

Enterprise Architecture 3.0: Designing Successful Endeavors

Leonard Fehskens

Chief Editor, Journal of Enterprise Architecture

Version of
23 July 2015

“Truth in Presenting” Disclosure

- ❑ The content of this presentation is not a position of, nor does it imply an endorsement of this content by, the Association of Enterprise Architects.
- ❑ The content of this presentation is not an editorial position of, nor does it imply an endorsement of this content by, the Journal of Enterprise Architecture.
- ❑ This is a work in progress that continues to evolve.

- ❑ This talk is organized as six “chapters”:
 - I – Introduction and a Context for EA 3.0
 - II – Design and Architecture
 - III – A Sketch of EA 3.0
 - IV – Errors of Omission and Errors of Commission
 - V – Constraints as the Medium of Design
 - VI – Wrapping Up

The difficulty lies not so much in developing new ideas as in escaping from old ones.

John Maynard Keynes

The real act of discovery consists not in finding new lands but in seeing with new eyes.

Marcel Proust

My Ulterior Motives

- ❑ My intent in this talk is not so much to get you to adopt these ideas as it is for you to understand them and then think about your ideas about EA and why you believe them.
- ❑ My goals in pursuing this line of inquiry were threefold: starting from the smallest possible set of as general as possible assumptions, derive a concept of architecture that has three properties:
 - it is applicable to any form of human endeavor
 - it has a readily apparent and compelling value proposition
 - it can serve as the foundation of an umbrella profession that includes as specializations all extant concepts of enterprise architecture and business architecture practiced today.

- ❑ Why is it necessary or appropriate to consider “upgrading” to a fundamentally different way of thinking about enterprise architecture?
- ❑ The IT-centricity of the conventional wisdom on Enterprise Architecture is increasingly recognized as not well-suited to addressing “whole of enterprise” concerns, and there is increasing recognition that commercial business is not the only form of enterprise that can benefit from architectural thinking.
- ❑ Many people have argued that their success using the conventional wisdom on EA for other than IT transformation in the commercial business context is evidence that the conventional wisdom is not IT-centric and is in fact fully general.
- ❑ To this I respond that they have succeeded in spite of the convention wisdom, not because of it, and that their efforts are much like having a suit fitted by Zumbach the Tailor.
- ❑ Regardless, when compared to other well-established professions, EA as generally practiced today looks much more like a specialization than a profession.
- ❑ Call the current conventional wisdom on EA, i.e., enterprise architecture as understood and practiced today, “EA 1.x”.

- ❑ Is EA as typically practiced today well suited for “whole of enterprise” concerns?
 - Yes
 - Not sure
 - No
 - Don’t understand the question

Temptations to Resist

- ❑ Some of the ideas introduced in this talk will seem similar to ideas familiar from EA 1.x and related subjects.
- ❑ Please resist the temptation to interpret them as being the same ideas, or to interpret them in the frame of EA 1.x. To help you do so, I have deliberately used different words to denote the ideas of EA 3.0.
- ❑ More importantly, ***please do not misconstrue this talk as arguing that EA 1.x is “wrong”, that it is not enterprise architecture, or that it has no utility or value.*** That is **not** what this talk is saying!
- ❑ I will later talk about how the ideas of EA 3.0 relate to the ideas of EA 1.x.

- ❑ The numerous attempts to “spin off” “business architecture” as a distinct discipline, and the questions this raises about its relationship to enterprise architecture, are indicative of this trend.
- ❑ Extrapolating this trend to a possible future for EA:
 - Despite numerous fringe efforts to position EA as “not an IT thing”, EA is unable to escape its association with IT and fragments into E(BusinessInformationSystems)A and BA. As a synthesis of agile, cloud, apps, and mashups comes to dominate the “front office”, E(BIS)A is relegated to the “back office”.
 - The BA community, in an attempt to demonstrate immediate added value and not threaten existing power structures, focuses on a purely analytic concept of architecture, positioning BA as a “decision support” tool, basically a form of business asset and capability configuration management.

- ❑ Is business architecture part of enterprise architecture, or vice versa?
 - Business architecture is part of enterprise architecture
 - Enterprise architecture is part of business architecture
 - Enterprise architecture and business architecture are independent of one another.
 - Not sure
 - Don't understand the question

- ❑ The conventional wisdom on EA is “a mile wide and an inch deep”. I explored the reasons for this in my talk “Why We Can’t Agree on What ‘Enterprise Architecture’ Means, and Why That’s OK, at Least for Now”.
 - The Open Group Conference Cannes, April 2012.
 - IRM UK EAC Europe 2013, London, June 2013.
- ❑ The EA community seems to respond to this diversity of opinion by pitting various different sets of assumptions (i.e., ideas about what EA is or is for) against one another in a contest to find the one that is “right”, rendering all the others “wrong”.
- ❑ This is in contrast to developing a system of umbrella concepts that would allow all of these “variations on a theme” to be thought of as legitimate forms of enterprise architecture.

