

Architectural Principles

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Introduction

Cool Elephant has extensive experience providing architecture artifacts, services and consultancy to a wide range of customers in both the private and public sectors. This experience has allowed us to test a wide range of architectural principles and approaches against the conditions imposed by introduction of architectural discipline to corporate IT environments.

This experience shows that without a rigorous set of architectural principles, the benefits of architectural discipline become exponentially harder to quantify, let alone deliver. To this end, we are pleased to publish our own principle set.

Please feel free to use these as and when you need them - either in their entirety or as a starting point for the development of your own principle set. We would, however, ask you to ensure that their copyright as a Cool Elephant production is clearly stated.

We retain full IPR over the following principles.

Principles

This section contains the list of 13 Cool Elephant architectural principles. They are discussed in more detail below.

	principle
1	the enterprise should be shaped by the services it provides to its customers
2	effective enterprise architecture is framework independent
3	enterprise architectures are organic
4	benefits from investment should not be limited to narrow business areas
5	architectures should allow timely provision
6	architecture is not driven by change
7	information is a corporate asset
8	business process is a corporate asset
9	employees are a corporate asset
10	architectures should impose an appropriate level of security
11	architecture must be driven by business strategy
12	architecture must be flexible and fit for purpose
13	tactical solutions are a vital part of the architecture's growth

Shaped By Services

Any Enterprise requires a guiding architecture only insofar as it is successful - and it is successful only insofar as it has satisfied customers. Thus the architecture of any enterprise is determined by the factor that makes it successful - the services it provides to its customers. Architecture exists only to allow any enterprise to provide these services more efficiently, and to bring new services to market more quickly.

Framework Independence

As the discipline of enterprise architecture becomes more widespread, so the number of frameworks within which it can be delivered grow. These range from the old and established (Zachmann, TOGAF et al) to the brand new niche market players. The Cool Elephant directors are TOGAF certified practitioners.

Almost all frameworks have benefits, and most have drawbacks. Cool Elephant believe that the discipline of enterprise architecture, and the benefits it can deliver, are at worst framework agnostic and at best framework independent. By this we mean that the various frameworks

share large areas of philosophy and practice, and further that none of them wholly define what can and cannot be achieved.

Organic Growth

When talking to some enterprise architects (or reading the materials associated with any particular framework) it can be easy to assume that all enterprise architectures look essentially the same, and that one model can potentially be transplanted from one enterprise to another. Cool Elephant do not believe this to be so - just as the enterprise is shaped by the services it gives to its customers, so its architecture must grow organically within the enterprise to achieve maximum effectiveness. Further, transplanting an architecture from one place to another can be damaging in the extreme. Architectures must be intertwined with the fabric of the enterprises to which they belong.

Widening Investment Benefit

Enterprise architecture exists to maximise the benefits of IT spending. It cannot do this if these are measured within the confines of one or more business “silos”. Its spending must bring broad benefit to the enterprise, and enterprise architecture exists to ensure that this happens and can be measurably proven.

Lifetime Benefit

Architectures are a long term investment and enterprise architecture typically involves considerable investment before any benefits are visible. In order to ensure these benefits are delivered, it also tends to impose additional overheads on the projects and programs it governs. These should never be so onerous that project timescales are negatively impacted and solutions cannot be delivered in a timely manner (or on budget).

Architecture & Change

Architecture should not be driven by change - instead it must provide the parameters within which effective change can take place and control the rate at which change happens such that the enterprise can successfully accommodate that change. This rate will not be uniform throughout the life of the architecture, the life of the enterprise, or even throughout the calendar year.

Information, Business Process & Employees

Enterprises typically spend considerable amounts of time and effort in maintaining and maximising the financial impact of their physical assets. However, they sometimes miss the important impact of their less tangible assets - their information, their business processes and the creative input of their employees. Enterprise architecture must have these intangible assets at its heart; both safeguarding them and looking to maximise their impact on the success of the enterprise.

Appropriate Security Levels

For many enterprises, security is a new concern and one which presents intractable problems. There is often a knee jerk reaction to new (or newly perceived) threats which imposes levels of security that are far more draconian than are actually required and that

hamper the normal operation of the enterprise. At the other end of the scale, security is often non-existent, or the threats so poorly understood that it might as well be. An effective enterprise architecture will have security at its heart, and will be capable of applying flexible and appropriate levels of security as required on a requirements-driven basis.

Business Strategy

One of the driving aims of enterprise architecture is to ensure that business and IT provision are closely aligned and thus that IT expenditure maximises business benefit. This is reflected in the primacy of the business layer in most architectural frameworks. All of this being so, the business strategy of the enterprise must be at the heart of the enterprise architecture, and must drive its genesis and growth.

Flexibility

As stated elsewhere in this document, enterprise architecture must be driven by business strategy and grow organically. It can often only achieve these two aims by offering a degree of flexibility, and not being a set of 'cast in stone' edicts that obstruct the progress of the enterprise. The architecture must be able to adjust to unforeseen circumstances.

Tactical Solutions

Tactical solutions are a vital part of any IT delivery landscape, and should be viewed positively. They can (and should) be used to prototype new ideas and trial approaches, or to ensure that IT satisfies business requirements in those circumstances where speed is of the essence.

However, a number of common misconceptions must be avoided:

- Tactical solutions are NOT those that simply cannot be shown to be strategic. If a solution does not fit within the strategy set of the enterprise, then there has been a failure in architecture.
- Tactical solutions are NOT those that fill spaces where no strategic solution is envisaged, can be afforded or is planned.

A tactical solution must be part of a plan - it must have suitable funding to allow for its replacement, it must have a limited lifespan (24 months is a reasonable figure in most cases), and an adequately funded project to facilitate its replacement must be underway.