# White Paper
## Soft Skills for Enterprise Architects
Going from Technical Guru to Strategic Influential Leader

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**Enterprise Architects are routinely known for their prowess and expertise in bringing technical innovation and new solutions into the organization. Highly successful Enterprise Architects have managed to establish critical relationships outside of the traditional IT walls, earning a seat at the broader organization table to discuss, shape and influence the strategic direction of the firm. This requires learning the language of the business, being able to clearly communicate a compelling technical vision in non-technical terms and having the critical skills that allow them to 'close the deal' with stakeholders.**

In this paper, we'll take a brief moment to place Enterprise Architecture and Enterprise Architects into the context of our dialog. Then we'll explore a number of fundamental skills that are often required in making the transition from the perception of Technical Guru to that of a Strategic Influential Leader.

## Architecting the Enterprise

The execution of Enterprise Architecture as a practice or discipline will vary from organization to organization. The same is true when describing the daily tasks performed by those architects given the title of Enterprise Architect. For our purposes here, we are not anchoring our discussion to any particular Enterprise Architecture framework, its selection or application. Instead we'll use a broad definition that is applicable across all frameworks, including internal and proprietary ones.

## Enterprise Architecture

There are several good definitions of Enterprise Architecture, including the one below from Gartner:

> *"Enterprise Architecture (EA) 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. EA delivers value by presenting business and IT leaders with signature-ready recommendations for adjusting policies and projects to achieve target business outcomes that capitalize on relevant business disruptions. EA is used to steer decision-making toward the evolution of the future state architecture."[i]*

Given subtle variations in the various domains that comprise common Enterprise Architecture definitions, they generally align to the domains of Business Architecture, Information Architecture, Solution Architecture, Application Architecture and Platform Architecture.[ii] In the context of this dialog we'll consider Enterprise Architecture as an over-arching objective lens through which we attempt to view (and influence) the enterprise's future state.  The focus of this lens can be made wider or narrower as needed to best model an organization's business, operation and technology constructs.  Keep in mind, however that the models are not the desired end result of Enterprise Architecture; the intent is to drive business strategy and align resources in an effective way that provides competitive advantage.

## Enterprise Architect

Enterprise Architects are generally responsible for executing the organization's Enterprise Architecture discipline across the various verticals the firm is engaged in.  The challenge that many Enterprise Architects face is the perception that their core function is to document the current and future state, and to be fair in some environments that is an accurate reflection of the role.  Unfortunately this approach clearly dilutes the potential impact an Enterprise Architect can have on the organization.  This has continued to fuel the debate and long-running question regarding how best to demonstrate the value of the function.

> *"Unfortunately, EA is often synonymous with the practice of documenting one person's viewpoint of their company's IT.  In reality, EA is about the skillful manipulation of an enterprise's structure and behavior within a complex environment."[iii]*

This debate underscores the need for Enterprise Architects to 'raise their gaze' above the sheer mechanics of technology and round out their 'soft' skills.  Keep in mind that while the verbiage and focus of this paper is for Enterprise Architects, the skills discussed below can improve the effectiveness of all types of technology practitioners.  With that in mind,

let's look at some behaviors and capabilities that separate the really great architects from the pretty good ones.

# Skills of Influential and Impactful EAs

Having the opportunity to interact and work with outstanding architects across numerous disciplines, industries, and global geographies, I've had the good fortune to observe what traits and characteristics helped exemplary Enterprise Architects have the most impact on their company. A common, fundamental theme was almost always being as passionate about the 'business' or purpose of their organization as about technology trends and implementation details. Being able to speak the language of those outside of IT with credibility and genuine understanding helped them gain a solid platform from which to influence and impact strategic direction. Strong technical skills and insight, in turn, become critical to the successful execution of the strategic plan. Successful execution leads to more influence and impact; creating a cycle that builds more and more trust over time. Keep in mind, however, that the opposite is also true. Lack of understanding of the firm's purpose and/or poor execution quickly erode confidence and dilute the level of influence and impact. Given enough 'unhappy path' cycles, the firm may consider moving away from the practice of Enterprise Architecture, citing a lack of clear value being derived from the function.

While not exhaustive or intended to be strictly followed verbatim, we'll examine a few resources, points of view and industrial anecdotes designed to help increase the effectiveness of Enterprise Architects. The information is also valuable to those individuals who are responsible for managing the Enterprise Architecture function as well, serving as a hiring and training guide for members of the team.

