

White Paper

10 Steps to Follow Before Initiating a TOGAF® 9 Project

WP0004 | July 2011



Louw Labuschagne CBPA®

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.

A significant number of Enterprise Architecture (EA) projects fail to achieve all of their objectives or do not realize the benefits that the architecture teams initially defined. This happens despite the fact that the teams are using good architecture frameworks and methods as guidance when executing the actual project.

When browsing the blogosphere or listening into social media networks you will hear the complaints and frustrations of architects and designers who are providing products and services to customers and stakeholders who don't understand the value or are not interested in what the architecture teams are delivering.

If you then follow the replies on forums and read the EA blogs, you will find that there are enough silver bullets available to start a small war, but while architects, consultants and vendors are fighting it out, the frustrated business client is still not any closer to solving his business problem.

Any number of architecture development approaches, tools and techniques will support the architecture team with the development of the architecture itself, but we have not found a large number of proven approaches that will assist the team in getting themselves organized before they start with an architecture initiative.

I have found that the failure rate of projects can be decreased when teams start by positioning themselves in the organization, with a clear understanding of their own value proposition, before attempting an architecture project or initiative.

Access our **free**, extensive library at
www.orbussoftware.com/community

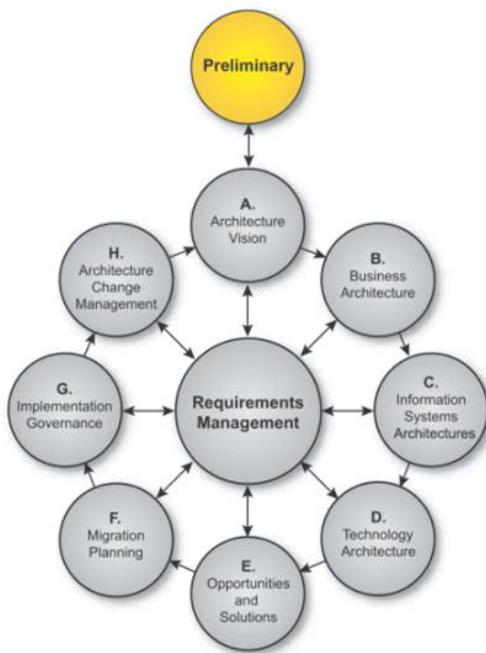


Figure 1: TOGAF 9 ADM

The focus of this whitepaper is to highlight the 10 key steps that teams can follow to help them deliver a successful TOGAF 9 project. The steps are adapted from The Open Group Architecture Framework¹ (TOGAF) version 9, which is the de-facto industry standard framework adopted by organizations and practitioners across the world, with more than 16 000 practitioners certified on the TOGAF standard.

Using TOGAF, as an Enterprise Architecture (EA) practitioner, you can leverage the combined knowledge and experience of all the organizations and volunteer architects who created the standard based on their experience and practical lessons learned.

Step 1: Define your understanding of the Organization Enterprise

Architecture practitioners are very familiar with how an organization operates internally, including a good understanding of the processes, systems and technology deployed within the organization, but at the same time I find that very few practitioners really understand **why**.

The answer to the question “**why are we in business?**” will give the architecture team insight into the business goals and allow them to more clearly identify initiatives that will have a real impact in the organization. Most business people, including your CxO management layer, are primarily concerned with reducing cost, managing risk and increasing value when authorising new initiatives. The team must be able to show how they can add value to the initiative, and if they do not understand the goals of the business, they cannot explain how the architecture work will support the initiatives.

