The New Role of the Architect

Central to growing your business in today’s digital world
In my 25 years of working in the IT industry, technology is not the only thing that has developed. The role of the architect working in IT has changed dramatically. Gone are the days when architects were confined to talking just hardware and software; today, architects talk business. They ensure value for money, shape strategies to pave the way to digital excellence, drive innovation and deliver IT solutions. They do all this while minimizing impact on the business and without introducing risk.

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Over the years, I have had the opportunity to work on a number of large architecture assignments where we enable all executives of all industries to view their businesses through a different lens and create strategies and solutions that are able to perform to their maximum potential.

The architect’s role is like no other – combining technology, market sector and consulting knowledge.

An architect understands what is “right” for the business and focuses on managing complexity to reduce risk and cost. Research outlined in this paper shows that architects can reduce project costs, project overrun, and increase overall customer satisfaction.

This short point of view paper whitepaper is designed to help CIOs and CDOs get a more concise understanding of the architect’s role, value and position within their business.

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Foreword

In my 25 years of working in the IT industry, technology is not the only thing that has developed. The role of the architect working in IT has changed dramatically. Gone are the days when architects were confined to talking just hardware and software; today, architects talk business. They ensure value for money, shape strategies to pave the way to digital excellence, drive innovation and deliver IT solutions. They do all this while minimizing impact on the business and without introducing risk.

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Architects are a key asset to achieving digital success. If you are planning to take your enterprise on a digital journey, make sure you have an architect, or even better, a team of architects on board.
In today’s era of digitalization, CIOs must live up to increasingly challenging expectations that often pull them in different directions as they look to balance digital opportunities and threats against the demands of execution. CIOs need “the holistic perspective of an Enterprise Architect team driven by business outcomes.” [1]

The pace of innovation is accelerating as new developments are seeding and maturing faster, enabling enterprises to respond to demand more quickly and change the way they work. Services that were not even thinkable five years ago are now standard practice. Open source, storage and compute, virtual services available on tap and microservices are only a small number of examples. Tablets, smartphones, wearables, social media, on-premises private Cloud, off-premises public Cloud, and hybrid approaches have all led to a new shift in IT.

Next to this shift comes a fundamental change in the way we see IT. In the 1st and 2nd generation, IT was a back-office capability, usually reporting to the CFO of an organization, regarded as a cost. With the advent of the 3rd and 4th generation, this has changed; IT is now a core part of the business. The most successful organizations now see IT as a vital ingredient to drive real business outcomes.

This is where an architect adds real value. Deployed correctly, architects have the ability to respond to these demands and advancements. They are able to help the business envision its future and integrate IT into the business, providing better value for money, faster benefit realization and improved market competitiveness.

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What is the Architect’s Role?

According to The Open Group Architecture Framework (TOGAF): “The role of an architect is to drive change that creates business opportunity through technology innovation.” [2]

“Architects shape and translate business and IT strategy needs into realizable, sustainable technology solutions whilst taking end-to-end solution delivery ownership from idea to benefits delivery.” [2]

Architects:
- Provide insight, thought leadership and innovation to ensure that the solution meets the client’s business goals
- Ensure that the solution is designed for production and can be delivered efficiently, maximizing reuse
- Ensure that the solution has integrity (is safe, secure and compliant) [2]

In the broadest sense, an architect will:
- Drive innovation and change
- Own the solution
- Jointly own the delivery

One of the key functions of an architect is to provide architecture and solution leadership. This is about setting the vision, creating a plan to achieve that vision, and then enthusing and motivating others to achieve that vision. This is done by working effectively with others while being confident and possessing the necessarily skills, both soft and technical, as well as experience to make those critical decisions.

There is a common misconception today that an architect is an engineer or a software developer. In fact, an architect does not necessarily need to be technical or hands-on, although having some content knowledge will always be an advantage.

The role of the architect can be simplified down to two components:

As there are an increasing number of architectural roles in the world today, there is no set career path. An architect could start their career as a server or network engineer, or a software developer, but could also start as a business analyst or project manager. Many architects spend an engagement mapping out the current business functions and services, working to understand and identify how they interact and are supported by IT. These types of architects would not reach down to the lower technical levels of applications and hardware.

The role of the architect is varied; depending on the need and the scope of the engagement, different types of architect are required, and there is no one architect that will suit all needs.
What is an Architect?

- **Agile and Flexible**: Responds to new demands and advancements with the shifting paradigms of IT
- **Fit for Purpose**: Understands what is “right” for the business and focuses on managing complexity to reduce risk and cost
- **Understand the Business**: Is able to apply architectural principles to business solutions
- **Build Relations**: Works together with the correct stakeholders to understand the business
- **Capacity**: Holds a holistic perspective, driven by business value and outcomes
- **Speed/Risk**: Helps the business envision its future, providing faster benefit realization and improved market competitiveness
- **Deliver**: Reduces project costs, project overrun, and increases overall customer satisfaction
- **Trust**: Takes end-to-end solution ownership from idea to benefits delivery
- **Information/Knowledge**: Combines technology, market sector, consulting knowledge and experience in a unique way
Choosing Your Architect

There is no one architect that suits all needs, and it would be an impossible task for one person to lead an entire journey alone. Across a solution life cycle many roles are needed to deliver the outcomes the business needs and expects.