## TOGAF® 9 Architecture Skills Framework

While not promoting TOGAF® over any other Enterprise Architecture method, its Architecture Skills Framework does offer a good starting point. In Part VII: Architecture Capability Framework of TOGAF® 9.1, the Open Group has established a suggested competency model for various architecture roles across a number of skill categories.[iv] A quick examination of these role types, categories and recommended proficiency levels for Enterprise Architects in particular provides a good example of desirable technical and non-technical (soft) skills. The list can be used from two aspects. First it can be used as a self-assessment and training guide for aspiring (and improving) Enterprise Architects. Secondly, it can be used as a job specification and candidate evaluation mechanism when hiring/managing resources that will be performing Enterprise Architecture functions.

# Roles

The eight 'roles' outlined by the TOGAF® Architecture Capability Framework are listed below. While these roles may not have a direct correlation to specific positions or job titles within your organization per se, it is likely that they map to general duties and activities being carried out in some form or fashion today.

- Architecture Board Member

- Architecture Sponsor

- Architecture Manager

- Architect
    o Business Architect
    o Data Architect
    o Application Architect
    o Technology Architect
    o Enterprise Architect
      *(Amalgamation of Business, Data, Application and Technology Architecture)*

# Proficiency Levels

In this model, architecture skill proficiency has been divided into four levels, from lowest to highest respectively: Background, Awareness, Knowledge and Expert. In Table 1, we find a generalized description for each level, along with its corresponding numerical value. As always, the descriptions should not be taken as an explicit mandate, but rather serve as a generic starting point from which to refine proficiency assessments based on the needs of the organization.

| Level | Achievement | Description |
|-------|-------------|-------------|
| 1 | Background | Not a required skill though should be able to define and manage skill if required. |
| 2 | Awareness | Understands the background, issues, and implications sufficiently to be able to understand how to proceed further and advise client accordingly. |
| 3 | Knowledge | Detailed knowledge of subject area and capable of providing professional advice and guidance. Ability to integrate capability into architecture design. |
| 4 | Expert | Extensive and substantial practical experience and applied knowledge on the subject. |

**Table 1 - TOGAF 9 Architecture Skills Framework Proficiency Levels**

## Categories

The next component of the framework we'll examine is the categorization of skills. There are seven 'top-level' categories:

- **Generic Skills:** Common interpersonal and professional skills

- **Business Skills & Methods:** Basic business acumen and contextual knowledge

- **Enterprise Architecture Skills:** Conceptual strategy and critical reasoning

- **Program or Project Management Skills:** Ability to lead organizational change

- **IT General Knowledge Skills:** Knowledge of application portfolio

- **Technical IT Skills:** System and software engineering capabilities

- **Legal Environment:** Familiarity with relevant aspects of laws and regulations

Without going into much further detail, a quick review of Figure 1 demonstrates how the seven categories are further broken down into 76 different subcategories. Reading through them gives you a much clearer picture regarding the scope and focus of each of the parent category nodes. Each of the subcategories is described in the framework and again serves as a starting point for customizing the model to meet the needs of your organization.

**Enterprise Architecture Skills**
- Business Modeling
- Business Process Design
- Role Design
- Organization Design
- Data Design
- Application Design
- Systems Integration
- IT Industry Standards
- Services Design
- Architecture Principles Design
- Architecture Views & Viewpoint Design
- Building Block Design
- Solutions Modeling
- Benefits Analysis
- Business Interworking
- Systems Behavior
- Project Management

**Generic Skills**
- Leadership
- Teamwork
- Interpersonal
- Oral Communication
- Written Communication
- Logical Analysis
- Stakeholder Management
- Risk Management

**IT General Knowledge Skills**
- IT Application Development Methods & Tools
- Programming Languages
- Brokering Applications
- Information Consumer Applications
- Information Provider Applications
- Storage Management
- Networks
- Web-Based Services
- IT Infrastructure
- Asset Management
- Service Level Agreements
- Systems
- COTS
- Enterprise Continuums
- Migration Planning
- Management Utilities
- Infrastructure

**Business Skill & Methods**
- Business Case
- Business Scenario
- Organization
- Business Process
- Strategic Planning
- Budget Management
- Visioning
- Business Metrics
- Business Culture
- Legacy Investments
- Business Functions

**Technical IT Skills**
- Software Engineering
- Security
- Systems & Network Management
- Transaction Processing
- Location & Directory
- User Interface
- International Operations
- Data Interchange
- Data Management
- Graphics & Image
- Operating System Services
- Network Services
- Communication Infrastructure

**Program / Project Management Skills**
- Program Management
- Project Management
- Managing Business Change
- Change Management
- Value Management

