Application Integration
A CAI White Paper by Nicholas Spanos

OVERVIEW

Organizations operate and support a wide variety of applications that include home-grown applications, licensed software, and purchased software that has been customized. Many of these applications have related or redundant functions, share data, or even have redundant copies of data. These issues result from the implementation of applications or functions to solve specific business problems without assessing or coordinating with existing capabilities.

The concept of Application Integration is to establish relationships to ensure consistency of data and possibly to merge applications with the goal of streamlining and eliminating redundancies. The middle-ware vendors provide software that facilitates the definition of relationships between application and data and provides a collective view of information from various applications.

This is only one aspect of Application Integration. An effective integration strategy should also identify and address redundant or obsolete capabilities or data. This document describes a process for developing an Application Integration strategy and plan.

APPLICATION INTEGRATION STRATEGY

The first step in the process is to assess the existing capabilities. The assessment consists of a Discovery Phase, an Analysis Phase, and finally a Recommendations Phase to document the Application Integration Strategy.

Discover

The discovery phase collects information about the existing applications required to analyse the applications and develop an Integration Strategy. This information includes:

- Functional Capabilities
- Data Sources
- Technologies
- Schedules
- Supported Business Processes
- Configurability
- Support Requirement

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Application Integration

The objective of the Analysis phase is to compare the applications that will be integrated. Compare the results for each application against the following criteria:

Data Analysis- Do they share common data sources? If not, are the data sources compatible for key fields? If not, what would be required to convert key fields to a common format? Is the data redundant? If it is, which organizations maintain it and is there a synchronization process?

Functional Analysis – Are there redundant functions? How similar are they? Who uses them? What would need to be developed to ensure the integrated system had both capabilities? Are there related functions that interact with each other to support a common business process?

Output Analysis – Review the format and purpose of the output (Inquiry, Reports, Extracts, etc.) Identify the purpose of each. Are there any redundancies? Who uses each of the redundant outputs and why? Can the redundancies be merged and replaced by a common output? Are they still necessary or can they be eliminated?

Interface Analysis – What are the interfaces to each system? Are they common? Are they redundant? What is the format of the data? Can they be merged or eliminated?

Recommend

This phase recommends the Integration strategy. There are many options to consider that may include merging applications into a common application, creating application interfaces, or implementing middle-ware to provide integration points. Regardless of the chosen solution, the following areas must be considered:

- Merge data and eliminate redundancies
- Implement new interfaces or utilize a middle-ware tool to enable integration
- Modify business processes for maintaining data and functional systems
- Assign decision ownership and identify organizational structure changes
- Modify functional capabilities
- Eliminate obsolete or redundant functions
- Modify reports/extracts
- Eliminate obsolete reports/extracts
- Modify or eliminate existing interfaces
- Develop an Implementation Strategy
- Develop Change Management Strategy that addresses changes to Organizations, business processes, functional changes, and the training required for all affected areas