Avoiding the EA 2.0 Scenario

- ❑ While there is an enormous diversity of concepts (“definitions”) of enterprise architecture, they all seem to be variations on a single theme:
 - Facilitating the success of an enterprise
- ❑ They differ in the (often tacit) assumptions they make about:
 - What constitutes an enterprise
 - What it means for an enterprise to be successful
 - What factors contribute to success
 - The means by which these factors are to be addressed
- ❑ Note that these assumptions can, and often do, presume on stakeholder prerogatives.

- ❑ Do you agree that enterprise architecture is ultimately about facilitating the success of an enterprise?
 - Yes
 - Not sure
 - No
 - Don't understand the question

The EA 3.0 Elevator Pitch

- ❑ No matter what you are trying to do –
- ❑ No matter what it means to succeed at what you are trying to do –
- ❑ You will not succeed at what you are trying to do unless you do everything that is essential to success.
- ❑ While this may sound trivial, it is undeniably true.

- ❑ Confident that you always do everything essential to the success of your endeavors?
- ❑ Confident that you never do anything that jeopardizes the success of your endeavors?
- ❑ Confident that you never commit time, resources and effort to things that are not essential to the success of your endeavors?

- ❑ What if you could be confident of all these things?

- ❑ Suppose we assume only that:
 - The primary goal of all endeavors is to be successful, in whatever way the endeavor itself defines success, and regardless of the nature of the endeavor.
- ❑ Suppose then that we set aside everything we already “know” about enterprise architecture and undertook to (re)design it from scratch, based on the above concept?
- ❑ What would such a discipline look like? Could such a profession include all the various ideas of what enterprise architecture and business architecture are or should be as specializations?

- ❑ Should our concept of enterprise architecture be more generally inclusive, more specifically focused, or is it pretty much right as is?
 - Be more generally inclusive
 - Be more specifically focused
 - Is pretty much right as is
 - Don't understand the question

- ❑ Endeavor
- ❑ Artifact
- ❑ Purpose and Intent
- ❑ Design
- ❑ Fitness for purpose
- ❑ Essential (vs. fundamental)

- ❑ Dictionary definition: “an attempt to achieve a goal”
- ❑ An endeavor is a concerted effort by people to achieve some outcome. The involvement of people is essential.
 - The reason for using the word “endeavor” is to avoid all the irrelevant baggage associated with “enterprise”.
- ❑ We generally invest in and undertake an endeavor in the expectation that by doing so we will achieve an at least acceptable outcome.
- ❑ Many large/complex/ambitious endeavors often fail to achieve their desired outcomes.
- ❑ We often deal with such failures by after the fact redefining the actual outcome to be an acceptable outcome.

- ❑ Endeavors are unavoidably unique. Even two nominally identical endeavors cannot take place in the same spatiotemporal contexts.
- ❑ Be that as it may, many endeavors share properties that it is useful to acknowledge. A recurring configuration of properties is often called a “pattern”.
- ❑ Thus, our experience with one endeavor may help us with another.

Endeavors and People

- ❑ An endeavor necessarily involves the participation of people.
- ❑ An endeavor has a purpose that reflects the shared intent of the people participating in it.
- ❑ As such, an endeavor is a concept that exists in peoples' minds, and that is realized by the actions of people.
- ❑ Thus, without people an endeavor cannot exist, and certainly cannot “undertake itself”.

- ❑ It has become fashionable to talk about endeavors as “sociotechnical systems”.
 - The phrase was coined at the Tavistock Institute in the late 1940s specifically to address how people work with technology, not just to be able to label systems comprising people and technology.
- ❑ In much “EA 1.x” practice though, the emphasis is on the “technical” stuff at the expense of the “socio-” stuff.
- ❑ This is understandable, as the “socio-” stuff is much less tractable than the “technical” stuff.
- ❑ The “EA 1.x” community often deals with this by ignoring the difficult “socio-” stuff, or simplifying it to the point where it can be modeled like the rest of the “technical” stuff.
- ❑ For this reason, I prefer to call endeavors “people-intensive systems”. This makes people’s central role in endeavors less easy to gloss over.

- ❑ Do you think that enterprise architecture as typically practiced today adequately addresses “people issues”?
 - Yes
 - Not sure
 - No
 - Don’t understand the question

- ❑ One of the major influences on people's behavior as part of an endeavor is their culture – the generally shared ideas, attitudes, practices, etc., of social group.
- ❑ People may partake of several different cultures at the same time. An organization's culture is not the only source of cultural influence on people who are part of that organization.
- ❑ Deliberately avoiding people and cultural “issues” because they are “difficult” or because “nothing can be done about them” often leads to inadequately addressing things that are essential to success.

The First Person Plural Perspective

- ❑ Note how many times the pronoun “we” occurs in this talk.
- ❑ This first person plural perspective is both inherent and pervasive in the EA 3.0 concept of architecture, i.e., architecture applied to any form of human endeavor.
- ❑ Such a concept of architecture is necessarily “people-centric”.

- ❑ This talk does not use “artifact” to mean a document or deliverable representing or expressing some aspect of an architecture, as some in the EA community use it.
- ❑ This talk uses “artifact” to mean any “made thing” – an artifact is something that we (people) have made; i.e., an artifact is something that does not occur naturally.
- ❑ We make things both deliberately and inadvertently.

