

White Paper

10 Indicators to use as Guidance Prior to Implementing an EA Capability

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Louw is a Managing Partner at CS Interactive Training, a specialist IT consultancy focused on providing methodology consulting, training and systems to organizations who need to build internal capacity within their Analysis, Architecture, Design, and Requirements Management environments. Louw is passionate about all aspects of information management and has had the opportunity to act as strategist, architect, speaker, trainer, analyst, modeler and developer within this field over the past 20 years.

I love my job. I can't say exactly why, but maybe it is because I cannot explain exactly what I do in a 30 second elevator pitch, so my best answer to anyone asking is normally; "I am an Enterprise Architect, I solve problems".

My job is unpredictable; I mostly work on projects, but sometimes get thrown into the trenches next to the operational staff to fight business fires that seem to jump out of nowhere. I normally don't have to wear a suite when discussing application lifecycle issues with the dev teams or when I am doing a Business Intelligence application comparison for the data warehouse team, although I do have to put on a suite when asked to present or review business value chains, role definitions or solution project overviews with senior management teams. I understand technology and keep abreast of changes in the ICT industry, but also have a stack of business books all over the house that gets read on a piece meal basis (the stack are getting smaller, thanks to my iPad with Kindle and Audible apps) to understand the challenges faced by businesses in the 21st century.

As a project manager, I can keep a team of professionals in line and deliver on time (most of the time), but will not try and compete with construction project managers. While as a trainer, I can explain and mentor information management professionals, but will not claim to be an educationalist that can teach any subject at the drop of a hat.

A typical day in my life can be anything from facilitating a workshop, modeling a business process, coaching an architect to managing a project, configuring a data mart, building a web application or

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presenting an architecture training course.

As a consultant, one of the more frequent projects that I am asked to lead or participate in is the establishment of an architecture capability in an organization. In a previous white paper I described the key steps to follow when establishing a capability, but sometimes an organization is not mature enough to sustain a full-blown EA capability.

In this white paper I will focus on the key indicators that I use to guide my decisions with regards to the level of formalisation that the EA capability can achieve. As a consultant and trainer I have the privilege of meeting a large number of architects and other professionals that are adopting Enterprise Architecture practices in their organizations and are facing several challenges in creating a sustainable EA capability.

For the purpose of this white paper I will use the definition of the word **capability** found in the business dictionary (<http://www.businessdictionary.com/definition/capability.html>):

*“**Capability:** Measure of the ability of an entity (department, organization, person, system) to achieve its objectives, especially in relation to its overall mission. “*

What are the goals of an EA Capability?

The best summary of EA Capability goals is listed in the latest COBIT 5 Framework Exposure Draft (<http://www.isaca.org/Knowledge-Center/Research/ResearchDeliverables/Pages/COBIT-5-Exposure-Draft.aspx>). COBIT is an ISACA reference document on the enterprise governance of IT and incorporate more than 15 years of practical usage and application within enterprises and users from the business, IT, security and assurance communities. I have used COBIT since version 3 and each consecutive publication has made it easier to use the standard to assist with the identification of governance processes and goals for EA.

NOTE: *By first identifying the goals or objectives of the EA capability I am trying attempting to root my experience in a bit of theory and also give context that can be applied or formalised by other practitioners.*

In the latest draft release of COBIT 5, the Align, Plan and Organize (APO) process 3 identifies the following management process **goals** for Enterprise Architecture in the organization:

1. An enterprise-appropriate and sustainable enterprise architecture capability is in place (**Management Practices**)
2. A portfolio of enterprise architecture services supports agile enterprise change (**Enterprise Change**)
3. Appropriate and up-to-date domain architectures exist that provide reliable architecture information (**Architecture Information**)

4. A common enterprise architecture framework and methodology as well as an integrated architecture repository are used to enable re-use efficiencies across the enterprise (**Framework & Architecture Repository**)

