The Ten ‘How’ Factors That Can Affect ERP TCO

Organizations tend to focus on the “what” – that is, the vendor or the product – when determining total cost of ownership (TCO). However, it’s often the “how” – that is, deployment aspects – of ERP that has a greater impact on determining TCO for a given organization. CIOs and application managers should consider the 10 factors raised in this research to help better determine the TCO of their ERP investments.

Key Findings

- TCO is not simply determined by which software an organization selects to implement.

- Concentrating solely on hard costs, such as software, hardware and infrastructure, will provide an incomplete understanding of an application’s true TCO.

- Focusing on the “how” of software deployment and use typically has a significant impact on the TCO of an application.

Recommendations

- When determining your organization’s TCO for an application, expand your focus beyond the “what” factors (such as software complexity, hardware and service costs), and consider the “how” factors noted in this research, because these can have a significant effect on TCO.

ANALYSIS

Organizations often want to know which ERP vendors on their shortlists will provide the lowest total cost of ownership (TCO). Although application configuration and installation complexity contribute to overall TCO, they are not significant drivers of it. The effort required to configure a given application is different from the next, and it can vary from a nominal difference to something substantially more significant. Generally speaking, in packaged applications, there isn’t a discernable TCO difference between one vendor’s product and another’s, because the variance in “how” an organization chooses to implement outstrips any meaningful discussion of “what” an organization chooses to implement.
Instead of focusing solely on the vendor’s products – the what – organizations should focus on organizational decisions – the how – that can have an impact on ERP TCO. This research focuses on 10 “how” questions categorized into three areas:

- **Strategy and architecture:**
  - What is the strategic role of ERP in the organization?
  - Will you deploy single-instance ERP?
  - Will overlapping systems be retired or retained?

- **Selection**
  - Have you identified your organization’s fatal flaws?
  - Will you enable application customization, or force business process change?
  - Have you defined your information requirements?
  - Are you seeking to expand the ERP footprint or integrate it?

- **Implementation and support**
  - Do you have a program or a project mentality?
  - What mix of resources will be used throughout the ERP’s life cycle?
  - Will users accept the new application and its accompanying process changes?

The TCO impact of the answers to these questions ranges from high to low (see Figure 1.)

This research takes a closer look at how the answers to these questions affect TCO.

1.0 Strategy and Architecture

1.1 Will you deploy single-instance ERP?

One of the main drivers of ERP TCO is the number of instances that are deployed and how they are managed for a distributed enterprise. Where organizations have pursued multiple-instance deployments, many have experienced higher-than-expected TCO, because of diverging configurations across locations that require specialized local support and human intervention for many consolidated reports and reconciliations. As organizations move forward, inconsistencies in data and processes across locations hamper their ability to quickly and accurately respond to change.

Deploying a single instance typically reduces support requirements, increases consistency in processes and data, and enables an integrated view of the organization’s data. A single-instance strategy is predicated on a set of common business processes, common data structures and a centralized support organization. Deploying common data and business processes can be challenging, and these challenges must be taken into consideration when embarking on a single-instance strategy. For example, local stakeholders may be reluctant to cede authority to a global process owner, or they may claim that a process is unique in a given geography. These types of challenges may slow down deployment and erode consolidation benefits if not properly addressed.

A single instance is not always possible or preferable. The more diverse a business, the more difficult it will be to identify and achieve the synergies of a single-instance strategy. In these cases, enterprises should seek commonality, where possible, driving to standard applications, technologies, processes and data, while using an individual instance to support each discrete business. Additionally organizations may find that while one integrated administrative suite is appropriate, multiple operational suites are needed to support local or regional business unit needs.

Here, TCO is driven by volume and variation: How many instances need supporting? How different are the instances? What cross-instance integration is needed? Have organizationwide standards for processes and data been developed? Is the support structure coordinated?
1.2 Will overlapping systems be retired or retained?
Organizations’ application portfolios often contain numerous systems containing overlapping functionality. ERPs are typically deployed in an attempt to rationalize the number of systems in use, and to minimize or eliminate overlapping functionality.

One determinant of ERP TCO is how many of these legacy systems will be retired, thereby eliminating redundant functionality and the cost overheads associated with overlapping systems. In some cases, legacy systems must be retained because the new ERP footprint does not cover all functionality found in the existing application. In these cases, the ERP often needs to be interfaced to the legacy system, thereby increasing TCO through integration needs and the need to keep older technologies running. To reduce TCO, organizations should attempt to retire legacy systems, rather than integrate them. If this is not possible in the initial ERP project, then the organization should regularly review its portfolio through an application portfolio management (APM) process and attempt to consolidate systems as soon as possible.

1.3 What is the strategic role of ERP in the organization?
Often, organizations embark on an ERP initiative without understanding what the role of ERP in the organization should be. In many cases, ERP is seen as a panacea to whatever process ills are besetting the organization at the time. While it is true that ERP can solve a myriad of issues, it is not a silver bullet that will solve everything, and it is not necessarily the appropriate solution for all organizations. ERP brings a number of challenges, and, without understanding the strategic role of ERP in the organization, it can create more problems than it solves. Also, selecting an ERP based on the assumption that you need an ERP can be a costly mistake, if the business issues you are experiencing cannot be fully resolved with its implementation.

