

Architecture Frameworks Provide System Road Maps

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Frameworks are the navigation for architectures. Carefully review the criteria, their compliance with major frameworks and the tools for working with frameworks.

ANALYSIS

Architecture frameworks have become critical for enterprise architects. Just like the old saying, “if you don’t know where you want to go, any road will take you there,” architects find that having a solid framework provides a road map, a set of constructs and a sense of direction for architecture efforts.

In this edition of the Architects and Planners Membership Program Spotlight, we feature three pieces that address enterprise architecture framework issues.

“Architecture Frameworks: How to Choose” sets the stage for understanding architecture frameworks by defining a framework. It also addresses how frameworks assist architecture and presents key criteria for selecting a framework.

A framework is a structure within which the key components of the architecture and the relationships between these components are defined. A framework:

- Helps organize thinking about the architecture
- Provides a description of the architecture artifacts
- Helps ensure that everyone is using the same set of semantics and presents them to the group of stakeholders interested in the contents of the architecture.

Additionally, a framework provides a way to communicate the architecture. It level-sets stakeholders about the contents of the architecture by providing common definitions and concepts. It helps get buy-in. It shows the relationships between business and technology elements, ensuring that there is coherence between all elements and that every business element can map to a corresponding element in the technical architecture, and, similarly, that technical elements can be seen as supporting key business requirements.

Given the importance of an architecture framework, we enumerate six key criteria, and excerpt from five of them here:

- A framework must be consistent and structured
- It must make the top-down approach to architecture development simple and natural
- The framework should incorporate a variety of constructs at different levels of abstraction
- The framework should define and enable a process for developing the architecture
- The framework should describe the artifacts that will be produced during the work of architecture development

“Architecture Frameworks: Some Options” takes these five elements of framework selection criteria, adds a sixth area called “other,” and evaluates several popular architecture frameworks. The “other” area contains issues such as governance and communications. The frameworks evaluated are:

- POSIX 1003.23
- The Open Group Architecture Framework (TOGAF)
- The Zachman Framework

- The Federal Enterprise Architecture Framework (FEAF)
- The Gartner Enterprise Architecture Framework

We have only evaluated the frameworks that are in the public domain, not those that have been developed and promoted by systems integrators (because they are proprietary and we don't, at this time, have the full range of information available) and technology vendors. The vendor frameworks are something altogether different; they are essentially meta-patterns — at the logical level, which are meant to showcase how their particular products provide particular technology services. They are not in the same class as systems integrator frameworks. They are typically not meant to help develop an architecture, but to show where a particular vendor's products fit into the overall realm of technology solutions.

As you look through these ratings, you will be struck by the sense that no single framework is fully complete. Rather, each has strengths and weaknesses. It is important to match a framework's strengths with the particular "pain points" in your organization, so that the specific aspects of the framework that you need are well represented in the choice you make. Also, it is not our expectation that any framework will be implemented in its entirety. Rather, think of a framework as a restaurant menu, where you can pick from among the most-appetizing dishes, and in doing so, think about implementing those pieces in a sequence that makes sense.

For example, notice that TOGAF has a clearly articulated process and is very prescriptive. If this matches your need, you might be drawn to the POSIX framework. Choose the one that fits to a 70 percent to 75 percent level and then augment it with things that are missing. You might choose to adopt the governance material from TOGAF, which is rich in this area, as an adjunct to Gartner's framework. An architecture group can also develop its own constructs to augment a framework. The fundamental notion here is augmentation, not to piece a framework together from a raft of incoherent pieces drawn from different sources.

In addition to the frameworks, there are tools that support creation, representation and "evergreening" of the artifacts within the framework. "Architecture Frameworks: Tool Support" presents the criteria for the capabilities of these tools and then evaluates vendors against those criteria. Several criteria include the ability to describe, diagram, classify elements and navigate within the framework. Twelve vendor offerings are described in terms of their support for these criteria with the frameworks described in earlier Gartner research. Not surprisingly, several of these products support multiple frameworks.

Architecture frameworks are tools that will help you develop an enterprise architecture. Choosing the right one will greatly enhance your chance of success.

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