

Architecture 10 Years On

By Jon Blunt

It's been ten years since the first meeting of TiAC at the Sonesta Hotel in Cambridge, Massachusetts. Much has changed in that time.

- Information Architecture became Enterprise Architecture, though we never changed our name.
- Tim Berners Lee had demonstrated the World Wide Web in 1990, but at the start of 1993 there were less than 50 www servers, and Mosaic, the first GUI web browser, had only been released in February.
- 5.4 million notebooks were sold in 1993 but no one brought one to this pre-PowerPoint event.
- The Pentium 60 was released in March 1993 with 3 million transistors with a line size of 800 nm.
- We were still two years away from Windows 95 and an almost acceptably stable PC operating system.

We do not record any attendee having a public e-mail address — the minutes of the second meeting state that, "the group would delay investigating file transfer and other complex technologies until the members had mastered the complexities of CompuServe mail".

The first ten years of TiAC, then, are the first ten years of the global adoption of the Internet outside the research community. No one at that first meeting had any idea of how much the technology domains in their company would change in the next decade or the direction they would take. There was no expectation that we would have universal digital access to each other or that there would be a simple, light-weight, platform-independent, universal user interface.

I think if presented with a vision of this future, most information architects in 1993 would have assumed that all their problems would be solved. Strangely, it has not happened. If the Internet is the dominant theme, corporate IT groups have also had to research and deploy:

- ERP software (and yes, SAP R/3 came to market in 1993 as well)
- Four generations of PC technology
- Object Oriented Technology from Smalltalk to Java
- Linux, whose genesis is contemporaneous with the founding of the Web
- Globalization of IT services

So in 2003 has the pace of change slowed? Temporarily maybe, and possibly away from pure technology. In the last three years we have begun to ask whether IT is the solution or is technology the problem¹. In the nineties, investment in the global technology infrastructure out-ran the ability of telco companies to make an acceptable rate of return. At the same time US companies have recorded increased rates of productivity from deploying those technologies nascent in 1993.

The turning point came with the bursting of the technology investment bubble. With budgets cut, companies turned to squeezing out returns from past investments. For three years increased productivity in the US economy has not come from greater sales, but from cutting costs including reducing the work force: business transformation by a thousand cuts. This is the antithesis of the “build it and they will come” mentality of the early rush into e-business.

But some things have not changed over the years. Implementing technology still costs more and takes longer than it should. The rate of failure in projects is still too high and the holy grail—integration—remains just beyond the grasp. A consultant friend once told me that when she started working with change management and technology projects the hot topic was implementing stand alone word processors as shared office services. She expected this to be a short phase of her career but every five years there is a new technology and a new generation of managers who insist on repeating the mistakes of their predecessors.

What, then, are the lessons we can carry forward?

First, the importance of implementation. In the current environment it is not acceptable to write off half an organization’s development investment in information technology, in the expectation that the other half will generate such high returns that no one will notice.

Second, integration and synergy, a much over used word that simply means sums like $1+1 > 2$, make sense. Traditionally there has been a huge amount of redundancy in applications with the same function provided in each application stack. More insidiously, data is replicated across systems in ways that ensure an over all lack of integrity. With constrained budgets applications need to exhibit a higher degree of integration to avoid value-decreasing maintenance and recovery costs.

Third, deriving as much benefit as possible from each technology. We should expect the life cycle of applications and infrastructure to become longer. Vendors will do everything in their power to avoid this happening, since it is the renewal cycle that funds their investment and that, in turn, results in the lowering of technology costs, particularly for hardware. Quite simply, if customers stop buying, the innovation cycle in the industry will slow down.

¹ *IT Doesn't Matter* is only the most reported article questioning the justification used to justify high levels of investment in IT.

However, in many areas the benefits from jumping to the next generation of technology are now marginal and for many companies the risks of being blind-sided by a competitor's adoption of a new technology are becoming more remote. In consequence adoption cycles are likely to be slower, with more companies deciding to wait for the technology to mature.

Fourth, more specialization. Companies will outsource those elements of technology and technology management that do not provide strategic advantage. This trend is clear, but how fast and to what extent we will not know for some time.

Last, the focus will be on the benefits to the organization—the business case. For some companies ROI will dominate, for others the criteria used will involve more factors. In either case, the expectation will be that the business case is made in advance and that outcomes will be tracked; if not project by project then at the impact IT has had at the aggregate level.

Architects

In this future, what is the role of the enterprise architect? Is there a role? Yes, almost certainly. The issues described above represent a compelling case for enterprise architecture, whether is called that or not.

Signally, integration and synergy demand a formal design/framework. If we have learned one thing in the last ten years, it is that integration does not happen by itself. Also, it is not a point event; as applications evolve, responding to changing requirements, the level of integration will decrease unless there is an active focus on the area.

Extending the technology life cycle requires disciplines to make the end of life decision: "When does an old application/platform become a liability?" Even more than in the past the concept of the To-Be state becomes a never to be reached nirvana while reality is a set of overlapping transition states that bridge multiple generations of technology.

Then if swathes of IT are to be outsourced there has to be a process for monitoring the effectiveness of the outsourcers and evaluating the services received back. Many elements of the technology map will virtualize, with products and platforms becoming services. This may require new metrics and models to manage. More of the technical decisions will be made by the supplier, but they need enterprise level requirements as input to those decisions.

Someone back home is on the hook for day to day management of the IT resources whether those are owned or leased. Thus the role of the CIO changes from technical leadership to information management. The challenge to enterprise architecture is to create the framework for planning, management and change of the enterprise's IT capabilities.