

SECTION I:

WHAT IS ENTERPRISE ARCHITECTURE?

Enterprise architecture is a well-defined practice for

conducting enterprise analysis, design, planning, and implementation, using a holistic approach at all times, for the successful development and execution of strategy. Enterprise architecture applies architecture principles and practices to guide organizations through the business, information, process, and technology changes necessary to execute their strategies. These practices utilize the various aspects of an enterprise to identify, motivate, and achieve these changes.

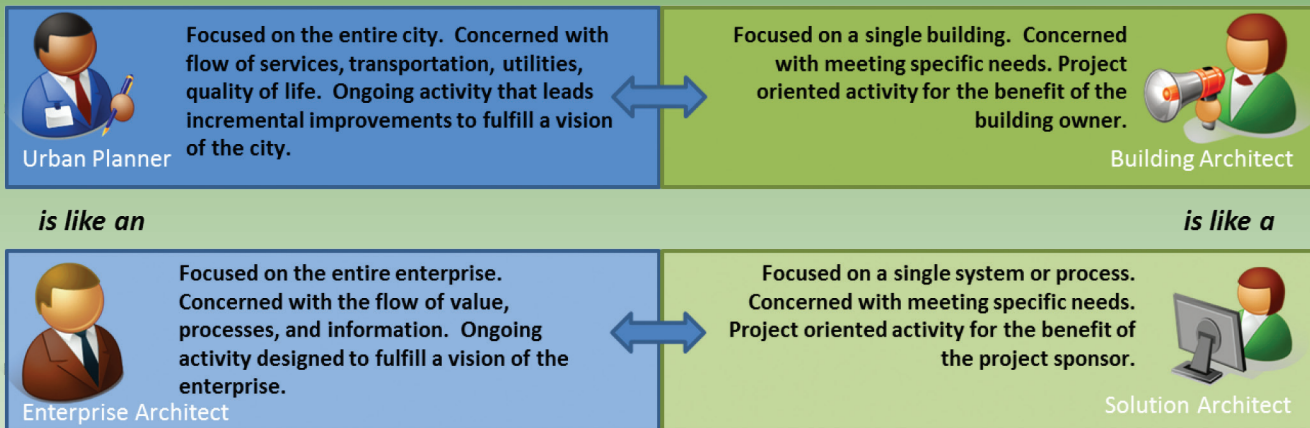
Effective enterprise architecture frequently provides pragmatic artifacts such as requirements, specifications, guiding principles, and conceptual models that describe the next major stage of evolution of an organization, often called the “future state.” Enterprise architecture analyzes the gaps between the future state and the current state, and provides the road maps that support the evolution of the enterprise to the future state by closing the gaps.

Enterprise architecture uniquely fosters dialog to create shared meaning and to deliver shared goals. The primary purpose of describing the architecture of an enterprise is to provide the holistic information and insights to effectively frame the opportunities of the organization and make better informed decisions. With enterprise architecture, organization leaders can more readily improve the effectiveness, efficiency, and responsiveness of their enterprise.

Organizations undertake enterprise architecture (EA) for a variety of reasons. Leaders want their organizations to better perform and better satisfy their stakeholders by doing things differently, and they expect the EA practice to enable such change. Because enterprise architects consider common strategic goals and strong integration between business strategy, enterprise program management, portfolio management, and governance functions, they are able to bridge the gap from

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Figure 1: The Evolving View of Enterprise Architecture



strategy to implementation in an organization.

Importantly, the work done by an enterprise architect is not specific to any one kind of organization. Enterprise architecture provides benefits to government, commercial, military, nonprofit, and composite organizations. In addition, EA can apply its methods at different organizational levels—from departments and divisions up through companies and more complex organizations (such as multinationals and national governments). As a result, EA considers the relationships and value streams that occur within any arbitrary “boundary” as well as outside that boundary.

In this respect, enterprise architecture engenders a practice that not only requires awareness of the organization’s “external” environment, but actively leverages that knowledge to identify improvements “internally.” EA is a highly versatile and useful mechanism for fitting an organization into its environment in the most effective and purposeful manner possible.

