How to Select an ERP System

Consider a Solution Design Approach

Beware of a Perfect Storm

The correlation between investment and reward is perhaps nowhere more tenuous than when implementing a new enterprise resource planning (ERP) system. Seasoned companies, and even technology powerhouses, have invested hundreds of millions of dollars in upgrading their ERP systems, only to discover they have simply bought tickets to a horror show of lost revenues, grossly missed sales forecasts, frustrated customers and dissatisfied investors.

It is extremely rare for an ERP implementation to fail because of technical reasons ... It is this knowledge that gives project managers the false confidence to rush the selection and implementation of a new ERP system.

Counter-intuitively, the success or failure of an ERP implementation is not predicated on the characteristics of the software package. In fact, it is extremely rare for an ERP implementation to fail because of technical reasons. Often, the same particular software, be it from Oracle, SAP, Microsoft or even smaller vendors, functions smoothly at peer firms. Frequently, it is this knowledge that gives project managers the false confidence to rush the selection and implementation of a new ERP system.

If technology is not a culprit, neither are there just two or three main causes of failure. All of the cases mentioned above failed for a myriad of different reasons that, in combination, led to a perfect storm.

Consider the Complexities

What exactly can doom an ERP initiative? Following are some examples of potential complexities in a firm's underlying business processes that can lead to serious problems if not addressed before the selection of a new ERP system.

Complex Contract Administration

A company offering services to automotive dealerships might establish contracts at multiple levels: with the dealership, with various car manufacturers, or with a large retailer like AutoNation that has hundreds of dealerships nationwide. When offering a new quote, the company must determine which of these established contracts should take precedence. This effort becomes nontrivial when the customer hierarchy does not conform to a proper tree structure.

Similar contract administration processes, either on the sell or buy side, must be fully analysed and mapped to the appropriate optimisation and automation solution components. This analysis and solution design must be done prior to selecting an ERP package to ensure the system can indeed support the process. In reality, core ERP modules lack the features necessary for comprehensive contract administration, but the functionality still can be achieved by integrating with the appropriate "advanced" modules.

Complex Pricing

Companies offering mobile services generally deploy complex usage pricing consisting of subscriptions, licenses, professional services and support. In turn, these policies lead to complex invoicing and revenue recognition.

In such cases, it is imperative to consider how information from sales quotes and contracts enters the core financial modules. Is there any risk of information loss? Has the integration with remaining systems like Salesforce.com been fleshed out? Before inviting vendors to demonstrate their ERP packages, it is crucial to outline and communicate how they can prove their solutions will sustain any complex pricing needs.

Complex Revenue Recognition

Many manufacturing, software and Internet companies need to manage their invoicing and revenue as parallel streams. This leads to complex revenue recognition processes. For example, a manufacturer might invoice hardware, software and maintenance within the same bundle, whereas the revenue needs to be distributed into different accounts with the recognised amounts calculated differently over time for each element in the bundle.

In general, core ERP modules do not provide robust support "out of the box" for nontrivial revenue recognition. Idiosyncratic processes as mentioned above, complex allocation calculations, or special schedules for deferring maintenance and support revenue might require additional modules, possibly from a third party.

Complex Project Accounting

A nuclear waste processing company that has grown primarily through acquisitions might consist of operating units in various geographic locations with business processes that differ considerably. Consequently, these units need to retain a certain amount of independence in how they structure their individual projects and how they distinguish them from non-project services. However, when consolidating at the corporate level, the company must make uniform decisions about how to budget projects and share costs and revenues.

Discrepancies between the business processes of different operating units must be uncovered prior to the vendors' demonstrations, especially if the new system is expected to automate complex translations between individual site configurations. The business processes themselves might require re-engineering to ensure a successful ERP implementation.

Complex Consolidation

It is not only multinational corporations that should be concerned with the accounting ramifications of consolidations. Even companies on the verge of an initial public offering should consider their growth prospects to ensure the ERP system selected can indeed support multiple legal entities (either national or international), multiple languages, multiple currencies, and multilevel consolidation with automatic eliminations and intercompany transactions. Not all ERP packages are created equal in this regard.

Complex Reporting

Most ERP packages come with standard reporting capabilities out of the box, but these might not be sufficient for more complex managerial and analytical reporting that is usually supported by business intelligence (BI) tools. To complicate matters, general BI applications might not cover specialised needs. For example, if a company wishes to perform a sophisticated analysis of its sourcing in order to explore strategic savings opportunities, it might need a dedicated spend analytics component, possibly from a third party.

Design the Solution

To identify these and other complexities, Protiviti's ERP selection methodology anchors itself in the business process and follows three phases prior to committing to a particular technology:

Future Business-System Landscape

We begin by identifying the key business process features and degree of sophistication needed in a new ERP system. We then shortlist the vendors whose products support these requirements and outline how the new applications will integrate within the matrix of systems the client wishes to retain. It is within this future business-system landscape that we estimate the total cost of ownership (TCO).

Business Process Optimisation

Next, we analyse the client's key business processes in detail to determine the optimisation and automation points. At this stage, we might suggest how to modify a particular process to improve both its general efficiency as well as the likelihood of success for the future ERP implementation.