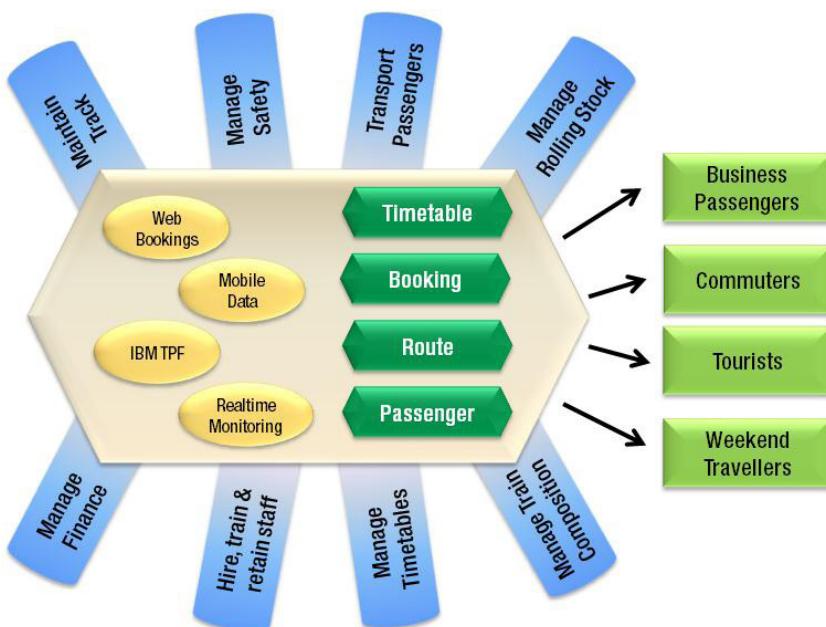


Figure 2: Organization Example: Rail Company

¹ TOGAF® is a registered trademark of The Open Group in the United States and other countries. All other trademarks are the property of their respective owners.



TIP: Read any business plans, strategic session output documents and discussion documents with your stakeholders when scoping a new initiative. I use the TOGAF 9 Business Principles, Goals & Drivers template to document my understanding of the business (Use the same TOGAF 9 template to document the output from Step 1- 4) (<https://www2.opengroup.org/ogsys/jsp/publications/PublicationDetails.jsp?catalogno=i093>). Enterprise Architecture as Strategy (Ross, Robertson & Weil) is a great resource to use as a basis for understanding the link between the “why” and the “how”, with great example operating models that can be used as a single diagram to communicate the operating model of the organization (<http://hbr.org/product/enterprise-architecture-as-strategy-creating-a-fou/an/8398-HBK-ENG>).

Step 2: Identify the key factors that influence the Organization

An organization does not operate within a vacuum. Institutions in the financial sectors of most of the developed world are still recovering from the subprime mortgage crisis of a few years ago and the impact is still being felt across the world. The crisis forced the financial institutions to change banking practices (especially mortgage securitisation), while new government regulation is also impacting on banking operations across international borders. This is an example of how business drivers of a sector influence the strategy and goals of organizations in that sector. Other examples include the impact that new environmental legislation is having on the natural resources sector (especially Mining & Oil) and the deregulation of the telecoms sectors in a large number of countries, while technological innovation and Internet broadband penetration is creating global competition for established retailers and enabling small to medium enterprises to compete with established professional services organizations.

These kinds of drivers influence the business goals and strategy of organizations in that sector, and in turn the new goals require new or updated business capabilities to enable the organization to manage the change. Enterprise Architecture (EA) practitioners have the responsibility to understand the business drivers in the industry where they work to ensure that architectural designs developed during new initiatives are aligned with the expectations of their business sponsors and support the business goals of the organization.



TIP: Continue with the Business Principles, Goals and Drivers template started in Step 1 by either completing the section on Sector Drivers or add a diagram in that section that is based on a business PEST analysis (<http://www.quickmba.com/strategy/pest/>) or Porter's 5 forces model (<http://www.quickmba.com/strategy/porter.shtml>). It is important to note that the idea is not to become a business strategist, but rather to collect, understand and reflect on the strategies that the business decided on and the drivers influencing the organization. The Principles, Goals and Drivers document must be used as a mechanism to communicate the EA practitioner's understanding of the environment to the sponsor and other stakeholders.

A good whitepaper to read is World-Class Enterprise Architecture (<https://www2.opengroup.org/ogsyst/jsp/publications/PublicationDetails.jsp?catalogno=w102>), published by The Open Group, with a section containing common business drivers found in a few key sectors in Europe.

Step 3: Clarify your mandate for Architecture Development

“Collaborate”, “present”, “discuss”, “facilitate” and “interact” are all verbs that can be used to describe a large part of the work that an EA professional is performing as part of his/her responsibilities during an architecture initiative. The EA professional must interact with employees in an organization, ranging from senior management to administrative personnel, as well as vendors, suppliers and regulatory institutions.

