

Project Governance and Enterprise Architecture Go Hand in Hand

Gene Leganza

Giga Position

The key to enterprise architecture (EA) effectiveness is governance, and the key to governance is intervention in IT projects. EA effectiveness is thus tied to project governance. Project governance is also key to aligning IT activity to business goals, cost control and providing IT value. EA efforts need to implement processes to maintain awareness of project initiation and to introduce design scrutiny and guidance in a systematic fashion. However, creating multiple non-integrated processes for project governance to serve the various goals will introduce an intolerable level of bureaucracy. Rather, what is needed is an integrated approach to project governance that will encumber project delivery as little as possible while addressing architecture, alignment and cost control requirements. IT organizations that do not implement effective project governance will be unable to achieve high level of architecture compliance and will have no effective means to manage to business goals or to attain a meaningful degree of cost control.

Recommendations

Design project governance processes with a view to avoiding redundant processes and a cumbersome amount of documentation for project sponsors. If several processes are needed to address timing issues, ensure the maximum possible linkage between processes and reuse project documentation. Use the project initiation process as a trigger for architecture scrutiny.

Implement an architecture review board as a gating factor for final designs. Project construction should begin only upon approval by the board. As a review board occurs at the end of design, it can be severely limited regarding its influence on design. The best approach is to implement a review board in conjunction with other processes that intervene in project design at an earlier stage.

Implement a consultative process for EA governance if at all possible. A consulting architect can review requirements and provide design and technology selection recommendations and can steer the organization toward reuse and best practices. The consultative approach also avoids the view of architecture governance as standards-policing activity by inserting proactive guidance. The combination of the consultative review for guidance and the review board approach for approval is most effective.

Organizations that are too resource-constrained to implement a consultative model can use an alternative form of architecture review board presentation designed for early review of project requirements. The first look review is not done for approval purposes but to give the technologists on the review board an opportunity to provide architecture recommendations and guidance.

Proof/Notes

A common problem for EA implementations is the governance of IT projects to ensure alignment with the architecture. Typical issues include a lack of awareness of projects' initiation (and the resulting inability to guide application design) and ineffective governance methods. This Planning Assumption provides an overview of IT project governance methods and techniques prevalent in the industry and then relates the EA perspective to overall project governance goals. It also addresses the issues faced by EA groups that need to

effect project governance for architecture issues in a project governance process vacuum.

The Goals of Project Governance

Project governance comes in a variety of forms and is undertaken for a variety of reasons that vary with the needs of the environment. Five primary goals that are common motivations for creating project governance structures and processes can be summarized as follows:

- *Controlling cost:* Budget pressure resulting from the last several years of poor economic conditions have resulted in many organizations instituting centralized project governance structures and processes to control cost. For many organizations, this was one of the first enterprisewide decision-making processes put in place and represented a significant change in how projects were funded.
- *Ensuring business value:* Cited as a motivation as much as cost control, the pursuit of business value includes selecting projects that make progress toward enterprisewide goals and thus improve alignment between the business and IT. Slim budgets have been a driver for this goal as well, as management would strongly prefer to expend scarce project funds on projects with demonstrable value.
- *Maximizing resources:* A centralized cross-divisional project vetting process provides management with an orderly analysis of available resources that provides input to project planning and portfolio management. Scarce, highly skilled resources can be reserved for the most important projects. High-priority projects with conflicting resource requirements, such as staff with specific technology skills, can be reassessed regarding the increased cost of adding contract help at the point of the funding decision rather than after the fact.
- *Providing a balanced investment portfolio:* Project governance processes feed naturally into project portfolio management processes in that they provide a central structure for cross-divisional project assessment. In addition to cost and business value issues, the existing portfolio of in-flight projects can be taken into consideration when determining which new projects to fund.
- *Ensuring the uniform application of best practices:* As project execution has been long recognized as one of the most important factors in providing business value, organizations have established project offices to that define the processes, methodologies, techniques and metrics to be used enterprisewide. In some cases these project offices simply provide this definition and some degree of project administration (metrics gathering) only; in other cases, the project office has project governance responsibilities and implements processes to ensure standard project management techniques are used, including the proper project initiation process.

