Pursuit of enterprise architecture (EA) programs in government organizations is now mainstream. However, the public sector experiences above-average difficulty with EA governance. To ensure success, the root causes must be understood and directly addressed in the EA governance plan.

Research indicates government agencies struggle to implement enterprise architecture programs that could make a positive difference in projects. Too often, in an effort to comply with an EA mandate, reams of paper are created and quickly relegated to shelfware as they are largely ignored by the rest of the IT organization. The shelfware concern is essentially an EA process governance problem. Worse, excessive effort is often expended on documenting the current-state environment and not enough future-state architecture is defined/approved.

The real value of an EA program is not in the content created as embodied in documents, but in the application of EA guidance within projects/programs. Therefore, how can an organization ensure that projects will utilize the appropriate parts of the EA plan? Project/program managers tend to have a high degree of autonomy in making decisions as they see fit to accomplish their goals. This must be tempered by what is best for the organization, as represented by the EA. An effective governance approach — tailored from industry best practices — must be designed early, and implementation must begin within the first few months of an EA program.

EA programs live or die by the effectiveness of their governance processes. To maximize the benefits derived from EA, it is critical to develop the process and the organizational discipline to follow it. The alternative is a perhaps slow but certain death of the EA program when frustration builds about the lack of value being generated.

In some organizations (especially the US federal government), enforcement of legislative EA mandates is well underway. Agencies are reviewing their enterprise architecture, or at least assessing their plans for producing one. Project capital requests are being evaluated against the EA. These steps are part of a broader positive trend that will continue. In 2003, the US Office of Management and Budget will release the remaining four of five EA reference models along with an update to the Business Reference Model, and it will require agencies to promptly use them. This will provide the initial input to identifying common IT solutions (future-state EA content) for the most commonly conducted business processes across the federal government. Most departments/agencies have at least some minimal enterprise technical architecture content. By 2005, further breadth and depth of EA content will be added, bringing a more holistic perspective across business, information, technical, and solution architectures. By 2007/08, the federated architecture model (see Figure 1), with the addition of substance at the governmentwide level, will finally reach a point of critical mass in its development of three tiers: governmentwide, department (mid) level, and agency/bureau level. Emerging as a best practice in the government sector, other government IT organizations will adopt this increasingly federated, multi-tier EA structure with expanding content at the highest level.

Ultimately, the EA must guide/direct behavioral change in the organization. Taken as a group, government employees tend to resist change more than their private-sector counterparts. We must identify and use the forces that have proven to drive the EA actions that are sought in projects/programs. Two primary forces are driving behavior in government organizations: 1) laws and other mandates such as executive orders (when they are enforced); and 2) funding processes. Savvy architects marshal these forces and use them to their advantage as follows.

META Trend: By 2006, unified management and governed evolution of the enterprise architecture will become dominant best practices in 60% of Global 2000 enterprises, even where asset ownership is federated. Federated architectures will focus on supporting common business infrastructure initiatives across semi-autonomous business units.
Clearly, to manage/govern adherence to any plan, a meaningful part of it must be in place. In this case, a future-state EA embodies the plan to guide IT investments. A comprehensive EA consists of a conceptual (broad) layer supported by more detailed domain architectures. An approved first version of a conceptual architecture is the basis on which initial governance should be implemented in parallel with future-state domain architecture creation.

Enterprise governance clearly extends far beyond the boundaries of enterprise architecture (see EPAS Deltas 116 and 129). Although the definition and characteristics of effectiveness apply consistently across organizations, different companies will establish and evolve their governance capabilities uniquely. The focus of this research is on the subset governing EA implementation.

Three Enterprise Architecture Implementation Governance Stages
In a government setting, an effective EA governance process needs to be linked to the requirements embodied in any laws or to key steps in the funding process. However, laws do not (and should not) specify what constitutes an effective enterprise architecture — including governance. The following are three major stages to an effective EA governance process for government (see EPAS META Practice 27):

1. **Budget preparation:** Monetary budgets are typically based on proposals from underlying organizational units. These proposals are drafted by identifying planned projects, conceptualizing how they will be executed, and estimating the cost of pursuing that approach. The organization must be taught that the design approaches to be used for such estimates (and their associated costs) should come (or at least be guided by) the future-state enterprise architecture extended by infrastructure patterns, if they exist (see EPAS Delta 105 and EPAS META Practice 69). Budget reviews should verify that such an approach was used in proposals. This prevents the future project excuse that a different design was estimated and budgeted.

2. **Project approval:** The project approval process should be only loosely coupled to the budget process to enable funding of great new ideas not conceived during budget preparation. However, all project proposals must express how they utilize and manifest the direction articulated in the enterprise architecture. If not, there must be a powerful business case to justify an exception (see EPAS Delta 17). The capital allocation process, managed by an investment review board, should use the enterprise architecture as a template against which to evaluate the merits of a project/program proposal. Projects that do not conform to this approach must be returned for rework or denied funding.

3. **Project execution:** Once a project/program is approved, several checkpoints must be built into the project life cycle to govern the use of architecture on the project. In the most comprehensive project management model, the checkpoints are: conceptual systems design review, business systems design review, technical systems design review, pre-production review, and project closure (lessons learned) review. In each case, part of the review meeting is to evaluate architecture compatibility and discuss the true need for any perceived deviations. Unresolved deviations must be addressed by the EA exception/waiver process (see EPAS Deltas 17 and 150, as well as EPAS META Practices 53 and 66).

It should be noted that this EA governance approach is to be applied at each layer of an organization’s federated EA structure. At each layer, the EA team will apply the EA process to embrace content from the higher organizational level and add extensions to its breadth and depth of content to address unique organizational needs.

**Bottom Line**

The value of enterprise architecture lies in its use in projects/programs. Active governance of this usage is key to realizing tremendous benefits, including reduced complexity, improved solution delivery time, better integration, and increased vendor leverage.

*Business Impact: Management discipline in enterprise architecture governance of the project portfolio will significantly improve business to IT alignment and effectiveness of IT capital investment.*
Figure 1 — Federated Enterprise Architecture

Source: META Group