**Legal Environment**
- Contract Law
- Data Protection Law
- Procurement Law
- Fraud
- Commercial Law

**Figure 1 - TOGAF Architecture Skill Framework: Categories of Skills**

## Example – Skills Mapping for an Enterprise Architect

The TOGAF® Architecture Capability Framework provides recommended skill levels, based on the four levels of proficiency listed above, correlated by role and skill. Figure 2 below shows the desired skill level required for each of the seven main categories for the Enterprise Architect role. The numeric value represents the average score for each subcategory, based on a four-point proficiency scale, with 1 being the least skilled (Background) and 4 being the most skilled (Expert).
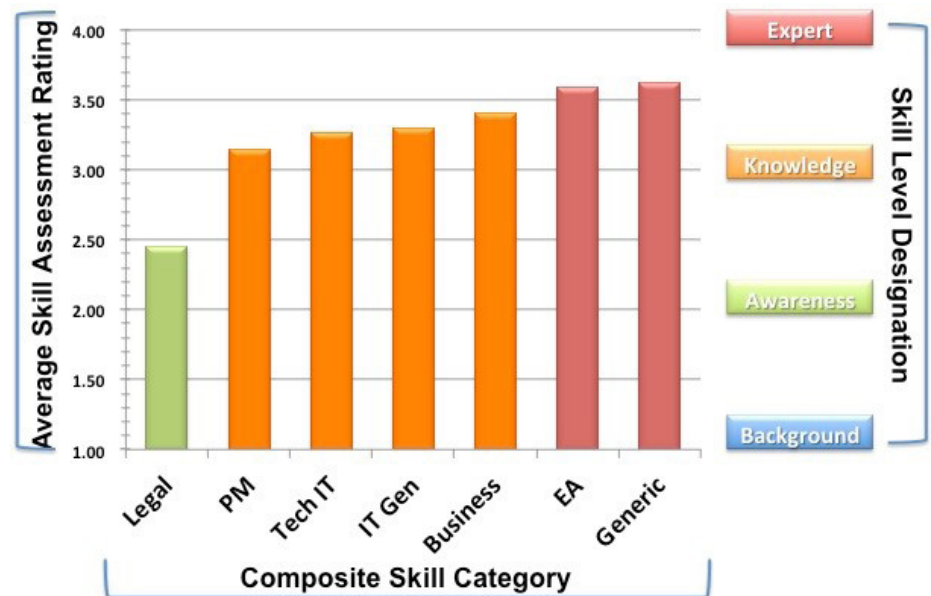


**Figure 2 - Suggested Average Category Skill Levels for an Enterprise Architect**

For this simple view, each skill was equally weighted across all four enterprise architecture domains (Technical, Business, Data, Application). The default model configuration favors Generic and Enterprise Architecture skills in Enterprise Architects above the other five dimensions. The next top skill, however, is non-technical in nature, focusing on Business abilities. In contrast, Legal and Project Management skills are ranked on the lower end of the spectrum. If you choose to apply this framework to your organization, you would need to adjust the scoring criteria to best reflect the unique needs of your setting, paying particular attention to the sub-categories and their respective weighting.

Enterprise Architects (and their leaders) will find this model useful as a form of self-assessment to evaluate where their current strengths and weaknesses are. Don't assume that one needs to be an expert in all 76 aspects – that would be unrealistic at best. Instead, focus first on those areas that are most important within the context of the organization's operating model. From that initial list, leverage existing areas of expertise in a very visible way to gain/maintain credibility, and begin to shore up areas needing personal improvement through training and mentorship to increase effectiveness.

# 24 Essential Skills for Software Architects

In a similar fashion, Hendrisksen has identified a number of competencies that are highly sought after in software architects, with equal application to Enterprise Architects.[v] Table 2 highlights those skills, which have been grouped into six broader categories. Similar to the previous framework, we find the more intuitive architect attributes related to business, technical and project management skills. In addition to that, we find three other groupings comprised of relationship, personal and visionary skills.

| Business Skills | Technology Skills | Project Skills |
|---|---|---|
| • Business Knowledge<br>• Innovation<br>• Pragmatism<br>• Vision | • Platform Development<br>• Architecture Perspective<br>• Governance<br>• Know How | • Partnership<br>• Discovery<br>• Conceptualization<br>• Estimation<br>• Management |
| Relationship Skills | Personal Skills | Visionary Skills |
| • Gracious Behavior<br>• Communication<br>• Negotiation<br>• Leadership<br>• Politics | • Transparency<br>• Passion<br>• Context Switching | • Technology Innovation<br>• Strategic Road Mapping<br>• Entrepreneurial Execution |