For many organizations, a secondary goal of project governance processes is to ensure adherence to the architecture. When organizations have implemented formal project governance for the above primary reasons, and there is an active EA program in place, analysis of the project for adherence to EA standards is usually included in the regime along with return on investment (ROI) or other financial measure. For many reasons, using non-standard technology will result in higher project costs, but this is often not recognized by many project sponsors (see Planning Assumption, [Follow the Money: The Cost of Implementing Nonstandard Technology](#), Gene Leganza). Adding the analysis rigor to vet projects' early design for impact on the established architecture or technology strategy will provide additional insight into project cost and viability and increase the likelihood of project success. In shops that have active EA programs that are attempting to establish project governance, but that do not have existing project governance processes, separate EA governance processes are needed to specifically address EA concerns. While the previous motivations for project governance have resulted in top-down pressure to establish the needed structures and processes, the need to for EA governance often struggles as a bottom-up governance approach.

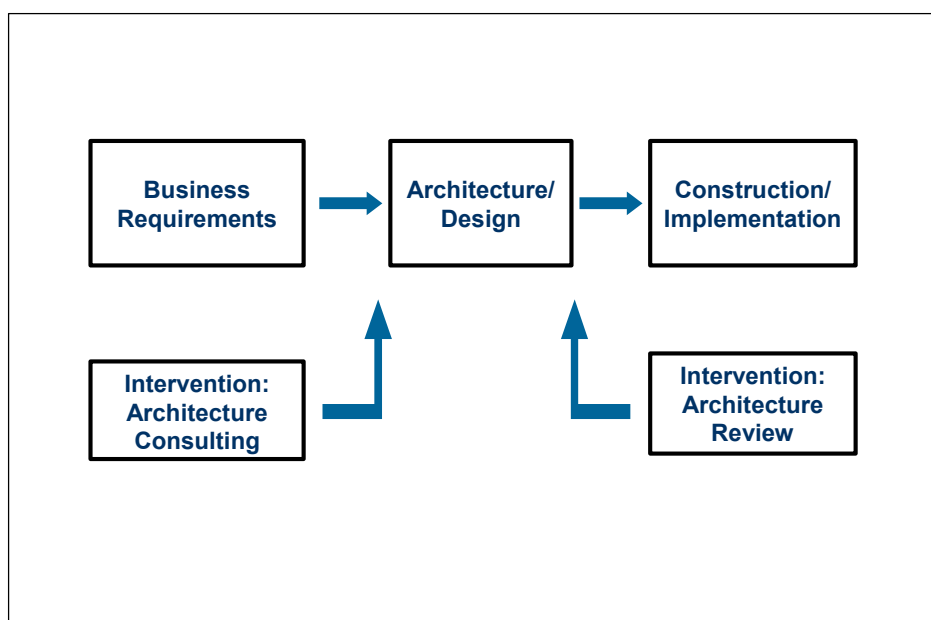
Relevance of EA to Project Governance Goals

From the enterprise architect's perspective, any project governance that has been instituted is an opportunity

to insert architecture governance processes. Once it has been recognized that careful project scrutiny is very important to the business, the door is open to demonstrate how attention to architecture considerations dovetails well with project governance goals. In organizations that have EA programs but no formal project governance, an understanding of the relation of EA concerns to the typical motivating factors that lead to the implementation of project governance can help justify the implementation of EA governance processes.

Cost control: Adherence to EA standards and the stated technology strategy has a significant impact on IT costs. Standardization simplifies infrastructure support, enables better negotiating positions with vendors via volume purchase agreements and avoids time spent in experimenting with untried technology elements. Again, an examination of how professional service organizations (PSOs) execute is instructive. By the rigorous application of standardization they can typically guarantee clients that they will provide services at reduced cost to the client than the client was able to do themselves and in the process make a reasonable profit. This shows the power of ruthless standardization and how EA is intimately tied to cost control in IT projects (see figure below).

EA Governance Process Flow



Source: Giga Research, a wholly owned subsidiary of Forrester Research, Inc.