Some argue that the practice of enterprise architecture is not really a new discipline but rather a collection of older, existing practices. In many respects this is true. Just as many of today’s established professions evolved from a collection of practices, enterprise architecture is in the process of consolidating, enhancing, and adding structure to many practices that have been performed to different degrees in organizations for decades. As the enterprise architecture practice evolves into a more formalized profession, the link that EA could (and many would say should) have with enterprise strategic planning is beginning to be better understood in many

organizations today.

One frequently used analogy is the comparison of an enterprise architect to an urban planner. As figure 1 implies, the building architect is analogous to the solution architect in that both are typically concerned with the construction of a single entity or system. The urban planner is somewhat analogous to the enterprise architect and enterprise architecture team in that the urban planning team needs to understand what the building architect (solution architect) does, but also needs to understand a wide range of topics that the building architect doesn’t need to deal with—things like the vision of how the urban area should evolve, the safety and livability of the urban area, urban infrastructure capacity and modernity, urban systems interactions and integration, and many other areas.

In many respects, enterprise architecture professionals are the urban planners for the enterprise.

Enterprise architecture as a practice meets an emerging need in our rapidly changing world. Any area of an organization that has to deal with rapid change and a complex set of challenges can leverage enterprise architecture. This ability to cope with complexity amidst change is driving the evolution of EA.

Enterprise architecture rose to prominence when organizations began to cope with rapid changes in technology and diversity in operating models. The business needs around systems integration, the shift from mainframe computing, and the emergence of personal computing were sufficiently complex to push organizations to find

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systematic solutions to the problems of complex change.

The scope of enterprise architecture in some organizations today is maturing. All kinds of organizations, from commercial businesses to government agencies, find themselves needing to cope with complex changes in order to quickly react. The ideas used by enterprise architects are not technology specific, and these expert change agents have found their skills and methods to be in demand well beyond technology settings. Enterprise architecture provides a wide array of services such as helping with broad changes in business and organizational models, improving partner relationships, implementing strategies, and addressing changing stakeholder demands. While many of the existing methods and tools were developed with technology change in mind, these tools are rapidly evolving to address such nontechnical concerns.

The individual models produced in the EA process are arranged in a logical manner, and this provides an ever-increasing degree of detail about the enterprise, generally including (but not limited to):

- Enterprise goals and objectives
- Enterprise capabilities, values streams, and information
- Enterprise portfolio of business solutions
- Enterprise technologies and resources

The term “enterprise architecture” has various uses. In some cases, EA practices may focus on the outputs (“the noun”) rather than the practice of EA. This paper primarily uses the term “enterprise architecture” to refer to a practice (“the verb”) rather than outputs or deliverable artifacts. Practitioners find that focusing on enterprise architecture as a continuous practice allows EA guidance to evolve in response to the desire for particular business outcomes. A continuous process provides clarity for the ongoing transformation of an enterprise. See figure 2.

Ongoing Change

One element worth noting is the potential for enterprise architecture to be a mechanism for transformational change and adaptation in an organization. The environment “outside” an organization is always changing.

Figure 2: The General Process of Enterprise Architecture



Responding to that change results in a steady stream of new products, new consumers, new partners, and new ways to do business. Organizations must “dance to the new music” or risk becoming inefficient or uncompetitive. Enterprise architecture is quickly becoming an essential feature of companies and organizations that evolve to meet changing needs.

Adaptation, by itself, is not the goal: nimble organizations are. But organizations are simply groups of people, and helping people to adapt requires making changes. Sometimes, small changes, like a new product or a feature in a product, are sufficient. Sometimes, the company itself has to change. For example, an organization may need to outsource (or insource) a part of the business to stay competitive. Perhaps it needs to open up sales in new markets, or distribute production among suppliers in a new way, or merge with a former competitor or supplier. Nearly every large organization has dealt with these changes, often many times.

Changing an enterprise is not just the job of enterprise architecture, and in fact, most organizations “execute change” without enterprise architecture involved. Those that are beginning to use EA, however, have a distinct advantage. EA provides a repeatable set of techniques that allow an organization to design its own future, plan for its evolution, and successfully implement these changes. The result is an organization that is

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simpler to operate, more nimble in the marketplace, and quicker to seize opportunities.

With enterprise architecture involved, organizational changes are completed more quickly, while protecting and enhancing shareholder value. On the opposite end of the spectrum, organizations that change without EA often become frail and cumbersome over time. These organizational changes can be dramatic, with large-scale reorganization of people, systems, and accountabilities. They can also be gradual and steady, involving hundreds of small, nondisruptive steps. Regardless of the approach taken, change is often complex and error-prone. Enterprise architecture, through continuous evaluation and adaptation of the enterprise, reduces the cost of change and improves the chances for success.