It is critical that the architecture team understand what is expected of them and who the executive sponsor is that sets the agenda for them. Without a clear understanding of the purpose and mandate of the team by all stakeholders (including the EA team themselves) organizational politics will challenge the delivery of architecture projects. Enterprise Architecture, by definition, is a cross-organizational activity. Even smaller organizations are sometimes too complex for a single team to manage the entire architecture and the work must then be partitioned. In large organizations with multiple EA teams it is even more important to have a clear understanding of the mandate of each team.

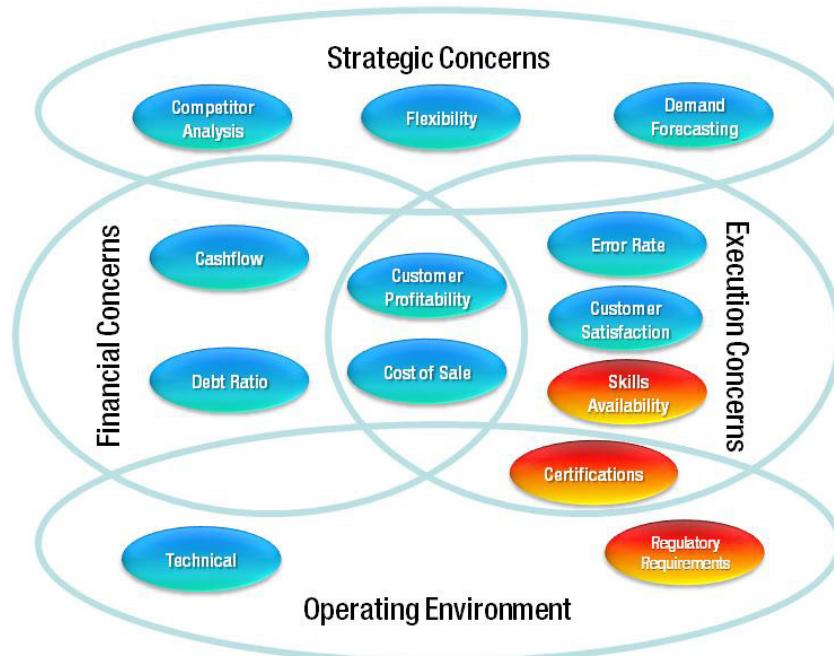


Figure 3: A clear architecture mandate is needed to address the primary concerns of an organization



TIP: Create a stakeholder diagram in collaboration with your Executive sponsor, describing the stakeholders you are responsible for supporting and the boundaries between the different EA teams in the organization. Include any other EA teams on your diagram as stakeholders and clearly identify the boundaries and expectations between the teams. Use TOGAF 9 Chapter 40: Architecture Partitioning (http://pubs.opengroup.org/architecture/togaf9-doc/arch/chap40.html#tag_40_01) as a guide for deciding how to partition the architecture work in the organization.e.

Step 4: Identify & link architecture principles to Organizational Values &

Drivers Organizations within the same industry, of the same size and operating in the same country, whilst both top performers in their market segments, might have totally different organizational cultures, structures and attitude towards risk. The result is that these different organizations will have vastly different architecture practices and principles driving their architecture decisions.

An example in the retail industry might be of two competing food retailers that followed quite different strategies; the first group could focus on a franchise model where all the retail outlets were owned and operated by independents, while the second group might refocus their operations and operate their own fully-owned stores. An example of architecture principles chosen by the first retailer might be a principle around Common Vocabulary and Data Definitions (TOGAF example principle 14), to ensure that minimum interoperability standards were established to enable transactions to be integrated into head office and supply-chain

partners, while for the second retailer a similar principle might be Data Trustee (TOGAF example principle 13, which requires all data to have a steward that is accountable and responsible for specific data elements shared across the organizations.

Architecture principles are a subset of organizational values and business principles and need to drive the behaviour of architecture teams in the organization by setting the foundation for architectural governance. It is therefore important to have a set of principles agreed and defined before different architecture projects are initiated. Architecture principles are based on business principles.



