



The Definitive Enterprise Architecture Blueprint

INTRODUCTION: The CIO's Concern

As we approach a new decade, rapid technical changes and advances present a raft of new challenges for business leaders. For CIOs in particular, the stakes have never been so high; a plethora of new opportunity abounds, but get the dynamic between business and IT wrong, and the company will become fragmented, its tools and process unwieldy and impossible to manage.

A cumbersome legacy enterprise is a ripe target for startups and unicorns intent on digital disruption. However, if such an organization can leverage its market knowledge, influence, resources and data at speed, it will remain ahead of the curve, delivering innovation at the speed consumers desire.

Clearly, an overarching strategy that involves digitalization, improving the customer experience and gaining efficiency needs to be put in place. Aligning technical developments with business directives has become imperative.

An enterprise architecture practice makes it possible to model the entire organization and make informed strategic decisions. If treated as a consultancy within IT, it will provide a holistic view of the infrastructure and organization. From here solutions across the business can be derived with a full understanding of their implications, and an effective realtime analysis of their success.



Five Consequences Of Failing To Align Technology And The Business:

1

Waste, spiralling costs and inefficiency slow the business down

2

A lack of visibility renders management impossible

3

'Dirty data' prevents accurate analytics

4

Unclear direction obstructs innovation

5

Siloed departments hinder collaboration

What is Enterprise Architecture?

Enterprise architecture is a broad term which can mean different things to different people. Yet while there is no universally accepted definition, the phrase typically denotes the analysis, planning and modeling of business structures and processes.

Integral to any organization undergoing digital transformation, enterprise architecture enables

us to manage complexity and interdependencies, influencing and mapping the strategic direction of the business.

Two of the most commonly used definitions of enterprise architecture that are currently used are those provided by Gartner and The Open Group Architecture Framework (TOGAF), both of whom offer slightly different perspectives.



Enterprise architecture is a discipline for proactively and holistically leading enterprise responses to disruptive forces by identifying and analyzing the execution of change toward desired business vision and outcomes.

Gartner®



The term “enterprise” in the context of “enterprise architecture” can be used denote both an entire enterprise – encompassing all of its information and technology services, processes and infrastructure – and a specific domain within the enterprise. In both cases, the architecture crosses multiple systems and multiple functional groups.

TOGAF



Enterprise Architecture In The Digital Age

New technology has far reaching implications. The internet of things big data and artificial intelligence have overhauled the way enterprises are structured. More has become possible, new teams have been created and processes have evolved. All at a pace never seen before.

At the same time, new technology leads to siloes within the organization. Teams working on legacy tech have become isolated, while those at the cutting edge are failing to integrate; toolchain sprawl has become one of the biggest challenges of the day.

IT and development managers often have no idea of which tools are being used where, which renders tracking and managing processes impossible, and leads to a worrying lack of visibility

and accountability. Without a scalable roadmap, new innovations are incorporated ad hoc, and become cut off from the rest of the business – that is if they are incorporated at all.

Furthermore, technical advances are often accompanied by governance and compliance complications – new technology brings new risks, and new procedure. Whether internally or externally enforced, too often organizations are operating in the dark and without an audit trail.

Having become something of a cliché, the mantra ‘adapt or die’ has resonated throughout the fourth industrial revolution. Yet while, new technology might place increasing demands on us, it also provides the opportunity to exploit new tools, processes

and ways of working. The field of enterprise architecture is no exception.

Methodologies including agile and lean have transformed the speed and quality at which we can deliver, and placed collaboration at the heart of what we do.

The role of the enterprise architect has evolved to meet this changes. It is no longer just about data gathering, but also decision making and driving digital transformation throughout the business.

Naturally though, these developments have increased what is expected of us. So fail to deliver and fall prey to unicorns and digital disrupters; consumers will turn to a competitor that can meet their demands.



Need and Opportunity

Enterprises need to find a way to map out all of these new tools, process and technologies, especially as they look to grow, or if they are involved in mergers and acquisitions.

This rapid adoption however is not without challenges. If the data and tools are not properly standardized and aggregated, the benefits are undone and management of the enterprise becomes inefficient and unwieldy.

Moreover, this must be done in a way that is both visible and accessible to anyone looking in, both to encourage collaboration but also by tracking from ideation through to execution. Here we can

establish ways to improve, analyze the implications of any changes and provide a fully auditable trail. In essence, any company leveraging enterprise architecture correctly will be able to improve efficiency, reduce waste and lower costs.

However, an enterprise architecture initiative is not a singular, finite project; something you do once and forget about. Organizations are fluid structures and need to respond dynamically to shifting market conditions. Therefore, enterprise architecture is a continual process, illuminating the impact of any change to the company.



Barriers to Effective Enterprise Architecture

Unclear Direction

Very often a team is given a vague directive that the company needs more enterprise architecture. If this comes from board level, the board want might want to see immediate results.