Enterprise architects, used correctly, are able to employ a wide array of techniques to bring about changes, both dramatic and incremental. These techniques are often discussed in the context of four “types” of architecture that are all included within the scope of EA:

- Business architecture is used to design competitive structures and processes, leverage existing strengths, and identify potential investment opportunities that advance the business’s objectives and drive innovation.
- Information architecture accelerates the availability, consistency, and quality of rapidly growing volumes of information.
- Applications architecture describes the behavior, structure, and interrelationships of the applications used in an organization and their interactions with information, business processes, and the people who use them.
- Technology architecture brings new and existing technologies together in a rich yet consistent mosaic to ensure security, availability, and reliability.

A fifth “type” of architecture, often called solution architecture, is composed of all four of the above types, but operates at a tactical level below enterprise architecture, focusing on the scope and span of a selected business problem. For a given organization, the EA function may partition its scope differently to accommodate the wide variety of stakeholder concerns.

Transformational Change

Regardless of whether an organization undergoes a large and dramatic reorganization or a steady series of nondisruptive tweaks, enterprise architecture has the opportunity to contribute by finding and expressing transformational opportunities. These are opportunities to transform beyond the typical areas of responsibility and alignment by addressing the challenges of new business models. For such larger changes, the planning for transformation is continuous, but the transformation itself may occur in a short time frame.

Transformational change, when conducted under the rigorous lens of enterprise architecture, uses a methodical approach to understand the existing enterprise and to create measurable and clearly aligned change programs. This methodology reduces risk and speeds up the transformation process. Transformational changes typically include large mergers or acquisitions, rapid adoption of new business models, or the shift from one overarching operating model to another.

With transformational change being demanded by the ever-increasing speed of business, enterprise architecture has had to change as well. While the enterprise architecture practice in the past focused primarily on the technological aspects of change, the practice is quickly evolving to use a rigorous business architecture approach to address the organizational and motivational aspects of change as well.

Enterprise architects, in this new mold, are evolving to leverage cross-functional business acumen as well as cross “domain” understanding within both business and technology. Transformational enterprise architecture coordinates enterprise-wide efforts that allow the benefits of transformation to be realized as quickly as possible without shying away from the difficult work of process improvement, clarification of decision structures, and systems integration.

SECTION II:

WHAT DIFFERENTIATES THE ENTERPRISE ARCHITECTURE PRACTICE FROM OTHER FUNCTIONS AND PRACTICES IN AN ORGANIZATION?

Creating an effective business strategy is difficult. It is also difficult to make the needed changes to an organization

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to bring that strategy to life. Enterprise architecture requires a specific mix of skills and abilities, combining the mindset of an engineer with the business awareness of an operational leader, and adding in the innovative creativity of an entrepreneur. Enterprise architecture gives powerful tools and methods to these unique individuals, allowing them to do more than offer tiny improvements or even to optimize investments.

Enterprise architecture is both an art and a science. Enterprise architects guide stakeholders within an organization to look across systems and silos to envision change with far-reaching enterprise implications. These talented practitioners help leaders to consider alternative ways in which that change can happen, and they are able to dive to the deepest details needed to ensure that business and process changes are properly constrained and executed. From the highest levels of change (changes in the business models and value streams) to the most detailed minutiae like the use of specific tools or technologies, the enterprise architecture process offers an effective and needed complement to strategic planning by doing more than describing a series of projects. Enterprise architects are comfortable with uncertainty and bring a socially aware approach to addressing difficult and ill-defined complexities.

To understand what is meant by this statement, let's go back to the urban planning analogy. The mayor and city council (the C-level executives) work with a strategic planning group to develop a strategic plan for the city. The urban planner then works closely with elected officials, civic leaders, civil engineers, building architects, and community groups to help develop and implement the city's strategic plan over time. Without the urban planning team as the bridge between the strategic vision and the people who implement aspects of the strategic plan (building architects, road and infrastructure architects, engineers, etc.), there would be little or no coordination between the people at the implementation level and no city-wide analysis, design, and planning to ensure an effective and efficient implementation of the city strategic plan.

