



## Enterprise Architecture: The Executive Advantage *by David Sims, sharpAngle.com*

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What is enterprise architecture? Let's break that down: Consultant Tom Finneran with CIBER, Inc. defines an "enterprise" as a business association consisting of a recognized set of interacting business functions, able to operate as an independent, stand-alone entity. "There are enterprises within enterprises," he says. For instance, a business unit within the overall corporate entity may be considered an enterprise as long as it could be operated independently.

"Architecture" provides the underlying framework, which defines and describes the platform required by the enterprise to attain its objectives and achieve its business vision. It's really just an amalgam of engineering art and engineering science. Usually there isn't any one single enterprise architecture, but can instead be considered to consist of four interrelated architectures, or "architectural views:"

- **Information architecture.** According to Finneran, information architecture consists of data models and databases that serve all participants in the business and its strategies, standards and policies. An information architecture implies that the enterprise no longer develops those hated "islands of databases," but is more interested in providing a common, shared, distributed, accurate, and consistent data resource.
- **Business architecture.** This models the business enterprise using logical service units (business processes) and the events that trigger them to represent the re-architected approach to satisfying customer requirements. Translation: It attempts to show how business is to be done. Currently this architecture is being turned upside down by CRM, which is reorganizing the entire business enterprise along new lines. At least, in correctly done CRM it is.
- **Application architecture.** Gee, can you guess what this covers? That's right, ten points. Application architecture links the data and business architecture to reflect applications. It supports the work activities of the business processes, and provides automated procedures. Application architecture manages information storage and retrieval in support of the enterprise objectives. It addresses location considerations and how information is used.
- **Technology architecture.** This is what links up with the application, business, and information architectures to provide interoperable technology platforms that meet the needs of the various user roles at identified work locations. If your business were Congress, this would be the Ways and Means committee.

Enterprise architecture, Finneran says, provides senior management the basis for obtaining consistent, higher quality answers from both detailed operational data and from informational data processed to answer their specific business analysis questions: "An architectural approach allows consistent, higher quality control of the various business processes and their underlying business rules." In other words, with an architecturally-designed system, instead of a haphazard system, the productivity of information system users will likely increase from the better systems analysis

and design. An architected system will usually provide a common look and feel that makes all systems using it seem more familiar, and therefore easier to learn and use.

By understanding the nuts and bolts of enterprise architecture, one can take the steps necessary to sustain an enterprise architecture practice.

Roger Fournier of Informationweek has done a good job breaking enterprise architecture down to its five basic components. "A generic but reasonably typical framework," he says, "consists of five major component architecture models: business, applications, information, technical, and organizational architectures. In a simplified sense, the planning process involves describing where you are versus where you want to be, for each component":

1. The business architecture component analyzes the company's business drivers, opportunities, goals, objectives, and strategies. For instance, does the company plan to develop new product lines, infiltrate new markets, reduce operating costs, or increase customer satisfaction and loyalty? What are the most critical business problems or opportunities? The business-architecture model also provides a high-level blueprint of all critical business events and processes, along with a description of their relationships and interdependencies.
2. The application architecture lays down the core business applications required to enable business processes and successfully run the business. The application architecture model encompasses all legacy systems, software packages, and distributed systems, along with an appraisal of their strategic value and impact on the business. It also identifies the new applications that are required to satisfy up-and-coming business needs. An assessment of the health of current applications is equally important to include, Fournier says, both from a functional and technical standpoint. Finally, the application architecture must carefully analyze the interdependencies and interoperability needs that are required between business applications.
3. The information architecture examines the key information assets of the enterprise. What are the types, locations, and timing of information that are required to achieve the prime objectives laid out in the enterprise business plans and processes? What types of information need to be shared? In what state is operational and informational data? The creation of the information architecture model also encompasses building an inventory for all operational files, databases, data warehouses, and data marts that are required by current and planned business applications.
4. The technical architecture model scrutinizes the underlying technologies that are required to run the applications, such as computing platforms, networks, operating systems, database management systems, storage devices, and middleware. The technical architecture model can be broken down into specific submodels, such as platforms, networks, security, and more. For example, some companies have developed a comprehensive security architecture blueprint to enable e-commerce in a secure fashion. Throughout the construction of the technical architecture model, potentially overlapping or incompatible technologies are identified, and those that do not make the grade become candidates for being phased out.
5. The organizational architecture entails a comprehensive examination of current IT processes, services, organizational structures, roles and responsibilities, and core competencies. All these components are carefully analyzed to see how well they facilitate the creation of flexible application and technical architectures that can quickly adapt to support new business requirements. It addresses fundamental questions such as: How well are IT services managed? How well does the IT organization contribute to the overall enterprise's success? Are IT services closely aligned with the business strategy? Is the current IT technology infrastructure a barrier to supporting or expanding business?

Always helps to know the nuts from the bolts.