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enterprise integrity

By DAVID McGOVERAN

e-Business Methodology

Isn't it a bit odd that there's no consensus on Enterprise Application Integration (EAI) or e-business methodologies? An Internet search for EAI methodologies turns up little. True, vendor Websites advertise consulting services and promote "methodologies." One site even patented their EAI implementation process. Still, nothing remotely resembles the formal software design and development methodologies (e.g., structured design, prototyping, object-oriented, etc.). Those methodologies apply to software design and development aspects of EAI and e-business, but only to a degree. The questions facing a company starting an EAI or e-business effort far exceed software concerns.

The starting point of traditional development usually includes a reasonably well-defined business or technical objective and a user community from which to develop specific requirements, including functionality, data inputs, and data outputs. Existing software, ranging from libraries (component or otherwise) to systems (legacy applications, data feeds, databases) are generally identified in advance. Options for combining existing systems with new software to provide a complete solution are often limited. These are common methodology elements, ignoring order or relative importance.

By contrast, with traditional software project methodologies, EAI and e-business projects depart from the norm. EAI business objectives are often poorly stated and refer to business improvements for which current conditions are unmeasured. As a result, measures of success, quality, and timeliness are not as easily determined. Because few firms understand key business processes or their IT implementation, they're unable to measure latencies. Nonetheless, a common EAI project objective is "to reduce latencies." Other business metrics are better known, but are inappropriate. For example, reducing Total Cost of Ownership (TCO) is sometimes a business objective, yet TCO ignores important EAI benefits such as improved flexibility, time-to-market, opportunity acquisition, etc.

Without clearly understood project objectives and measures of success, traditional methodologies fall apart. Implementation choices that contribute "optimally" to the objectives are impossible, let alone identification of the relative value of one strategy or product over another. From a business perspective, traditional projects let a company perform existing processes more reliably, faster, or with higher quality. Objectives are so well defined that we can focus on required functionality, usability for a well-defined community, TCO, and time-to-deployment.

EAI and e-business projects are different. They change business processes. The more successful they are, the greater the change. Additionally, rapid changes in commerce, market, tech-nologies, standards, and products cause highly difficult design choices. Often, we cannot project user load or education, resource availability or usage. Accordingly, capacity planning methodologies no longer work. The choice is to design systems that can be either augmented modularly to handle any load (the scalability strategy) or else rapidly replaced (the planned obsolescence strategy). Designing so that component-level upgrades are easy, we soon discover the plug-and-play backbone becomes the limiting link in the design. If "standard" data exchange protocols change — such as the movement from Electronic Data Interchange (EDI) to Extensible Markup Language (XML) — we're stuck with an obsolete system.

We need a new methodology type for these problems — one that will give CIOs and IT managers guidance and reassurance in answering questions such as:

- How can I help my company specify its business and technical objectives?
- How do I scope the project based on a ranking of business and technical priorities?
- What technologies does my staff need to be trained in?
- How do I decide on the emerging technologies, products, and standards?
- How can I select the best architecture for my company?
- Is the better strategy a focus on infrastructure or a point solution?
- If I start with a pilot, how do I select it? How do I expand on my solution?
- How can I develop quantifiable measures of success and, just as important, value?
- How is a project divided into tasks, and the software into components or subsystems?

Methodologies that answer these questions may be in use. Clearly, however, none have reached the status of a generally accepted methodology. Numerous studies were done to validate structured design methodologies. Where are the equivalent studies for EAI and e-business methodologies? Using a validated methodology means you know what you are doing and why. That's something every CIO should demand. It's our only way to build enterprise integrity into an EAI or e-business project, rather than leaving it to chance. e\I

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