Risk Avoidance: EA programs' establishment of infrastructure, application and data architecture standards explicitly address risk factors in projects (see Planning Assumption, [Risk and Mitigation in Enterprise Architecture Efforts](#), Gene Leganza). Standardization on proven technology in technical (infrastructure) architectures is in service of the goals of availability, high performance and reliability. Application architecture activities typically relate to proven approaches to complex application design (such as with the patterns approach) which define acceptable approaches to application with specific requirements. The implementation of data architectures avoid redundancy, enable application integration and lay the groundwork for enterprisewide analysis of information assets. Proceeding with project design without the benefit of architecture guidance (read governance) thus places the ability to understand and control costs as well as infrastructure, application and data quality and reliability at risk.

Achievement of expected ROI: The ability to correctly gauge costs directly impacts the ROI calculation. Few projects that do not go through a formal EA assessment correctly assess implementation and support costs. The inclusion of a process that would assess project design would enable a significantly more accurate estimate of project costs, and thus more accurate ROI calculation. The costs hidden by incomplete (or non-

existent) architecture analysis tend to make the ROI look better than will be actually attainable.

Enabling the attainment of business value: A thorough and well-organized EA program will have included steps to understand business drivers and needs. Architecture planning often targets the achievement of business goals via technology and in well-run programs it relates directly to the attainment of business value. In those organizations that include IT thought leaders at the business planning table, a senior EA figure is often involved to brainstorm appropriate or innovative applications of IT's capabilities to business problems. When architects work with business representatives to design IT solutions they typically bring with them a thorough understanding of the business drivers and strategic goals and the business value of the projects are not lost in a rush to embrace impressive new technology. Rather, the interest in technology solutions is typically tempered by a pragmatic approach to design that takes benefits or risks to the enterprise as a whole into consideration.

Alignment of resources: When EA groups define domain and sub-domain architectures, they select technology that addresses the needs of the organization. Considerations include industry standards, vendor viability, product functionality, reliability, performance and the ability to integrate with other enterprise standard elements, and many other criteria. One important criterion relates to the capabilities of the current IT organization. Architecture groups do not standardize application architectures on Unix when their entire development population only knows the Microsoft environment. Certainly architects cannot be slaves to incumbent architectures and existing skill sets, but any architecture change that leads an organization away from their skills base must be accompanied by plans to bring skills in line with the architecture. Thus, project governance that ensures alignment with the architecture will also ensure alignment with existing resources. Architecture governance, of course, does not address the availability of specific individuals with specific skills for project resource planning purposes, but it does address the issue of selecting technology for which there will be in-house capabilities.

Inserting EA Considerations into Project Governance Processes

Architecture governance is essentially an intervention or a series of interventions in the development process (see figure above). The two fundamental tasks are to gain awareness that a project has been initiated and then to interact with the project team to provide guidance, approve their design or, preferably, both. There will be two general approaches to this, depending on whether or not there are formal project governance processes in existence currently in the organization.

1. *Organizations with formal project governance processes:* Instituting EA governance is never easy, but the most straightforward situation is that where an organization already regularly adheres to standard processes for development, project management and project governance. In those instances, implementing EA governance is a matter of justifying the EA considerations and inserting the appropriate inserting project architecture assessment steps (see Planning Assumption, [Implementing Effective Enterprise Architecture Governance](#), Gene Leganza). Internal architecture consulting is often the most effective means of reviewing project requirements at the outset of project design and providing architecture design and technology selection guidance. This can make architecture governance a proactive process rather than a police action. The other most typical approach to architecture governance is the implementation of an architecture review board. These typically are convened to review projects that have already been approved and are near the completion of their design phase. This timing does not serve the overall project governance process very well. This level of scrutiny typically occurs this late in the project's life cycle because it is not till then that the appropriate level of detail is known about the project design. Including architecture scrutiny as part of a project governance process would require that more time is spent specifying the project and attending to probable solution designs. The need to address architecture issues at the project selection stage contributes to the "process overhead" and the delay to project execution that elaborate project governance processes introduce.

