# Dynamic business environments, static IT architectures create constant battle

In the August article, we indicated that enterprises have multiple layers of architectures that form a suite of architectures. Maintaining alignment of the layers has always been a problem that the number of articles, seminars and discussions about IT alignment in business attest.

There are several reasons for the IT alignment problem. Consider the Zachman Framework approach, for example, using successive transformation of views of the information systems architecture. If the technology in row 4 is changed, it impacts the design, or the system logic in row 3 above, (see diagram below). If the business changes, then the design represented by row 3 is impacted by the business changes. This is known as the "row 3 squeeze" so design is impacted from two directions. Change is most likely from the business side as the organization reacts to changes in the business environment.

Below is the diagram that shows the layers of architecture in an enterprise ranging from dynamic to stable architectures. Each architecture layer, as shown in the diagram, has characteristics that are different from the layers on either side. One key characteristic is the amount of change over time for each layer. The part of the architecture suite that is most dynamic is the point which perceived market needs are developed to respond to the changing business environment. Architectures become more stable as they approach the enablers, as enablers, including systems, are the most stable architecture to develop and manage.

The layering of architectures from the business environment down to the enablers

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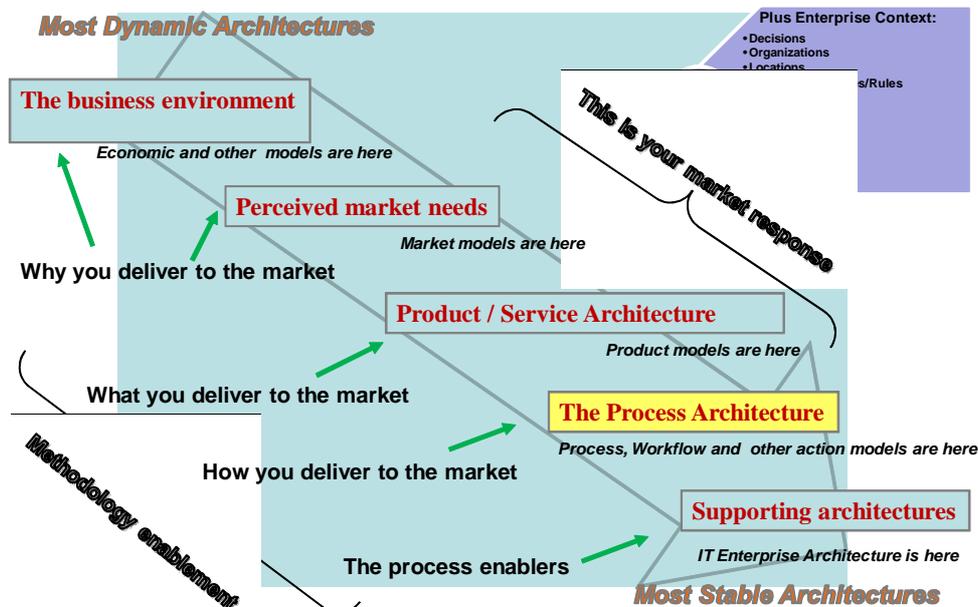
Enablers include the digital part of the business managed by IT as well as skills, policies, procedures and business technology. It is no wonder alignment of architecture is such a big problem. Perhaps virtualization and SOA technologies will help increase the alignment possibilities between IT and the business.

There are multiple models in an architecture layer. As an example, the classic functional decomposition of processes is shown as a hierarchical, or tree structure. This logical nesting of the organization's processes shows only unique process names. Another tree structure process model shows the same process names but is constructed to show the sequence of execution of the processes. In this second hierarchical model, a process name may appear many times. These models, along with process flow models, workflow models, case management models and process context matrices, represent the actions of the business, which form the business process architecture.

When executing an architecture methodology that develops models of the enterprise, organizations often capture the business information that makes up the models in written documents, graphical diagrams (e.g., Visio) or combinations of both. Unfortunately, this has significant drawbacks since the content and context are static.

As a result of these drawbacks, the following may occur: Dynamic changes that occur in the business environment cannot be easily captured or updated, the impact of those changes cannot be quickly assessed, and relationships among the contextual categories cannot be easily identified. In addition, decisions-to react to a market change are impacted by management's ability in understanding relationships between models in the architectural layers.

Because of these drawbacks, organizations today often make business and implied architectural decisions that inhibit their ability to be flexible, adaptable and responsive to business change. As Benjamin Franklin stated, "Experience is an expensive school."

Dynamic verses static representations
Two core issues illustrate the differences in dynamics that cause organizational dilemmas and undermine successful transformations:
1. C-level executives often fail to focus and align actions that are necessary to fully execute strategic shifts, and
2. The difference that exists between the desired strategic shift and the business-as-usual, day-to-day operations creates a performance gap.

An integrated, systematic architectural approach can help the organization respond to dynamic changes.

A business architecture that is dynamic covers making organizational changes that shed, rebalance and adapt to underlying technologies that minimize technical and organizational complexity. Obviously, using some form of organizational measurement system, such as scorecards, tracks key indicators that point to future architectural targets, align measures, and provide feedback for effective decision making during the transitional period. These tools enable C-level executives to focus and align organizational actions. These architectures usually are

more structured and stable because of decisions made in the past, the business and industry with which it competes, and the organization's culture.

Our Skeptical Architect, however, can provide some analytical techniques to quickly respond to constant changes in the business environment. By using an effective, lightweight approach, the architect can address the following:

- Dynamic changes in the business environment that drive responses from the other architectures,
- Outcomes, such as deliverables, from various architectures provided in a timely manner in order to respond to market conditions and changes,
- Enterprise context (decisions, organizations, locations, business systems, etc.) as needed as a part of every architecture perspective, and
- Unanticipated consequences that occur because of a lack of understanding of the relationships.

With a focus on high-level understanding of the organizational strategic direction, the Architect enables the following:

- Establishing a rapid-response mechanism to respond to dynamic business environment changes;
- Identifying the key business and organizational assessments and capabilities required to achieve desired strategic goals;
- Providing for the alignment of business process, technology, and organizational understanding to improve operational capabilities;
- Evaluating potential strategic constraints exposed by architecture;
- Establishing a baseline for the business and architectural measurement system;
- Defining, assessing and prioritizing critical strategic initiatives and projects; and
- Scheduling an on-going, 3-month project and deployment cycle.

The Skeptical Architect suggests that quick-hit business insight can be attained by illustrating various architectural views of the organization. Using matrices representative of the context of the business, the Architect can solicit additional inputs from business professionals to improve the architectural solutions. This defines IT solutions that will be more flexible and adaptable to the changing environment, which results in producing a more dynamic, responsive solution while maintaining a static, stable operational business system.