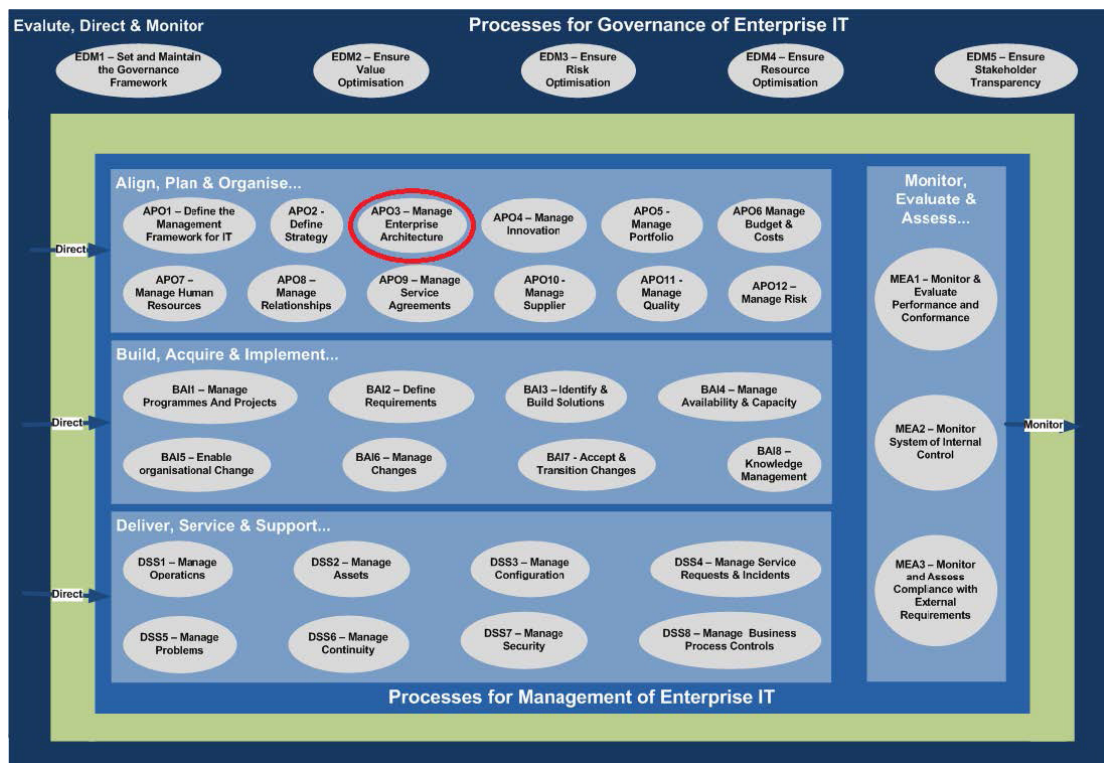


Figure 1: COBIT 5 Governance & Management Processes with APO3 - Manage Enterprise Architecture

For each of the process goals identified above there are also metrics defined in COBIT. The metrics used are applicable to the management team, but as a consultant evaluating to what extent the process can be implemented, they are not very useful.

In the following sections I will discuss the Top 10 Indicators to use when evaluating the goals of an Enterprise Architecture (as defined in COBIT5).

Management Practices

What management practices must be in place to ease the implementation of a sustainable enterprise architecture capability?

As an architect, I have spent a significant amount of time implementing management practices that must be in place to support a sustainable architecture capability. Initially I did not explicitly identify the missing practices, but the challenges we faced on the projects were as a result of not having the relevant practices in place.

Since I first read Jeanne Ross, Peter Weill, and David Robertson's book, Enterprise Architecture as Strategy (<http://www.architectureasstrategy.com/book/eas/testimonials.htm>) towards the end of 2007, it had a significant impact on my approach towards architecture engagements.

A very useful chapter in the book refers to the research performed by the authors on the stages of Enterprise Architecture maturity and how organizations need to master management practices in each stage before moving on to the next. The stages are listed as (1) Business Silos, (2) Standardized Technology, (3) Optimised Core and (4) Business Modularity.

I simplified and interpreted the stages to enable me to use some of the measures as key indicators of sustainability of the Enterprise Architecture capability in the organization impacted by the change.

Key Indicator 1: Is there a governance process requiring Business Cases for process or technology change requests in the organization?

If an organization has a process for creating and building business cases before delivering a service or a product to a client, then implementing an EA practice will be smoother.

TOGAF 9 includes a business driven Enterprise Architecture Development Method (ADM) and a business case forms the basis for a range of decisions that must be taken during the ADM cycles.

Key Indicator 2: Does the organization follow a standardised project methodology?

Project management is a key method used in organizations to plan and manage change. If an organization does not have a structured project management environment then it has to be implemented before, a TOGAF architecture initiative can be launched.

Key Indicator 3: Is there an IT Steering Committee?

An IT steering committee can form the basis of a future architecture board or similar governance structure. Architecture requires guidance and accountability from executives as decisions taken have an impact across the organization.

Key Indicator 4: Does the organization fund enterprise applications from a centralised fund?

Managing a central capital budget allows more control over standards and architecture decisions have a greater impact on the business.



TIP: A great example of how to build a business case and manage centralised funding and value governance can be found on the ISACA website, the Val IT framework 2.0 (<http://www.isaca.org/Knowledge-Center/Research/ResearchDeliverables/Pages/Val-IT-Framework-2.0.aspx>)

I prefer to use the Prince2 method aligned with TOGAF 9 for defining and managing architecture projects (<http://www.prince-officialsite.com/>)

Enterprise Change

Is enterprise change supported by Enterprise architecture services?

The next set of indicators is focused on measuring the impact that the capability will have on the rest of the organization. Again I selected only three indicators to use as a guide before the architecture capability is implemented. Following implantation I suggest using the US Department of Commerce Architecture Capability Maturity Model (http://ocio.os.doc.gov/ITPolicyandPrograms/Enterprise_Architecture/PROD01_004935) as a simple survey mechanism that can be deployed in the organization to measure the maturity using the following nine aspects:

1. Architecture Process
2. Architecture Development
3. Business Linkage
4. Senior Management Involvement
5. Operating Unit Participation
6. Architecture Communication
7. IT Security
8. Architecture Governance
9. IT Investment and Acquisition Strategy

Key Indicator 5: Is there an established Enterprise Architecture or IT design process somewhere in the organization?