Therefore, the wheels are set in motion, but often there is not a clear goal place. The organization in question sets about implementing enterprise architecture (or at least trying to implement it) before the company is ready.

Often this boils down to a lack of clear leadership or vision. This in turn leads to a lack of stakeholder buy-in and a negative mindset towards enterprise architecture permeating the company. This can manifest as resistant teams

reluctant to engage, or worse yet, ivory tower architects oblivious to daily operational challenges who isolate themselves behind abstract or obfuscating approaches. When trying to engage stakeholders, it is vital to keep at the forefront of any discussion the reasons for doing enterprise architecture; demonstrate the benefits and long-term intentions. Don't overlook quick wins (if they exist) as a way to gain buy in, but highlight that the main benefits are long-term.

Without fully understanding the overarching intention, any investment in new tools and attempts to impose them on an enterprise creates an added layer of complexity and resistance.



Lack of Visibility

One of the biggest challenges for any company looking to implement enterprise architecture is a lack of visibility across the organization. Often entire teams and departments can become isolated due to geography, technology or function.

These siloes add to complexity, creating inconsistencies with processes and tooling. Without holistic visibility, management can become a high-on impossible task. Data, applications and information can become lost, or changed without any discernible way of tracking it.

Moreover, the implications of change become something of an unknown. And in such cases, mapping from the current 'baseline' architecture to the future 'target' architecture is a futile task.

Consequently, teams operating on the periphery of organizations may well become resistant to the enterprise architecture initiative, or it may even pass them by altogether. This reinforces the sense of isolation, ever widening the gap and creating an increasingly disparate architecture.



Incorrect Tools

Defining strategy, mapping the organization and executing processes all require the correct tooling. Incapable platforms will act as a hindrance and roadblock to enterprise architecture.

The tools must include certain criteria:

- Scalability: the tools must be capable of growing with the organization and adapting to new changes in the business model, market conditions or technical developments
- Automation: to meet the criteria of the digital age, speed and quality have become a prerequisite – if your organization is reliant on manual handoffs, it creates delays and risks losing data
- Usability: not everyone involved in the process is going to be technical or have a background in enterprise architecture, so the tools must be readily accessible and able to present information to nontechnical stakeholders
- Metrics: the most crucial aspect of an enterprise architecture tool is its ability to let users display and analyze the vast quantity of data stored within – if you cannot measure it, how do you know what's working?



Maturity Levels



1. Emergent:

Your Enterprise Architecture program is nascent - mostly undefined and nonfunctional. Agreeing and articulating a clear mission statement and principles, forming the basis of measurable objectives, is a key task at this stage.



2. Developing:

Your Enterprise Architecture program is developing – some basic definition has been undertaken, but the practice is not at a fully operational state and development may not be balanced across the measurement domains required to ensure a successful program.



3. Functional:

Your Enterprise Architecture program is at a moderate state of maturity. While the EA practice is likely to be functional and offering some business value, there is still much work to be done.



4. Performing:

Your Enterprise Architecture program is performing, but there are still gaps and areas for advancement. Common challenges at this maturity level are the ability to measure success with clear performance indicators.



5. Optimized:

The highest level of EA maturity.

Strive to continuously review and improve the way your EA operates, and its measurable impact on the business, to keep pace with rapid change in both the business environment and the technology landscape.

Critical Business Requirements

Even with a plan, vision and strategy in place there are further considerations that need to be in place in order to execute.

It is important to go beyond just having buy in from stakeholders and build team with a mix of skills and competencies. Indeed, to drive enterprise architecture throughout the business, a wider culture of delivery, innovation and creativity should be fostered.

A shift in mindset is also necessary for the organization to move away from the point solutions to an enterprise wide platform and holistic approach that engages the whole business and

eliminates silos. Isolated solutions will ultimately have a negative impact on the business as a whole, adding to the complexity and heterogeneity of the organization.

By contrast the architecture should be bespoke, flexible and designed with the business in mind. This approach extends to methodologies and how they implemented; rather than blindly following a series of methodologies that cannot accommodate the project they should be used to support the enterprise architecture project and provide a strong foundation.

Throughout the process, it is vital not to lose track of the

target endstates, nor to let stakeholders forget what they are trying to achieve. This requires demonstrating value through metrics and making the right connections – linking different areas of the business together.

The results should be predictable and sustainable, enabling faster response to changes in organization strategy, tactics and processes. In doing so you can drive operational efficiency and allow your staff to focus on an innovation and bringing value to the business.



Critical Technical Requirements

A standardized “single source of truth” is the foremost requirement for ensuring consistency throughout the enterprise.

A central repository collates information and will increase visibility across the organization, helping manage risks to business projects and the overall IT landscape.