- ❑ Do you understand what this talk means by “artifact”?
 - Yes
 - Sort of
 - No

Purpose and Intent

- ❑ In this talk I will use the words “purpose” and “intent” to mean two different things.
- ❑ People have intent; intent is a cognitive act.
- ❑ Artifacts have purposes; purposes are ascribed to an artifact by people.
- ❑ For the time being, consideration of the issue of the purpose of naturally occurring things is deferred.

- ❑ Do you understand the difference between what this talk means by “intent” and what it means by “purpose”?
 - Yes
 - Sort of
 - No

- ❑ This talk uses “design” in the sense of these definitions from the Oxford Dictionaries:
 - verb: “Do or plan (something) with a specific purpose or intention in mind”.
 - noun: “Purpose, planning, or intention that exists or is thought to exist behind an action, fact, or material object”.
- ❑ “A design” is the outcome of the verb form, or a representation of the noun form.
- ❑ As such, “design” is not limited to what happens during the “design phase” of a system development life cycle (SDLC).
- ❑ Indeed, in this sense, almost everything that happens throughout an SDLC involves “design” in some respect.
- ❑ An artifact’s design will often, though not always, be suggestive of the artifact’s purpose, and how it is to be used to achieve its designer’s intent.

- ❑ Do you understand the difference between what this talk means by “intent” and what it means by “purpose”?
 - Yes
 - Sort of
 - No

- ❑ We design artifacts with purposes that serve our intentions.
- ❑ We may judge an artifact's "fitness for purpose", i.e., how well the artifact helps us realize our intentions.
- ❑ We will likely judge a paper towel to not be fit for the purpose of driving nails. Similarly, we will likely judge a hammer to not be fit for the purpose of cleaning up spills.
- ❑ The fitness for purpose of artifacts we design, make and use is likely to be critical to the success of our endeavors.

Essential vs. Fundamental

- ❑ This talk uses “essential” and “fundamental” to denote two different concepts.
- ❑ Fundamental is used to denote the roots of a structure’s dependency relationships. The fundamental elements of a structure are the elements that every other element of the structure are ultimately dependent on; if any one of them is not present, the structure “falls apart”, or the other elements “do not work” or “do not make sense”. Fundamental is thus “inward looking”.
- ❑ The implicit referent for this concept of fundamental is “structural soundness” or “conceptual integrity”.

Essential vs. Fundamental

- ❑ Essential is used to denote “necessary and sufficient”. As such, the use of essential requires an explicit referent – “essential to what?”, “necessary and sufficient for what?”. Essential is thus “outward looking”.
- ❑ Anything that is fundamental will also be essential, but many things that are essential will not be fundamental.
- ❑ You cannot determine what is fundamental until you have determined everything that is essential.

❑ Building

- Fundamental: foundation, structural framing
- Essential to a residence: kitchen, bedroom

❑ Calculus

- Fundamental: limits, differentiation, integration
- Essential to electrical engineering: Fourier transform

- ❑ Do you understand the difference between what this talk means by “essential” and what it means by “fundamental”?
 - Yes
 - Sort of
 - No

Ten Ideas that Pervade this Line of Inquiry

- ❑ Creating a foundation for a profession is not the same as creating a foundation for practice, though they are closely related.
- ❑ Without an explicitly articulated and widely shared epistemology, anything we say about enterprise architecture as a discipline can only be opinion, often based on unspoken assumptions.
- ❑ Given the role that people must play in how we conceive and realize our endeavors, we ignore people issues at our peril.
- ❑ Given the role that language must play in how we collaborate on our endeavors, we ignore language issues at our peril.

- ❑ Architecture is a specific kind of design, not something different from design, and it is critical to understand exactly what kind of design it is.
- ❑ Design, and architecture as a kind of design, can be thought of as specifying systems of constraints on subsequent design and implementation.
- ❑ We design so we can make and use artifacts to achieve some outcome.

- ❑ A view of enterprise that is not fundamentally people-centric is fundamentally misguided. If you take the people out of an enterprise all you are left with is a random collection of inert capital assets.
- ❑ As such, enterprise architecture lies at the confluence of the “design sciences” and the “social sciences”, and I use the word “sciences” with considerable reluctance.
- ❑ Architecture (or something else with a different name) has to be about “what matters”, and what “what matters” means cannot be divorced from context.

- ❑ The core ideas of EA 3.0:
 - A successful endeavor requires that everything essential to success be fit for purpose.
 - People are ultimately the means by which endeavors are successful, and thus must be central to our thinking about how we achieve success.

- ❑ Do you agree that for an endeavor to be successful, everything that is essential to its success must be fit for purpose?
 - Yes
 - Not sure
 - No
 - Don't understand the question



Association of
Enterprise Architects

Questions?



Thank You



Association of
Enterprise Architects

Leonard Fehskens

Chief Editor,
Journal of Enterprise Architecture

l.fehskens@globalaea.org

130 Oakview Drive
Cranberry Township, PA
16066 USA

Tel +1 724 538 5773
www.globalaea.org