Even if there is no architecture practice established in an organization, individual architects working on projects might be following formal or informal architecture processes. It is easier to formalise or standardise processes in an organization, than implementing new processes.

Key Indicator 6: To what extent are the senior managers of the Operating Units involved in the establishment and on-going development of Enterprise Architecture?

The level of understanding and involvement of the senior management team with the Enterprise Architecture establishment has a direct relation to the value that EA can provide to the business.

Key Indicator 7: To what extent is the concept of Enterprise Architecture accepted by Business Operating Units?

The levels of success of Enterprise Architecture in an organization are determined by the type of involvement received from the business operation. EA cannot make operational decisions or question business strategies without giving something in return.

Architecture Information

Is reliable architecture information available from appropriate and up-to-date domains?

Out-of-date or inaccurate architecture models undermine the value of the architecture information in the organization. In organizations with decentralised teams, the challenges are even greater to keep information up to date.

Key Indicator 8: What Blueprints, standards and specifications are available in the organization?

Domain architecture or solutions architecture teams might already have a range of architecture blueprints available (blueprints refers to the completed documents that are prepared using the Architecture Framework processes, templates and forms). If solution blueprints or standards are available and up to date, then the EA team will be able to more easily construct an as-is architecture of the organization.

EA Framework & repository

Do you use an EA Framework or integrated architecture repository to enable re-use across the enterprise?

The level of re-use of architecture content is very much dependent on either people following a process and the governance processes ensuring compliance or the use of an integrated architecture repository with a standard meta-model and views.

Key Indicator 9: Did the architecture team agree on a single standard repository or an integrated Architecture framework for the organization?

If an integrated EA framework like TOGAF is adopted by the organization and adapted for its needs, then all architecture developed using the same set of processes, standards and templates will have similar architectures. Re-use can be increased by magnitudes if a single architecture repository, configured to be aligned with an architecture framework is implemented.

Key Indicator 10: How many architects are certified or trained using industry frameworks and tools?

The quality of implementations and the establishment of the new EA capability are very dependent on the skills and experience of the architects using the tool or following the process. Experienced architects can manage ambiguity better and thus require fewer governance and control processes than less experienced architects.

Conclusion

In the table below I recap the Key Indicators (KI) that can be used to determine to what extent an EA practice can be established in an organization. If any of the first four KI's are not available in the organization I would not attempt a formal EA capability, but would rather put the effort into first ensuring that those management practices exist to a level of maturity.

KI's in Enterprise change management will determine to what extent you can claim that the Enterprise Architecture influences or changes business practices, not just IT practices. With low acceptance in business or senior management, I will focus my effort on strengthening the IT architecture capability and ensure that solutions design is an established practice.

The Architecture Information area's Key Indicator will not really influence the establishment of the practice directly, but to create a sustainable practice quality information is required and if it is readily available then the stakeholders are more likely to share and participate. The alternative is also true. If the current architecture information (from whatever source) is not available or not trusted, then the practice will have difficulty in building good trusting relationships with stakeholders.

If there are multiple frameworks or architecture repositories in use in an organization, I focus on standardising the tools and processes, and train the architects on a standard (I prefer TOGAF) to ensure that I will be able to communicate with the team without misunderstandings.

Management Practices	Key Indicator 1: Is there a governance process in the organization requiring Business Cases for process or technology change requests in the organization?	Yes / No
	Key Indicator 2: Does the organization follow a standardised project methodology?	Yes / No
	Key Indicator 3: Is there an IT Steering Committee?	Yes / No
	Key Indicator 4: Does the organization fund enterprise applications from a centralised fund?	Yes / No
Enterprise Change	Key Indicator 5: Is there an established Enterprise Architecture or IT design process somewhere in the organization?	Yes / No
	Key Indicator 6: To what extent are the senior managers of the Operating Units involved in the establishment and on-going development of Enterprise Architecture?	High / Med / Low
	Key Indicator 7: To what extent is the concept of Enterprise Architecture accepted by Business Operating Units?	High / Med / Low
Architecture Information	Key Indicator 8: What Blueprints, standards and specifications are available in the organization?	All / Most / Few / None
EA Framework & repository	Key Indicator 9: Did the architecture team agree on a single standard repository or an integrated Architecture framework for the organization?	Yes / No
	Key Indicator 10: How many architects are certified or trained using industry frameworks and tools?	All / Most / Few / None

Table 1: Summary of Key Indicators

As a final point I just want to stress that this is by no means a scientific measure to use, and if you spend more than a day or two in puzzling it out, then you are overthinking the problem. The important point I am trying to make with this white paper is that Enterprise Architecture cannot be viewed in isolation and that a few core practices and capabilities must exist in the organization to make the EA effort sustainable.

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