The diagram below outlines the different stages/phases a project goes through and the typical roles that support each aspect, from inception of the IT strategy through to solution design, build, test, implementation and production.

On many occasions the role of an architect and an engineer are synonymous. One way to distinguish between them is to look at the context in which each works. An architect will usually try to understand the reason for a change: the “why” and “what” questions, whereas an engineer usually focuses on the timeline and the physical aspects: the “how” and “by when” questions.

In practice, there is seldom a very clear separation and sometimes people execute both roles. Fundamentally, there is nothing wrong with executing both roles; however, each role requires different skill sets and targets different objectives to function best.
Architecture is not only about technology, infrastructure and software; it is also about managing complexity to reduce risk and cost.

Architecture identifies the main components of the organization or a sub-set of it (such as its information systems) and the ways in which these components work together and interact to achieve the defined business objectives. These components will include staff, business processes, technology and information. There is no set representation of architecture itself; to stay relevant it will be different for each organization. Architecture in itself does not deliver any direct business value, i.e. something with direct monetary value.

As this is not a one-off activity, these components must be maintained, changed and improved on an ongoing basis to stay relevant to the business.

**Is Creating Architecture Always a “Six-Month Exercise?”**

Creating an architecture can take anywhere from a day to several months. The duration depends on the scope of the engagement and the quality and quantity of the input material.

There is a common misconception in the IT industry that architecture must be created “top-down” with all architecture-related artefacts being developed. This is not true. Following an architecture approach and designing a solution can be done, as a team, in one day. Of course, the level of detail will not be as deep as with one that takes months to produce, but it could be sufficient to make the necessary decisions to move forward.

Frameworks like the Open Group Architecture Framework (TOGAF) and Capgemini’s Integrated Architecture Framework (IAF) help achieve the correct balance by giving guidelines for what needs to be created and considered. However, one thing that cannot be overlooked is experience; it is crucial to have an architect with experience and who understands best practices and knows the major pitfalls.
As architecture does not directly increase revenue or cut costs, it is often difficult to show its value.

A recent study [3] tried to tackle this difficulty and provide answers in terms of business value against success factors such as project cost, delivery time and customer satisfaction. The study compared the results achieved by those using architecture, against those that did not. There were 49 projects, with an average size of €700,000. The results and conclusions (shown in the infographic on the following page) translate to an average saving, through the use of architecture, of €140,000.

Typical organizations have a dozen to several hundred IT projects running, and based on the average project portfolio, architecture could save millions of euros annually. There is, of course, a cost associated with building up and maintaining an architecture process and capability. These costs need to be balanced and incorporated with the savings. Having said that, cost is only one aspect to consider when looking to adopt an architecture function.

Next to the commercial value of an architect there are other factors that are also positively influenced by having an architect, such as best overall technical fit, the timely delivery of projects, delivering better enterprise level value and ensuring best strategic fit. Architects understand what is “right” for the business. They ensure value for money, shape strategies to pave the way to digital excellence, drive innovation and deliver IT solutions. They do all this while minimizing impact on the business and without introducing risk.

**The Value of Architecture**

Based on the average project portfolio, architecture could save millions of euros annually.
The average project size in the study was €700,000. This translates to an average saving of approximately €140,000 through the use of architecture.

Usage of solution architecture within software development projects also provides the following benefits:

- **19% decrease in project budget overrun**
- **40% decrease in project time overrun**
- **38% decrease**

Decreases the percentage of projects with large (> 20%) budget overruns from 38% to 13%.

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Many enterprises have both traditional and emerging IT landscapes.

Changes to the existing enterprise capabilities can result in complexity, risk and cost. As one part of the business focuses on being stable and ensuring day-to-day activities are supported; another part will tend to focus on improvement, trying to lower costs and stay competitive.

Given the fact that IT development is accelerating, people are needed to handle the planning, designing, building, testing and implementation of IT changes, while, at the same time, keeping an eye on new developments. In this scenario, using an architect would be beneficial to address these challenges.

If there is no complexity and no, or only very limited choice, then an architect is not necessarily needed.

Although complexity may have negative connotations, it is not a bad thing. It is, however, something that demands your attention and keeps you moving forward.

At What Point Do I Need an Architect?

There are no set points in time to begin searching for an architect; our advice is: “sooner is always better.” It is important to realize that if you have a vision or strategy, implementing this and seeing it through to fruition will be a long and difficult journey; and doing this alone is likely to end in failure. An architect can be a powerful asset and one that should not be overlooked.

If you are experiencing any of the following, an architect might be part of the solution:

- Unable to set a vision or strategy to achieve that vision
- Struggling to keep your IT costs under control or finding that IT is providing little value in growth and enablement to the rest of the business
- See technology initiatives constantly failing or going over budget

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