Solution Design

Finally, we identify the systems of record together with key business rules, data structures and interfaces as gathered from documents such as contracts, pricing lists, sales orders and invoices, or from existing system data such as the item, customer, vendor and employee master files. The solution components will be designed to support these specific structures. We end this phase with a list of demonstration scenarios that follow the flow of data and related business rules through the new system landscape. These scenarios are intended to guide vendors invited for presentations to ensure they demonstrate how the features of their products fit the precise needs of the client.

The approach outlined above ensures a company selects the single best ERP solution to its particular context and anticipated growth.

Implement with Confidence

In our experience, the approach outlined above ensures a company selects the single best ERP solution to its particular context and anticipated growth. Moreover, this significant executive decision is made with confidence in terms of the estimated TCO, the implementation time frame and the expected benefits.This is because:

- By defining its requirements with care, the firm avoids spending on unnecessary modules and invites for demonstrations only those vendors whose products can truly support the requirements.

- By analysing its business processes from an optimisation and automation perspective, the

company takes a solid step toward mitigating the risk of a failed implementation, in part because this often prevents unnecessary customisations and extensions to the new system.

- By designing the solution in a technology-agnostic manner, the firm better positions itself to decide which ERP package best fits its particular needs.

- A comprehensive solution design augmented by demonstration scenarios helps vendors improve their preparation and disciplines them during their presentations.

- A detailed solution design can also serve as the baseline for the system integrator during the implementation. This will ensure proper configuration and correct integration with the remaining systems in alignment with the key design decisions made with respect to process optimisation and automation during the ERP selection phase.

- Only a unified solution design that balances the integration of business systems with the optimisation of business processes can truly minimise manual processing and hence achieve a level of automation that maximises operational efficiency and enables better decision-making. This will yield a higher return on investment from the ERP implementation.

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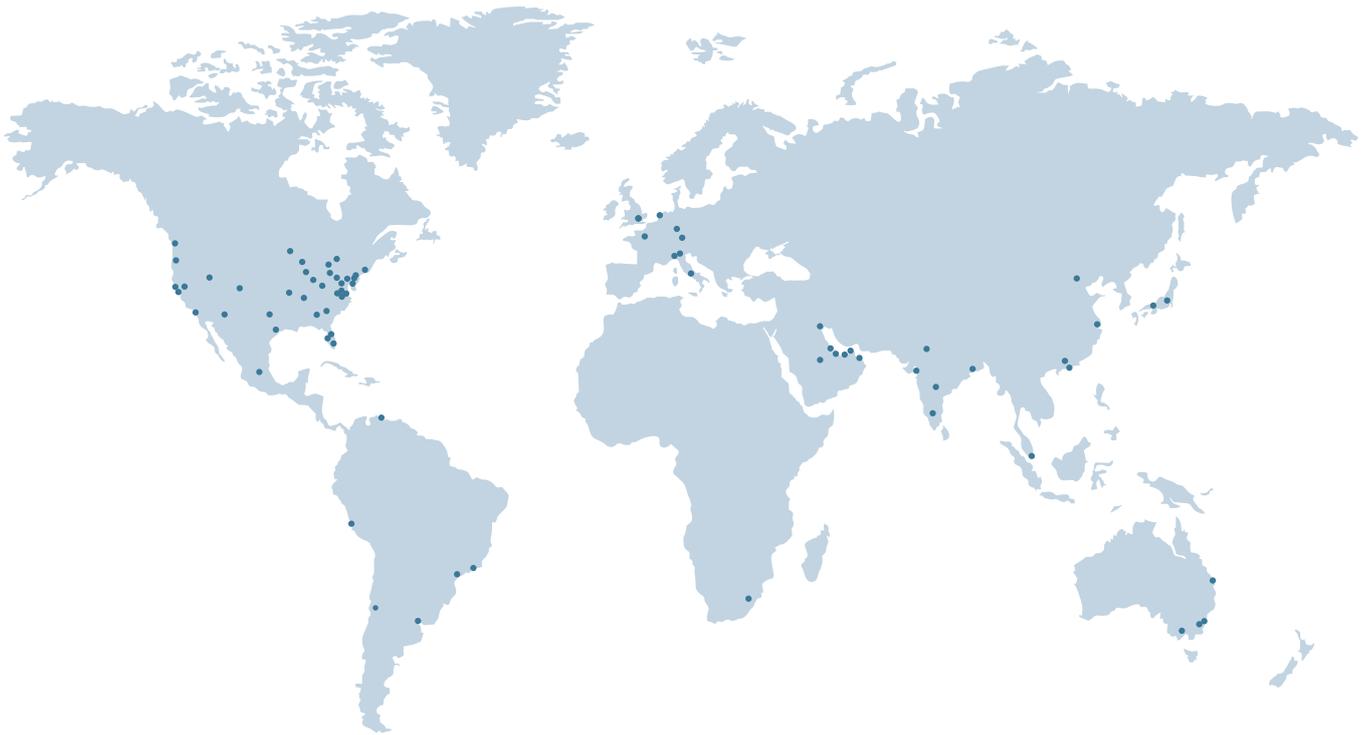
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