An enterprise architecture practice collaborates with many interconnected disciplines including performance engineering and management, process engineering and management, IT and enterprise portfolio management,

governance and compliance, IT strategic planning, risk analysis, information management, metadata management, and a wide variety of technical disciplines as well as organizational disciplines such as organizational development, transformation, innovation, and learning. Increasingly, many practitioners have stressed the important relationship of enterprise architecture with emerging holistic design practices such as design thinking, systems thinking, and user experience design.

SECTION III:

WHAT VALUE DOES ENTERPRISE ARCHITECTURE BRING TO AN ORGANIZATION?

An EA practice delivers business value by producing several results, including but not limited to:

- An articulation of the strategic requirements of the enterprise
- Models of the future state, which illustrate what the enterprise should look like across all EA viewpoints in support of the business strategy
- A road map of the change initiatives required to reach that future state
- The requirements, principles, standards, and guidelines that will steer the implementation of change initiatives

While these outputs are often the visible “things” created by enterprise architects, they are created in service of specific outcomes. Enterprise architecture exists to help deliver an array of outcomes including, but not limited to:

- Improvements to the effectiveness, efficiency, and agility of the enterprise
- Innovations in the structure of an organization
- Improvements in the capability of continuous organizational innovation and change competency
- The rational centralization or federation of business processes
- Improvements to the quality and timeliness of business information
- Clarification and articulation of business rules

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- Alignment of spending so that money spent on business initiatives and systems actually delivers on the strategic intent

There are many different ways to use this information to improve the functioning of an organization. One common approach is to maintain a description of the enterprise that represents a “target” or “future state” goal. A set of intermediate steps is created that illustrates the process of changing from the present situation to the target future state. These intermediate steps are called “transitional architectures” by some in the field.

The value of enterprise architecture is measured in many ways. In most cases, the notion of “value” includes measures that are nonfinancial as well as financial measures. When discussing the value of strategically oriented functions like strategic planning or urban planning, a longer-term value understanding is essential. Strategic planning alone does not produce a directly measurable return on investment (ROI). However, the successful execution of the strategic plan in the form of projects that are well aligned with the strategic plan produces benefits on many levels to the enterprise.

A formal enterprise architecture practice or group can provide for the efficient, effective, and consistent analysis, planning, design, and implementation of strategic needs. The lack of a formal EA practice implies that the needed bridge between strategy and execution either does not exist at all or exists in fragmented pieces in the organization.

The enterprise architecture practice can have a unique vantage point across an enterprise. That insight and viewpoint are necessary to help identify and develop areas of possible innovation.

MORE THAN A FAD

The trends and needs of business are constantly changing. Just a few years ago, organizations were focused on agility and manageability as core issues. After that, the focus shifted to security. The current management trend is around innovation. Regardless of which one of these trends may be motivating change in an organization or what trends may emerge in the future, enterprise architecture is a key element enabling rapid and rational changes in businesses, government, nonprofit organizations, and any other kind of human enterprise.

CONCLUSION

Enterprise architecture is a useful and unique practice. It is quickly becoming a core competency for organizations dealing with the complexity of overwhelming change. The continuous and ongoing application of enterprise architecture solves one of the most difficult challenges of modern enterprises: making sure that senior leaders can bring about the changes needed to deliver the strategies they have promised to their stakeholders. The unique blend of skills demanded by enterprise architecture, including business, information, and technology competencies, and the carefully engineered and proven methods they employ allow enterprise architects to address the obstacles to strategic change. Commercial, government, and nonprofit organizations throughout the world are successfully using enterprise architecture to adapt to the ever-increasing demand for change.

FUTURE DIRECTIONS

The seventeen professional organizations of the Federation of Enterprise Architecture Professional Organizations (FEAPO) authored and developed this paper. FEAPO, a worldwide association of professional organizations, was established in 2011 to provide a forum to standardize, professionalize, and otherwise advance the discipline of enterprise architecture.

This paper is the first of a planned series of papers on the enterprise architecture profession that will progressively dive deeper into various aspects of this evolving field. The initial papers will explore current and emerging issues and trends surrounding many of the topics highlighted in this paper. For more information on FEAPO and how to become involved in these and other initiatives, please visit www.feapo.org. **A&G**

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November 7

<http://campconferences.com/events/2013/leadership2.htm>

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