



Enterprise System Modernization

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The demands for enterprise system modernization are driven by mainly two reasons: 1) many systems are aging, and cannot meet current e-business and e-government requirements; and 2) most enterprise architecture (EA) products are created in the business layer and at a high-level in the system and technology layers, which need to be carried over to system implementation. Gaps exist in most organizations between enterprise architecture and system level modernization efforts. Our Enterprise System Modernization service is to help organizations in developing solutions to close the gaps between bottom-up system modernization efforts and top-down EA endeavors.

Relationship to Enterprise Architecture

Enterprise system modernization is a continuation of enterprise architecture development. It is also complementary to enterprise architecture development in terms of scope refinement, more detail coverage, and carry through conceptual models to practical implementation in a continuous operation environment. The combined efforts of enterprise architecture development and legacy system modernization can assist an organization to reach its e-age enterprise modernization goals with high efficiency and high productivity, and in a practical manner.

The relationship of this enterprise system modernization solution with EA can be summarized as: 1) the enterprise system modernization is a continuation of EA efforts and is not on a separate track to create new “silos”; 2) it meets with EA in logical and physical system architecture development phase, i.e. from the 3rd and 4th rows in the Zachman Framework, and carries it deeper into specific applications and systems implementation; and 3) it complies with the high-level guidance provided from EA. In case an organization does not have EA, the corresponding EA work inside the scope of enterprise system modernization should be performed to ensure enterprise consistency. The “As-Is” (Current) and “To-Be” (Target) architectures created during enterprise system modernization usually are smaller in scope and more detailed in description comparing to the ones created in EA, so that they can be engineered accordingly.

Scope of Coverage

The scope of coverage is mainly in three aspects: 1) processes, 2) approaches and methodologies, and 3) portfolio, program and project management. Also, the approaches and methodologies are supported by the best practices, technology guidance, and tools. The solutions are scalable, which can be applied to large scope enterprise-wise system modernization efforts as well as to a single application.

Solution Concepts

As shown in the following Figure 1, the Enterprise System Modernization is a process that transform the current “As-Is” systems to the target “To-Be” systems with inputs from enterprise architecture, new technologies, new business and system requirements, standards, policies, etc.

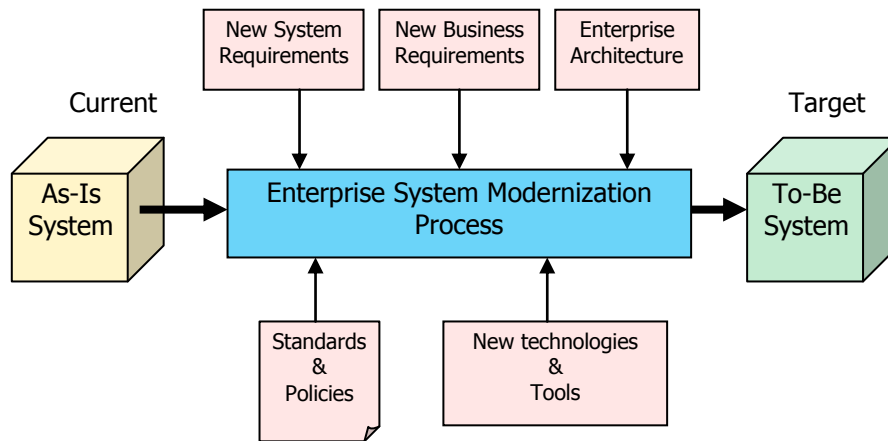


Figure 1. Conceptual view of legacy system modernization process

Modernization Practice

Most enterprise system modernization efforts attempt to reach similar goals for an efficient and productive e-business or e-government organization, which are heavily influenced by current business requirements and common technology trends.

Also, the enterprise legacy systems in most organizations tend to be based on the similar legacy technologies or commercial products that were available and acquired over the passing years. The lifecycle for legacy systems in the government environment usually spans an even longer time frame with co-existence of technologies and products from new to very old. Because such environments share the similar “To Be” requirements and “As Is” system variety, it enables us to create reusable solutions. Our reusable solutions are provided in processes, approaches, methodologies, as well as relevant content in portfolio, program and project management. Also, we’ll provide technical solution options for target system creation based on popular modernization scenarios and technology reference model and standards adopted by the organization.

Although most enterprise system modernization efforts have common environmental characteristics as discussed above, each individual modernization effort is unique with regarding to the specific goals an organization intends to achieve, e.g. its unique line of business and the specific position it holds in its current business and system environment. These uniquenesses will be reflected in the target

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architecture and in the roadmap specifically created for each organization. Although we cannot build a common roadmap for solutions, we can efficiently build a customized roadmap for each customer using our knowledge and reusable assets, which can be applied in

- Assessing the current legacy systems
- Developing the target systems
- Creating a roadmap based on identified legacy and target systems, business requirements, and input from EA

A similar approach can be applied to individual *application* modernization effort as well. In another words, our solutions can be scaled up and down to accommodate different scopes of enterprise system modernization efforts.

Framework and Components

The three major components for enterprise system modernization are processes, approaches and methodologies, and portfolio/program/project management, as illustrated in the following Figure 2. The processes provide guidance on activities and steps involved for enterprise system modernization. The approaches and methodologies provide technical references to support the processes, which provide descriptions on “how to do it”. The portfolio/program/project management is for operational management, lifecycle governance, organizational support, roadmap creation and execution planning, etc. to make sure modernization processes proceeding effectively and efficiently.

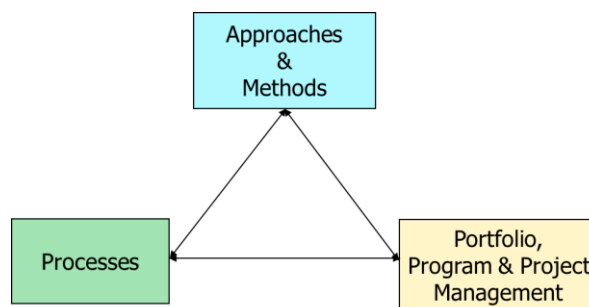


Figure 2. The three major components for enterprise system modernization

Proceed in Iterations

The enterprise system modernization should be an iterative effort with an “evergreen” process in place. The processes, approaches and methodologies, and management mechanisms will be constantly modified and improved based on knowledge gained and lessons learned from ongoing and completed modernization projects.

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