TIP: Identify the business principles (a.k.a. business values / pillars / beliefs) and update the Business Principles, Goals and Drivers document (originally started in Step 1). Use a mind-map or entity relationship diagram to associate architecture principles with business principles and drivers. Use the mapping as input during the scoping exercise of architecture initiatives to help build the business case for the architecture project. Use TOGAF 9 Chapter 23: Architecture Principles (http://pubs.opengroup.org/architecture/togaf9-doc/arch/chap23.html#tag_23_06) as a resource for getting started.

Step 5: Understand how Architecture Governance fits into the Organizational Governance Framework

Architecture governance is the process that transforms a repository full of interesting models into real value for the organization. The architectural documentation delivered during the architecture development cycle must be brought under a governance structure. If the practice of Enterprise Architecture is new to the organization, then the current organizational governance structure must be updated to accommodate the new architecture process.

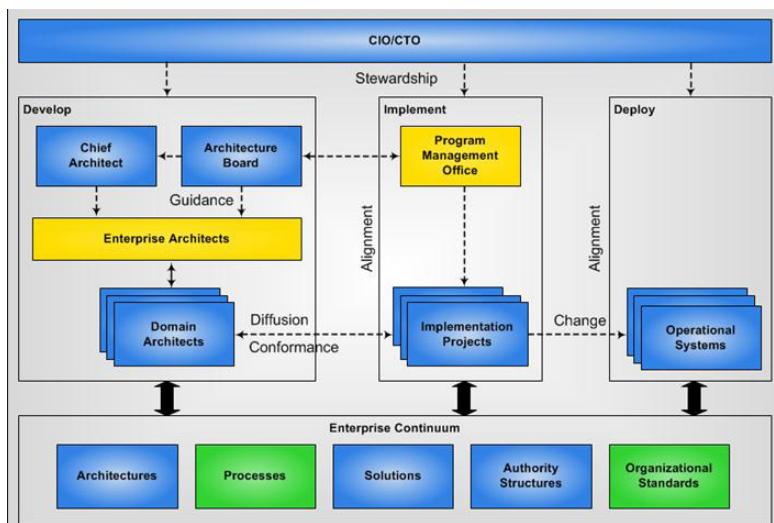


Figure 3: A clear architecture mandate is needed to address the primary concerns of an organization

Change initiatives, budgeting, resource allocation and standards approval are some of the areas that are directly impacted when adopting a new architectural approach. If architecture governance processes are not aligned with the existing governance framework the duplication of governance structures might undermine the credibility and consistency of architecture deliverables.

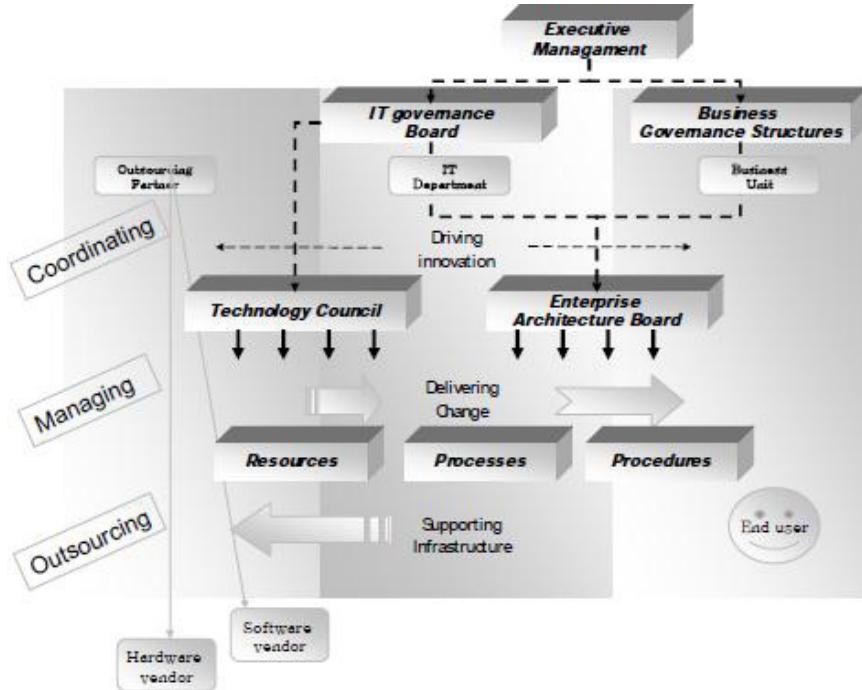


Figure 5: An example of how architecture governance processes can align with an existing Governance Framework.
 (Source: adapted from Gartner - The reality of IS Lite: Executive Summary - GARTNEREXPPREMIER - 20030915 and EDS, an HP company Executive Management IT)

