



Enterprise Evolution

The Assessment Process

Enterprise Evolution, a discipline in the legacy modernization domain, is a collection of tool-enabled disciplines that facilitates the understanding, improvement, migration, reuse and/or transformation of existing software systems. This is the first in a 3-part series of white papers that discusses the assessment phase of an Enterprise Evolution modernization initiative.

If you plan to maintain, improve, migrate, transform or otherwise modify information systems, knowledge of those systems is essential. Just as a surgeon would never operate without obtaining x-rays and performing other diagnostics, a project team working on software systems must similarly obtain an understanding of those systems.

Assessments rely on tool-enabled, analyst-assisted examination of systems and related artifacts along with discussions with subject matter experts. Assessments support large or small projects for a variety of scenarios including full-scale replacement, package deployment, platform or language migration, remediation, integration, consolidation and small, localized enhancements.

Assessment Benefits

The benefits of performing an assessment vary based on the type of project involved. The larger the project, the greater the benefit derived from the assessment. At a most basic level, an assessment allows project teams to streamline implementation tasks and delivery timeframes while increasing project success rates.

A second important benefit of performing an assessment is the provision of highly useful technical and functional documentation to project teams. For example, assessment generated documentation supports portfolio analysis, outsourcing plans, ongoing enhancements and improvements, and, of course, modernization projects.

Confirming the viability of a proposed approach is another benefit of an assessment. For example, management may plan to replace three systems with a package. An assessment may discover, however, that these systems are intertwined with two other systems. As a result, management must adjust its plan to salvage and integrate these other two systems into the package. The bottom line is that skipping an assessment is like taking a journey with no map and no knowledge of your current location.

Assessment Breadth versus Depth

An assessment approach, level of effort and deliverables vary based on the depth and breadth of a given assessment. The depth and breadth of an assessment is driven by the requirements of a given project. While there are a number of hybrid approaches and nuances for various situations, two common assessment types have emerged in practice; the enterprise assessment and the in-depth assessment.



The enterprise assessment is characterized by greater breadth and less depth while an in-depth assessment drills deeper across a subset of systems, business areas and artifacts. A mix and match approach to an assessment is frequently used, but aspects of breadth and depth must be recognized and planned for accordingly. Otherwise, project teams can end up digging too deep into a subset of systems without understanding or accounting for the big picture.

Enterprise Assessments: Determining Approach & Scope

The main goal of enterprise assessments is determining the scope and viability of a project. Enterprise assessments can also be used to help fulfill portfolio management requirements. Deliverables include a systems inventory; a cross-reference of systems and data structures; a functional overview of systems and sub-systems; a statement of scope; a risk evaluation and cost/benefit analysis. A sample scenario highlights the enterprise assessment in practice.

Consider an initiative to replace a billing application. An enterprise assessment identifies interfacing and overlapping systems, examines data flow into and out of the system, and determines relationships to surrounding applications. From this, management obtains the big picture view of the application and data architecture as well as information needed to build a viable plan on how to proceed.

If applicable, the enterprise assessment can deliver a high-level mapping to target requirements, which clarifies the role of current system data usage and functional definitions within the target environment. For example, if billing data and functionality is obsolete, a package option may be the best path forward. If, on the other hand, the system is functionally sound and merely running on an obsolete platform, remediation and platform migration makes more sense. All too often, these decisions are made in a vacuum, resulting in failed or ill-advised projects.

In-Depth Assessments: Developing Detailed Analysis & Implementation Plans

In-depth or phase two assessments can be viewed as an extension of enterprise assessments and as the initial stage of an implementation plan. In the billing system example discussed earlier, analysts would build upon prior assessment deliverables and drill down into specific data usage, functionality, process flow, usage scenarios, user interfaces and other aspects of the billing environment.

At this stage, project teams require granular, highly targeted analyses about execution flow, data definitions, business rules and user interfaces. Typical deliverables include artifact cross-reference maps; data definition mappings; business rule extractions; detailed system interface identification; extracted logical models of data, processes and systems; gap analysis between current and target architectures; and a plan on how to proceed with the implementation phase of a project.

In-depth assessment deliverables and the level of corresponding effort are project dependent. A simple platform migration may only require an inventory, data usage and execution flow analysis while a systems consolidation project would require significantly more analysis.



Assessment Project: Planning Considerations

Assessment projects can be delivered more effectively if they have appropriate management support, leverage selected analysis tools and incorporate certain skills and roles. The importance of management sponsorship is directly proportional to the size and scope of the project. For example, an assessment that crosses business units and applications requires significant management awareness and support from executives responsible for each system and user area. Smaller projects relying on more confined assessments may only require authorization from a single manager.

Analysis tools analyze programs, data definition languages, user interfaces and execution facilities on a variety of languages and platforms. Various tools produce inventory lists of system artifacts, cross-reference analysis, logic and data mappings, extracted diagrams, logic extractions, populated repositories and related meta-data. Many of the analysis tools in the market also support certain modernization implementation tasks.

Certain skills and roles are needed to plan and execute assessment projects, utilize analysis tools, address functional analysis, package deliverables and produce a viable plan. Roles, depending on the scenario, include project management, system subject matter experts, user subject matter experts, individuals versed in the current and target platforms and languages, data analysts and modernization strategists.

As organizations move forward with assessment plans, it is important to consider the scenario involved, scope, requirements and other aspects of an initiative. Performing an assessment at the early stages of any project involving existing software systems helps to ensure the delivery of successful projects whether they are small or large.

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and **Part 3 (Modernization)** of this paper

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