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The Changing Nature of Construction ERP Solutions

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Today's enterprise resource planning (ERP) solutions have evolved considerably from the 1980s, growing from basic accounting software to more functional, broader business applications. And with other construction-specific software continuing to undergo upgrades, deciding on an ERP solution can be more complex than in the past.

Contractors considering various options should look carefully at new developments, as ERP is rarely implemented in a silo anymore.

With integrations, report writing, user-defined fields and tables, screen tailoring, online training materials, dashboards and portals, today's software must leverage powerful system tools to deliver what contractors need. Trying to do all of this with older architecture and less powerful tools is akin to digging a trench with shovels instead of a backhoe. It can be done, but it takes a while.

It's crucial to investigate a solution's underlying technology and tools, as well as to understand what portions are available to the user, the IT department and the software developer.

Integration

In the old days, contractors only had a batch import capability that brought the estimate into the job cost budget. Today, more applications can share data with the ERP system. Published application programming interfaces allow the IT department to build a small program that sees new data available for import, recognizes it, validates it and then posts it to the correct table automatically, rather than depending on user intervention.

When assessing an ERP solution, understand which integration tools and technologies are available. Be wary of solutions that require custom programming by the vendor.

Report Writing

Report writing technology first moved from proprietary to third-party, and now to the more powerful business intelligence solutions. Some ERP report writing solutions only work well within each developer's data and tables. These internally developed reports lack much of the power offered by more advanced solutions; however, they are easier to use and may suffice for smaller companies.

Soon, contractors will have a single business intelligence tool that can extract and report on data from multiple systems; for example, ERP, estimating, project management and enterprise content management (ECM). Those tools also can provide valuable trend reporting, search capability and dashboard-like displays, preventing users from having to learn a different report writing solution for each different business application.

Understand how reports and inquiries can be built from the solution, and who can perform the task (e.g., IT, a user, the developer). This also requires looking at the data tables or views to see how well organized and accessible they are.

Enterprise Content Management

ECM is one of the technologies intended to fulfill the promise of the paperless office.

Adequate versions have been available from third-party developers for some time, and ERP vendors are starting to build in versions of their own. However, these versions are focused on basic data storage, and workflow typically zeroes in on invoice routing and approval. Newer tools making their way to market offer more advanced document storage, search, retrieval, security and retention, as well as more flexible workflow engines that allow the customer to develop their own workflows and access records beyond just the ERP solution.

Consider this technology carefully for the long term. A simple ERP-based system may seem like the easiest route to take for the next year to 18 months, but eventually the needs of the organization will outpace the natively developed application—putting the company back in the market for a more comprehensive solution.

The Big Picture

It is important to consider an ERP solution not just within the context of the accounting department and its needs, but also the company's overall IT direction. The IT department's ability to serve the user community on any system is highly dependent on the tools and technology the organization chooses. If the tools are too basic, too proprietary or not available, IT's hands will be tied.

Make sure to consider operations personnel as well. Without adoption from project managers and project administrators, the system will lack considerable amounts of data.

Finally, look not only toward the company's future and what kind of technology and systems will be required then, but also look backward and question the current organization's capabilities. Too many companies expect new systems and technology to be the source of change in an organization that is not ready for or open to change. New systems can be a catalyst for change, but only with strong leadership and a team committed to out-of-the-box thinking.

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