2. *Organizations without formal project governance processes:* When organizations have not implemented formal project governance processes and they do not follow standard system development life cycles or have standardized project management methodologies in place, it becomes incumbent on the architecture group to define and implement processes to review project designs and address architecture issues. The above-mentioned Planning Assumption describes approaches to this in some detail. In summary, projects are most typically reviewed by architecture review boards (ARBs), which convene at the end of the design phase to vet the project's architecture and design. Note that, as stated above, this is after projects have obtained funding approval and are in progress. This process provides a good cross-disciplinary review of important projects; however, the timing is such that ARBs have considerable difficulty in turning back unsatisfactory architectures. The business need to implement the project on time typically overrides the perceived benefit of the recommended architecture changes, leading to a frustrating set of circumstances for the ongoing ARB and questionable governance value.

There are two approaches to addressing architecture governance needs and include guidance early enough in a project life cycle to make a difference. One approach is to formally characterize reviews as being for a first look or for formal approval. First look presentations are not critiques or design by committee scenarios, but simply an opportunity to vet project requirements at a high level with an organization's technology thought leaders. This provides an opportunity for early guidance and early identification of issues that may lead to eventual conflict with the architecture. A leading US waste management company, for example, has a "Vision" presentation format for newly defined projects. This provides an early chance to influence technology selection or project design and also enhances the perception of the architecture process as one that is helpful rather than merely punitive.

The other approach to early intervention is that of architecture consulting. In this process, an application architect reviews project requirements and involves infrastructure architects as well if needed to address any expected issues. As stated above, this process has the benefit of applying skilled resources in a center of excellence approach that can benefit the enterprise as a whole by applying highly skilled resources broadly across the enterprise; it is seen as proactive rather than punitive in nature.

However, while architect involvement in this consulting model is intended to be brief, this is a resource-intensive approach. And, without formal project initiation processes in shops with poor adherence to process, awareness of project initiation can be a basic problem to getting architects involved with project design. The IdeaByte, [Making Architecture Real With Extended Architecture Teams](#), Gene Leganza, discusses the creation of virtual or extended teams of architects to address this situation with a matrixed model.

In this model, senior development staff are assigned the role of application architecture for the area in which they work. The individuals selected for this role are typically those knowledgeable individuals that people go to for technical advice. The concept is that the application architect has a dual reporting relationship: he/she reports to both local development management and the head of the architecture effort. In addition to any project responsibilities these architects have, they are charged with scrutinizing all projects in their area and engage the rest of the architecture group as necessary when projects with issues require further attention.

A forms-based approach to the project awareness issue is problematic. Incorporating a formal process whereby every single project files paperwork with an architecture group and scrutiny is applied to project documentation would be severely taxing — most large organizations have so many projects in flight that this activity would overwhelm a central architecture group. Also, this process would be dependent on the quality of the early project documentation, which is not reliable or typically well detailed. Sending out central enterprise architects to review all projects in a consulting role would also be too resource intensive and prevent the central architects from doing much else. But engaging architect-level staff in the development groups puts the eyes and ears of the central architecture group into each development organization by proxy.

This approach requires that development management accept the tasking of very skilled resources to this task

of architecture scrutiny for all projects. There can be resistance to this as these staff are often allocated to the most important projects. However, the development area can benefit by having a senior development apply their eye to all projects. In some instances, senior IT management (e.g., the CIO) has not only sanctioned this approach but mandated it, in order to advance the cause of the architecture effort.

Alternative View

An alternative view does not apply.

References

Related Giga Research

Planning Assumptions

[Follow the Money: The Cost of Implementing Nonstandard Technology](#), Gene Leganza

[Designing an Enterprise Project Management Office to Improve Organizational Project Management Efficiency](#), Margo Visitacion

[Giga's Framework for Project Selection and Prioritization](#), Margo Visitacion

[Risk and Mitigation in Enterprise Architecture Efforts](#), Gene Leganza

[Implementing Effective Enterprise Architecture Governance](#), Gene Leganza

IdeaBytes

[Making Architecture Real With Extended Architecture Teams](#), Gene Leganza

[ROI and Patience Support Project Office Implementations](#), Margo Visitacion

[Project Offices — One Size Does Not Fit All](#), Margo Visitacion

[IT Governance: Steering Committee Do's and Don'ts](#), Craig Symons

[Making Architecture Real With Extended Architecture Teams](#), Gene Leganza