For example the architecture governance board might approve a new project to define a standard integration layer across the organization, while at the same time a business unit might decide to implement a different integration protocol for their environment. If the IT procurement department and Business Project office operate under a separate governance structure, the business request for a proprietary solution might be approved, while the architecture initiative, which is trying to set standards for enterprise wide integration, is being undermined.



TIP: Governance practices are varied across the world and not only do organizational culture and management styles have an influence, but also regional cultures and values will play a role in the type of governance frameworks that are implemented in organizations. A good resource for understanding governance within an organization and aligning it with Architecture is the COBIT 4.1 framework (http://www.isaca.org/Knowledge-Center/cobit/Documents/CobiT_4.1.pdf). The COBIT 5 exposure draft is available for a limited time (end of July 2011 at the moment) (<http://www.isaca.org/Knowledge-Center/Research/Documents/COBIT5-Framework-ED-27June2011.pdf>).

The Implementation Governance Model defined in Enterprise Architecture as Strategy is also a great resource to use as an input into understanding how architecture and business governance can align (<http://hbr.org/product/enterprise-architecture-as-strategy-creating-a-fou/an/8398-HBK-ENG>).

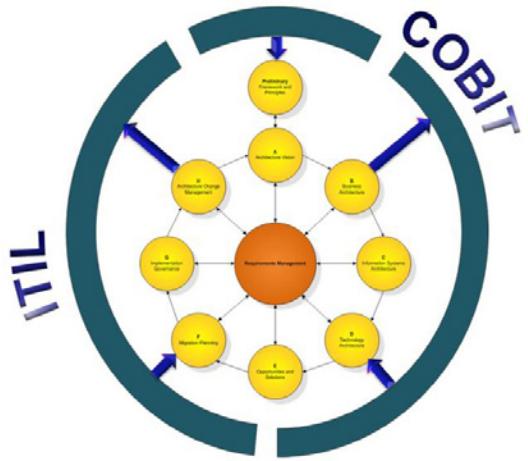
Lastly, The Open Group white paper W193 Governance in IT and Architecture is also a useful resource for background on IT and architecture governance, with recommendations for updating the governance section within TOGAF 9. (<https://www2.opengroup.org/ogsys/jsp/publications/PublicationDetails.jsp?publicationid=12220>)

Step 6: Integrate the Architecture Development processes with other management frameworks

The Architecture Development Method (ADM) in TOGAF 9 is a step-by-step guide for EA practitioners to follow when executing an Architecture project. The ADM was designed to be used as a stand-alone method or integrated into other architecture frameworks or industry specific management frameworks. In Step 5 I already indicated that the architecture governance framework must be aligned with the organizational governance framework. I also want to emphasise the need for the process steps to be aligned with other management framework steps to ensure that there is no duplication of effort or deliverables produced.

The first potential overlap that must be addressed when implementing TOGAF 9 is the project management deliverables and processes steps. If an organization already has a project management framework (e.g. Prince2) implemented, then certain key deliverables from TOGAF (e.g. Statement of Architecture Work, Communication Plan, Implementation & Migration Plan) are already overlapping. If the frameworks are allowed to operate independently the logical conclusion of the effort will be an Architect and Project manager who has created similar but different deliverables and submitted it to different decision making bodies, creating confusion in the organization. As part of Step 3, a stakeholder

map was created; use this map and highlight the stakeholders from project management (e.g. Prince2), development (e.g. SCRUM), operations management (e.g. ITIL), IT management (e.g. COBIT), procurement, etc. and ensure that the architecture team have access to all the business and IT management frameworks and processes that are already implemented in the organization.