**Table 2 - Hendricksen's Essential Skills for Software Architects**

Many of the qualities may seem to be a bit vague or subjective in nature. Others, such as passion for example, may appear to be more personality traits than teachable skills. In my experience, I have found it difficult to 'teach' someone how to be passionate about the work they do. I instead focus on kindling their own self-motivation through inspiration, which may or may not lead to an expression of passionate work habits. However, if we look at the list introspectively, we can ask ourselves 'do I demonstrate that I am passionate about my work in a way that is clear to others and beneficial to the organization?' We could also ask 'would this particular skill make me more effective within the context of my environment or the next role I would like to be in?'

As with the previous section, bear in mind that not all of these skills will be of equal value in every organization, including your own. Rather than trying to be great at everything on the list, focus on those areas most likely to increase your influential effectiveness within your environment. From there, focus on targeted skill improvement in a way that will yield the greatest potential results over various time periods (right now, near term, mid-term, and long term). Some of these skills can be mastered rather quickly, while others take time (and extensive practice) to perfect. The key is to take an intentional approach to improvement, to iteratively try new things out until they become natural, and try not to default back to comfortable areas of current expertise.

# EQ - Emotional Quotient (Intelligence)

Several years ago, the concept of Emotional Quotient (EQ) was introduced, based on the results of studies showing that high IQ (Intelligence Quotient) levels were not always synonymous with highest levels of professional success and innovation.

> *"The difficulty with these kinds of [IQ] tests is that they're a snapshot...on this day, on this particular test, with this particular tester. An IQ score doesn't measure your practical intelligence: knowing how to make things work. It doesn't measure your creativity. It doesn't measure your curiosity."*[vi]

As the research team evaluated their observations, they arrived at the matrix shown in Table 3. Across the horizontal axis, we find a simple stimulus/response model: 'What I See" (observation) and "What I Do" (response). Across the vertical access, we find differentiation between self and community behaviors, expressed as Personal Competence and Social Competence. At the intersections, we first evaluate our level of awareness to our observations (Self-Awareness at the Personal Competence level, and Social Awareness at the Social Competence level). We can then evaluate and regulate how we react to those same observations at both a personal level (Self-Management) and a social level (Relationship Management).

| | What I See | What I Do |
|---|---|---|
| **Personal Competence** | **Self-Awareness** The ability to accurately perceive your emotions and stay aware of them as they happen | **Self-Management** Your ability to use awareness of your emotions to stay flexible and positively direct your behavior |
| **Social Competence** | **Social Awareness** Your ability to accurately pick up on emotions in other people and understand what is really | **Relationship Management** Your ability to use awareness of your emotions and the others' emotions to manage interactions successfully |

The inclusion of EQ may seem to be a bit of a stretch when it comes to being an effective Enterprise Architect. However, in my experience strong Social Competence, coupled with a deep knowledge of the business and above-average technical acumen always formed the best combination. We've been talking about knowing what skills would be more valuable within an individual organization, but haven't really tied that to a decision model or mechanism for doing so. Social Competence is just such a means, tuning into the culture of the organization, gaining an understanding of relationships throughout the company, and observing

how important things get done.  That doesn't mean they are done well in every organization – it simply means being able to understand how the organization operates in order to determine how best to influence and lead it from within.

## Politics – More than a Necessary Evil

Ignoring the negative stereotypes most often associated with the term 'politics' or the thinly veiled backhanded compliment regarding 'good' politicians, effective Enterprise Architects are often masters of the political aspects of their organizational community.  By that we mean they are able to navigate and leverage the decision-making networks within their organizations, communicate with all levels of the entity in ways that resonate with constituents (rather than alienating them through obtuse technical jargon), and influence behavior irrespective of the formal organizational structure.  After all, politics is about influencing the behavior of others to achieve a desired outcome or objective.

In the case of an Enterprise Architect, that outcome is the realization of the strategic initiatives that further the purpose of the organization. This isn't about being the most popular or widely known architect in the company – it is about being a true catalyst for change, successfully influencing outcomes at a strategic and meaningful level.

