

THE EVOLVING ROLE OF THE ENTERPRISE ARCHITECT

By Jon Blunt

At the last meeting in Sacramento we spent some time discussing security and how it relates to architecture. Shortly afterwards, someone came close to taking down the master domain services for the Internet, in addition to the general run of new viruses and their capacity for disruption. This led me to some thoughts on security and that to some musings on the evolving role of the enterprise architect.

It is clear that the global infrastructure upon which every company depends is vulnerable to attack and that the systems that enable us to create integrated supply chains, to integrate services with customers, and to coordinate across highly dispersed operations and a mobile workforce also create vulnerabilities.

Certainly, each company has more control over its own infrastructure than it does over the global infrastructure. This is true whether it owns and manages the infrastructure or outsources those functions, though the mechanisms for control will be different in each case. Yet the complexity of these environments and their dependence on third party products that themselves may not be secure imports many elements that contribute to the vulnerability of the public infrastructure.

In her presentation in Sacramento, Rosie discussed a range of issues related to security and how some of these can be addressed through “coalitions of the willing”. Areas that I am sure we will return to at TiAC in the next year include those where public policy issues, such as privacy, interact with and influence architecture. I am following with interest the current cases before courts that will define the limits of using encryption and other technologies to protect copyrights.

This issue of the interaction of the public and the private was also present when Rosie identified security as an emergent property of systems: a property that cannot be identified with the individual components but only by observing the complete system. Some years ago, this was a theme of Mark Maier when he discussed with TiAC the problem of architecting “systems of systems”. It seems to me that as more of the core business processes are implemented in systems and networks of systems, with components internal and external to the enterprise, emergent properties like security will become increasingly important. It is in leveraging the potential benefits and helping the organization to avoid the hazards in building these “systems of systems” that I feel enterprise architecture will continue to deliver value to the enterprise.

The uncomfortable fact is the Enterprise Architect straddles two levels of abstraction. One responsibility is for the architectural integrity of systems that are deployed in the enterprise, though often this oversight role is limited to the technical architecture of systems that form part of, or integrate into, the enterprise infrastructure. A second role is the shepherding of the organization towards “systems synergy” where the value of the system portfolio is greater than the value of the individual components.

Of the two roles the first is usually more clearly defined. Governance processes set out accountabilities for project teams and architects and the end goal is clear, a working system that operates within the enterprise infrastructure. The second role, however, requires developing some statement of vision or objectives for the enterprise to which systems can be aligned. The problem comes when the goals, and funding, of individual systems do not reflect these objectives. These conflicts can often only be resolved at the executive level through a process that is highly political.

Yet this second role is fundamental, for in the reality of conflicting time lines, devolved responsibility and the leverage available from public infrastructure there is probably no effective process of self-assembly for enterprise level processes. System investments are distributed too much over time and responsibilities to naturally evolve to deliver enterprise level integration. The difficulty of eliminating duplicate business systems just demonstrates the tendency for solutions to proliferate and the difficulty of developing a universal yet manageable solution in a business domain.

The evolution of open standard protocols and interfaces has enforced some level of discipline, separating functionality and allowing more of a plug and play model for critical services to emerge. This is a benefit to be exploited to the full, but it will never be a complete answer. By aligning with the standards in the global infrastructure a company creates opportunities to network and integrate with others while having access to the greatest range of products.

At the same time the best of breed philosophy is in conflict with relying upon vendors to provide the integration. Perhaps the ERP vendors will solve the problem by offering one application that covers all business processes. They are certainly positioning themselves as one stop shops for enterprise systems, but while companies are likely to deepen their commitment to strategic vendors, it is difficult to see this developing into a total solution: business processes and value systems evolve too quickly to be constrained by the capabilities of a single vendor to deliver solutions.

Yet, neither is it acceptable, as we have in the past, to build, fix, tear down and start again. The cost of this is becoming too apparent. For all practical purposes some systems, including those ERP systems, are not going to be replaced and the only alternative is to integrate to them and architect around them.

This leaves Enterprise Architecture owning the responsibility for the meta-architecture that ensures higher-level goals are not compromised in the desire to deliver to budget and deadlines. This is not to say this role is clearly defined, or indeed valued. However, the CIO and CTO can only deliver on their accountability to the enterprise if they create processes and competencies for creating alignment across organizations. In the short term the key roles in those processes can be outsourced to consultants along with the infrastructure, but for all but the smallest companies it will not be acceptable to executive management to cede control over their fate to an outside organization. Now, if we outsource the CIO and CTO as well...

Looking to the next year and beyond, it appears that Enterprise Architects will continue to add value to the corporation, especially where they focus on the challenges of the future and avoid fighting the battles of the past. H.G. Wells wrote that, ‘in the land of the blind the one eyed man is king’, and architects do not have to see the future to be successful. It is enough to protect the enterprise from self-inflicted wounds that will cause it to fail to exploit the opportunities tomorrow will bring.

My objective for TiAC for next year is that we discuss and advance the capabilities of Enterprise Architecture in this full range of accountabilities. There are challenges a plenty in implementing good governance processes and managing relationships with other groups inside and outside IT, and I am sure the group will continue to return to that topic.