TIP: Use the COBIT 4.1 framework as the starting point when integrating frameworks, the domains PO (Plan), AI (Build or Procure), DS (Run) and ME (Monitor). The Chief Architect is defined as a role within the COBIT 4.1 accountability matrix (1 matrix per COBIT Process). The COBIT 4.1 Capability Matrix assigns a RACI (Accountable, Responsible, Consulted or Informed) indicator per role and by using the accountability matrix the processes where the Chief Architect is involved can be identified. (http://www.isaca.org/Knowledge-Center/cobit/Documents/CobiT_4.1.pdf).

Step 7: Perform an Architecture maturity assessment

Capability Maturity Models (CMM) can be used in a pragmatic way to determine the extent to which an organization is ready to adopt an Enterprise Architecture approach for managing change and complexity. The measurement of architecture maturity is subjective and the results will reflect the views of participants that completed the assessment instrument. To achieve a realistic result, it is important to identify which key characteristics to measure and to start with a maturity assessment that is already developed and that can adjust to fit the needs of the organization. TOGAF 9 provides an example of the NASIO Architecture Maturity Model, CMMi and DOC Architecture CMM, which can be used as a starting point to define an organizational architecture maturity assessment instrument.

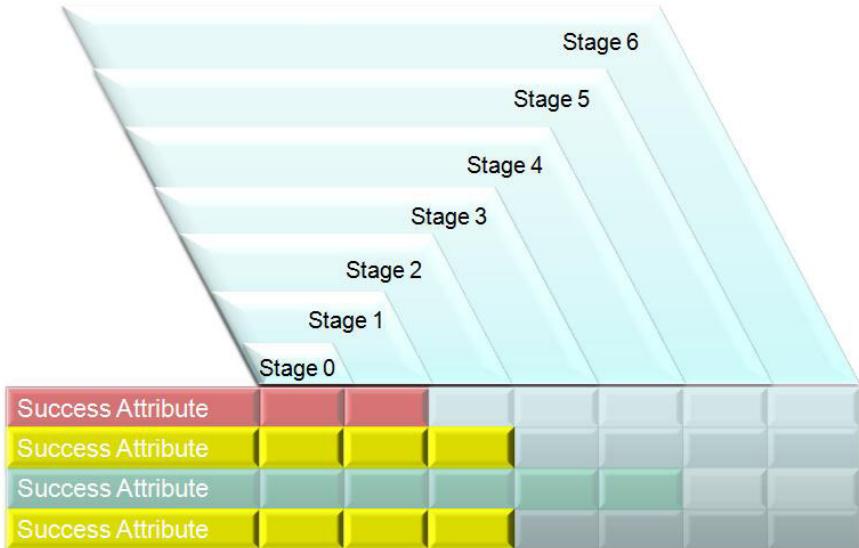


Figure 7: Framework for Assessing and Improving Enterprise Architecture Management (General Accounting Office, 2010)

In 2010 the United States Government Accountability Office released Framework for Assessing and Improving Enterprise Architecture Management (Figure 7) with seven stages of maturity and four major groupings of core elements: Governance (EA program management), Content (Development & maintenance of artefacts), Use (Implementation and reference usage) and Measurement (Quality). It is the most complete and well-rounded EA maturity assessment framework that is publically available.



TIP: If configuring and completing a formal CMM assessment is not feasible, but you still need an indication of to what level an organization can benefit from following or improving their architecture environment, following the stages of architecture maturity and management practices in Enterprise Architecture as Strategy might be a good alternative. Before an EA project can be attempted the management practices that are essential are: having a Project Methodology in place and having Business Cases for all initiatives.

The GAO Framework for Assessing and Improving Enterprise Architecture Management (Version 2.0) is available from this website:
<http://www.gao.gov/new.items/d10846g.pdf>

Step 8: Formalise the Architecture function in the Organization

Any sustainable architecture initiative in an organization needs a formalised architecture function. Too many organizations run their architecture initiatives as programs or projects and have no organizational career ladder for professionals who perform architecture-related roles in the organization.

The structure of the architecture function is influenced by all factors that are listed up to Step 7. Based on the industry, maturity of the organizations, human resource strategy, budget constraints and governance structure an organizational chart must now be produced which lists the team structure and roles and responsibilities. Formalising the Human Resource component will allow the management team to start with succession planning, skills development, resource allocation, and performance management.