> *"Political competence is the ability to understand what you can and cannot control, when to take action, who is going to resist your agenda, and who you need on your side to push your agenda forward. Political competence is about knowing how to map the political terrain, get others on your side, and lead coalitions. More often than not, political competence is not understood as a critical core competence that is needed by all leaders in organizations."*[vii]

Good political skill often takes the form (and more palatable title) of Influential Leadership – the ability to persuade those who are not obligated to follow you due to your formal leadership position to follow you anyway for the greater good.  Being highly regarded and respected within the firm for many of the other attributes and skills we have discussed previously are typically manifested in the level of influential leadership the Enterprise Architect is able to wield across the company. Before attempting to become more influential, it is best to gain a better (and unbiased) understanding of your current level of influence within the firm.  How many decisions have gone your way?  How often are you tapped to provide expert insight, which then becomes an important determinant?  Strengthening your influence skills is not for the sake of being misleading or disingenuous, but instead to move people within an organization to take strategic action in a way they might not otherwise have considered or previously agreed with.

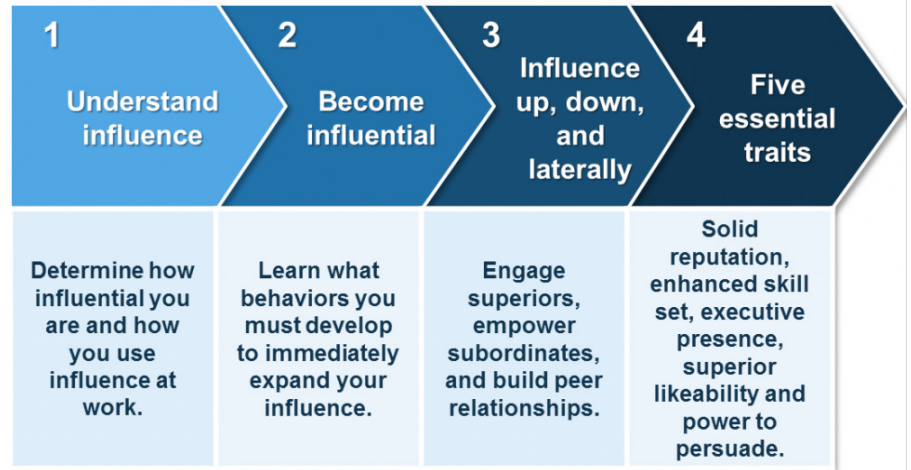**Four-Steps to Become an**
# Influential Leader

| 1 Understand influence | 2 Become influential | 3 Influence up, down, and laterally | 4 Five essential traits |
|---|---|---|---|
| Determine how influential you are and how you use influence at work. | Learn what behaviors you must develop to immediately expand your influence. | Engage superiors, empower subordinates, and build peer relationships. | Solid reputation, enhanced skill set, executive presence, superior likeability and power to persuade. |

**Figure 3 - Four Steps to Influential Leadership[viii]**

Influential Leadership is most effective at the enterprise level when one is able to influence in all directions - down (subordinates), across (peers) and up (superiors). An important caveat, however, is to recognize that Influential Leadership cannot stand alone and apart from other critical skills that have been demonstrated over time to establish a strong reputation and build trust. Trying to influence others without the requisite competencies is typically perceived as manipulation and political (in the bad sense) game playing.

## Conclusion

None of these soft skills are overly complex or differ greatly from those traits and capabilities that help others to be successful in different professional roles and disciplines. The challenge Enterprise Architects often face is the perception that their technical strength doesn't clearly translate into a deep understanding and appreciation of the business their firm is engaged in.

- Speak and understand the language of your business

- Harness the power of organizational politics rather than being whipsawed by them

- Focus on business outcomes before technology outcomes rather than the other way around

- Seek out mentors and role models from non-technical parts of the organization

- Narrow targeted skill improvements initially to those that are most valuable within the context of the organization

- Remember that the goal is a better enterprise, not merely better enterprise architecture

Benefits of enhancing non-technical skills for Enterprise Architects include:

- Have a more direct impact on the progress of the enterprise agenda

- Bring clear value to the Enterprise Architecture function within the organization

- Reduce friction and resistance to change through higher levels of influence

- Become a trusted business colleague while still being respected for technical expertise

## Recommended Reading

*12 Essential Skills for Software Architects*
**Hendricksen (2011)**

*12 More Essential Skills for Software Architects*
**Hendricksen (2014)**

*Why Motivating People Doesn't Work...and What Does*
**Fowler (2014)**

*Enterprise Architecture from Concept to Practice; Second Edition*
**Iyamu (2014)**

*Emotional Intelligence 2.0*
**Bradberry & Greaves (2014)**

*Getting Ahead: Three Steps to Take Your Career to the Next Level*
**Garfinkle (2011)**

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