By ensuring everyone has access to the same information, complexity become manageable and standardized, collaboration is encouraged and it is possible to see who is doing what and when. This means tracking and governance becomes much easier as there will be a full audit trail.

Furthermore, to ensure enterprise architecture initiative to be undertaken in a standardized, consistent and repeatable fashion,

whichever tools you use should be preconfigured with your framework of choice, for instance TOGAF or ArchiMate.

Ideally, within the repository there will be a set of out-the-box templates and models which can be used for strategic guidance and to facilitate the development of the desired architecture. In this way we can ensure a scheme and structure for developing and communicating business plans in an organized manner.

Navigating this database of information is crucial to deriving insights and reporting capabilities. A powerful and reliable views and dashboards system is therefore necessary to cut through the noise and show comprehensive representations of data.



Communicating this information across the business and keeping all stakeholders engaged and supportive of a project is crucial to establishing a feedback loop, which is invaluable for content assessment and decision making. Therefore, it is imperative any platform makes sure content is easily accessible to everyone, irrespective of their department and geographical location.

Having the technical capability to determine the consequences of changes to the architecture, run cross-domain analytics, and establish integrated reporting sits at the heart of any enterprise architecture initiative. Moreover,

impact analysis can be used to identify inconsistencies in the architectural landscape, no matter how big or small, and help us on our way to achieving the pre-identified goals.

Establishing a single document management system eliminates the need to use any other resources when tracking progress. Indeed, failure to centralize documentation will result in a lot of inefficiencies and time wasted. Therefore, it's vital to use a tool that creates, imports and links documents to an object within the repository, and contains tagging capabilities.



Exploit Analytics

Fundamental to effective enterprise architecture is gathering and managing data. Any tool must ensure the fidelity of data input and enable complex modeling. In this way, we can make data driven decisions with confidence in near real-time.

To achieve this, the platform must provide “leading” (in the moment) rather than “trailing” (after the fact) metrics. Without them we cannot make improvements at the requisite pace or understand the implications of any change until it is too late.

Furthermore, the tool must be able to present findings to non-technical stakeholders and provide them with real-time user friendly dashboards. Reporting and dashboards answer the

initial questions that brought us to defining and outlining an enterprise architecture strategy.

Our analytic capabilities must demonstrate the impact of change on the entire business. With holistic transparency, you can locate potential bottlenecks and limitations within the enterprise, while different teams can share data and collaborate on projects with greater ease.

Therefore, the platform we use should be accessible, user friendly and easily configurable, at the same time being powerful, flexible and scalable. This manifests as features such as a structured database, clear coherent graphical representation and open communication channels. Only through exploiting technology in this way can we gather the

requisite data and drive accurate analysis to provide the insight so critical in a digital business transformation.

Moreover, in considering the tool and its complexity we want something that is familiar and requires a lower learning curve. This makes it possible to realize value as quickly as possible and engage a wide range of business centric people. It’s key to create deliverables that customizable; engaging rather than overwhelming content.

In essence the enterprise architecture tool must facilitate the solving of real problems rather than abstract ones, by both technical non-technical users. Consequently, it will be seen as a solution rather than a roadblock to business growth and development.



Continually Review

The final piece of the jigsaw, is to recognize that enterprise architecture is an ongoing practice, rather than something we do once and then forget about. Continually monitoring and reviewing the process to ensure everything is up to date, is a prerequisite for any company looking to retain exemplary levels of enterprise architecture maturity.

Scalable and dynamic implementation and support tools allow us to facilitate business growth and adaptability to evolving market conditions, bringing significant long term benefits to the organization, facilitating continued real-time decision making based on the latest data.

Furthermore, tracking from ideation to execution, enables us to visually roadmap and bring

disruptive trends – artificial intelligence, the internet of things, conversational platforms and so on – into the organization's ecosystem at the right time.

With complete transparency of our architecture, we can define to a granular level how our strategy has, and is continuing to, affect our architecture. However, it is also key to keep user engaged, with accurate, accessible reports so we can maintain the inventory with up-to-date information – if we input bad data we get bad results. Indeed, without stakeholder input, the continuous improvement process falls apart.

Ultimately, it is by maintaining an exemplary state of enterprise architecture that we will demonstrate tangible results and ensure its continued adoption and success throughout the business.



Conclusion

Peace of Mind

A successful enterprise architecture practice will ease concerns about the impact of technology. It will transform the advent of digital disruption into competitive advantage and enable the enterprise to leverage its own strengths.

No longer is a new digital directive something to fear, but something that is embraced. With a clear understanding of their impact on the business, new technical advances can be incorporated into roadmaps and used as a platform for innovation.

While enterprise architecture is not something that will happen overnight, by following a clear plan and strategy you will be able to establish the right tools, processes and mentality to overcome the many inevitable roadblocks.

As you work your way through the different levels of maturity, your organization will become agile, respond faster, and make real-time decisions based on reliable and consistent data.



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