A number of EA projects fail or do not achieve their original objectives due to resource movements (resignations) in the organization and the excessive use of contract or temporary staff. Depending on the strategy of the organization, using contract or temporary staff is acceptable, but the risks and impact on the project must be highlighted to enable the management team to make informed decisions.

As an example, the mining sector would not have the same staff compliment for Enterprise Architecture as the financial sector, only because the product that a bank or insurance organization sells is information that must be secured, available and trusted. If a customer does not trust the bank that his/her money or that his/her credit card information is secure, the bank can suffer irreparable damage and be forced to close down. By comparison the mining sector is largely concerned with the extraction of minerals or metals from the ground and if there is a mix-up with data the impact is much lower.

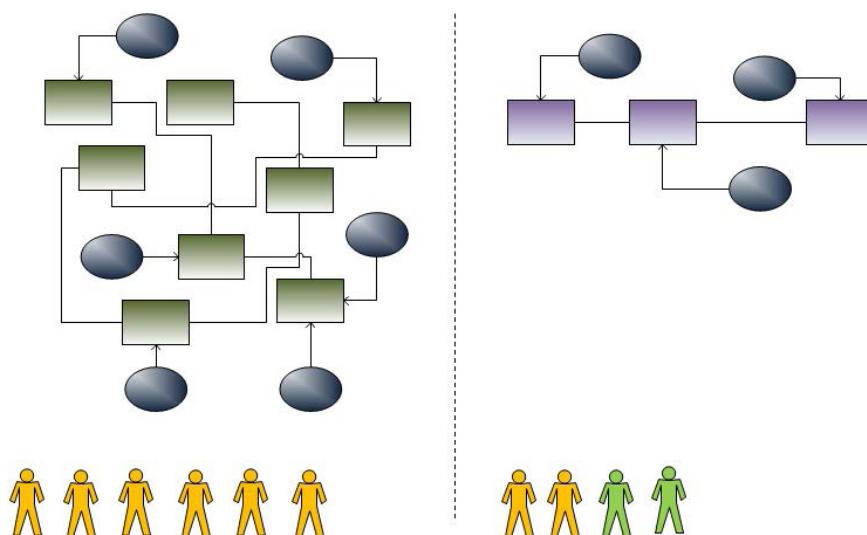


Figure 8: Selected people for EA teams should reflect the complexity of the architecture



TIP: Use the TOGAF 9 Template: Organizational Model for Enterprise Architecture to consolidate all the information related to the maturity assessment, roles & responsibilities, constraints, budget requirements and governance and support (<https://www2.opengroup.org/ogsys/jsp/publications/PublicationDetails.jsp?catalogno=i093>).

Step 9: Customize TOGAF for your organization

TOGAF 9 is a framework that is continuously evolving and is designed to address architecture problems from a wide range of sectors, including the public sector and other non-profit organizations. In Steps 5 & 6 I already discussed the need to align TOGAF 9 with other management frameworks to ensure that the deliverables are placed within the organizational governance processes and structures. This step is included to urge EA practitioners to formally document the customized processes of TOGAF, as well as any deliverables that are mandated by the organization for delivery.

This document is very valuable if, for example, new employees join the team or if the architecture process must be formalised and rolled-out (to achieve level 2 CMMi maturity) or if the architecture function is expanded across the organization.



TIP: Use your architecture repository to model your internal Architecture environment, including the Architecture Development process. I.e. become your own architecture customer.

Step 10: Architecture repository components to consider before implementation

To establish a sustainable Enterprise Architecture practice based on TOGAF 9, you need a good architecture repository. TOGAF 9 does provide a list of criteria that you can use for a tool comparison, but I am not going to create a comparison table, just because it is so subjective and there are so many of those tables already available (and if I exclude the business process management tools that charade as EA tools, then I might just get a backlash from the vendor community).

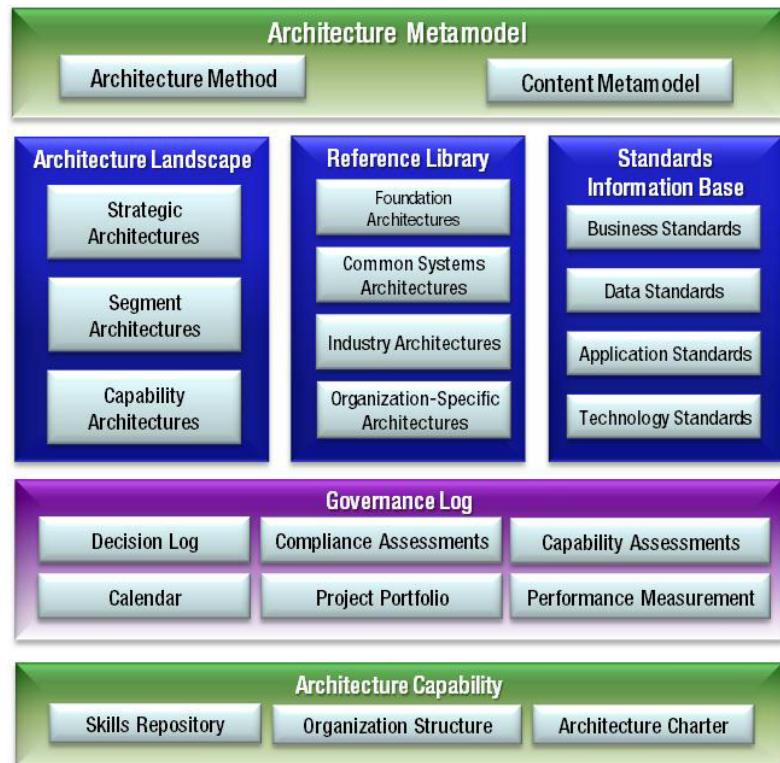


Figure 9: Architecture Metamodel

I will however list the components that a repository must provide to support the successful deployment of TOGAF 9:

1. The Architecture Repository must have a model storage component (Architecture Landscape) that is easy to customize, to allow multiple projects and users to store content in the same server with proper artifact level security.
2. The Meta-model must be open and be easy to customize
3. A separate reference library component, populated with reference material (e.g. ITIL, APQC PCF, COBIT, TRM, etc.) and the ability to allow internal organizational-specific architectures to be included into the reference library components
4. A governance log component that can store and share governance content (e.g. Architecture Project Docs and decisions, etc.) with an external Project Management repository.
5. A document library or content management component where all non-artifact architecture related content is stored in a version controlled environment (including Architecture Capability docs, Project Docs, Gap Analysis Reports)
6. A viewpoint library with a set of predefined viewpoints that can be re-used in an organization, with the ability to add predefined viewpoints for other architects in the organization.
7. An analysis engine (Empowering Architects to run what-if analysis, gap analysis, dynamic view creation etc.)



TIP: Download the next white paper, entitled “The Top 10 Features that you need in a TOGAF 9 Repository” to learn more about what factors to consider when choosing an Architecture Repository tool.

Conclusions

Enterprise Architecture practitioners are intently focused on project delivery, with little thought going into defining their environment and planning ahead for the EA practice. In this whitepaper I highlighted 10 key steps, based on the TOGAF 9 standard, which all architects must complete before starting a new initiative or project.

The only way that EA practitioners are going to get better sponsorship for their initiatives or increase the success rate of current architecture projects is by going back to the basics. They must ensure that they have an executive sponsor that understands the value that they provide to the organization, an internal architecture team who understand their role and position in the organization and stakeholders who are comfortable with a set of viewpoints that are published from an automated tool and that address their needs.

In the following white paper we will explore the Top 10 key features that you would expect to find in a TOGAF 9 repository.

© Copyright 2011 Orbus Software. All rights reserved.

No part of this publication may be reproduced, resold, stored in a retrieval system, or distributed in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior permission of the copyright owner.

Such requests for permission or any other comments relating to the material contained in this document may be submitted to: marketing@orbussoftware.com

Orbus Software

3rd Floor
111 Buckingham Palace Road
London
SW1W 0SR
United Kingdom

+44 (0) 870 991 1851
enquiries@orbussoftware.com
www.orbussoftware.com