Organizations must begin an ERP evaluation with a thorough analysis of requirements and the desired business outcomes. This is usually based on a combination of a business case, which includes strategic business objectives, and how the ERP will improve the organization’s ability to meet objectives, including the metrics and key performance indicators (KPIs) needed to measure the objectives’ success. Identifying how the ERP will support organizational strategy, then, subsequently, how it fits in your overall enterprise architecture, will help avoid costly mistakes and help lower the ERP TCO. Because the selected application will likely be present in your organization for more than 10 years, understanding ERP’s role and the vendor’s long-term strategy for the product are key components to your organization’s ability to derive business value from ERP during that period.

2.0 Selection

2.1 Have you identified your organization’s fatal flaws?
Organizations setting out on an ERP journey often focus on extensive lists of requirements that the vendors must meet to be shortlisted. Although functionality is important, it is more than just a “does the software meet our requirements” type of decision. Functional fit should focus on processes that are differentiating (for example, those that provide a competitive advantage), unique and/or mission-critical to the business; these types of processes are known as “fatal flaws”. The organization must distinguish among processes, capabilities and assets that are, or could be, sources of competitive advantage, and those that are not. For processes, identified as sources of advantage, the imperative is to “free and enable” the business from restrictions that prevent it from exploiting opportunities as they arise.
Failure to understand your organization’s fatal flaws may lead to heavy customization efforts and the need for third-party products, which raise the TCO, or even to abandoning the chosen ERP for a more suitable one. Additionally, it is important to understand your chosen vendor’s ERP strategy and vision, because these types of strategic processes will become absorbed into the ERP suite, as well as to understand how new strategic processes will come into being in the product, if they do at all. This process of commoditization and enhancement lowers TCO, because the vendor takes responsibility for creating and maintaining these crucial processes, rather than the organization; however, this lowering of TCO only occurs when an organization retires their custom-made, one-off solutions for the newly added standard functionality from the ERP vendor. However, some vendors choose to keep some processes outside the ERP, and offer alternative methods of supporting those functions. A good example of this can be found in the supply chain management (SCM) space, where SCM functionality is outside the core ERP offerings. Thus, from an SCM perspective, choosing SAP, Oracle or Infor will not necessarily offer a lower TCO cost than choosing one of these vendors and JDA for ERP and SCM. A suite-based approach from Oracle or SAP results in a higher TCO in the SCM area than does a completely integrated ERP offering, such as from Epicor or IBS. Additionally, understanding the vendor’s architecture and technology is critical. Vendors that adopt alternative sourcing models enable their applications to offer lower TCO in the short term, while service-oriented architecture (SOA) technologies enable needed process flexibility.

2.2 Will you enable application customization, or force business process change?

Organizations must decide if they’re willing to adopt packaged-provided processes, or if the package should be tailored to support unique business process requirements. To determine the most appropriate approach, organizations should balance the maturity of the process area against the competitive advantage provided by the requirements.

Although customization of applications may be required in some areas, organizations need to consider the effect on TCO as part of the overall decision-making process. Application customization ownership costs go beyond the costs of initial development and integration. When base applications are upgraded or patched, customizations must be revisited for applicability. Custom components may be superseded, fully or partially, by new packaged functionality, allowing customization elimination or rewrite. Customizations that are not affected by new functionality will require analysis to ensure that application touchpoints are unchanged and integrated processes still perform as planned.

These analyses must be performed with each packaged application upgrade. Overcustomization can lock an organization into an older version that, in time, loses vendor support and becomes, in effect, a new legacy system. Best practice is to not customize to satisfy “commodity requirements,” which are requirements that will not provide business differentiation or ensure compliance. However, all organizations customize, and, because of the additional costs created by customization, it is important to create a solid business case for each customization and variation, to ensure that they are necessary and well-managed.

2.3 Will there be integration or expansion of the ERP footprint?

Many organizations have already deployed ERP applications, and are selecting solutions to augment and extend these capabilities. These projects typically start with the question: “Should we buy from our incumbent vendor, or should we look to another provider for this functionality?”

The TCO consideration under analysis is one of integration costs vs. potential costs to reach functional and process completeness. For an integrated scenario, organizations should weigh the benefits of acquiring an integrated application (taking into account that, in some instances, the application under consideration will have similar integration requirements as those of a third-party application) against the ownership costs to make it functionally complete, if needed. When considering integration options, organizations should weigh the benefits of superior functionality against the ownership costs to provide ongoing integration. In some cases, integration of third-party applications is required to satisfy specific industry or local needs that are not met by traditional ERP vendors. In the SCM area, there is little or no difference in the processes bundled in an SCM best-of-breed offering versus an ERP vendor that has SCM capability. In these cases, the organization has to be aware of process integrity issues; if you break open processes by using best of breeds, then this can have a significant impact on TCO, because you will then need to deal with process and data integrity issues. Organizations should weigh the effect on TCO of ERP and integration scenarios across the cost drivers of acquisition, functionality, deployment, integration, support, end-user experience and overall solution complexity. As the ERP vendor’s solution evolves and matures, organizations should re-examine the business case for moving from using a third-party solution to the ERP, or linking the ERP and CRM suites in an integrated solution.

2.4 To what degree have you defined your information requirements?

When considering ERP selection, all organizations define process requirements to a granular-enough level for product differentiation to be determined, and to ensure that critical processes are supported by the new ERP. Although process requirements definition is vital to achieving a good functional fit (thereby, minimizing customization and lowering TCO), most organizations overlook their information requirements.

Understanding the organization’s need for information is critical to making informed decisions. Better decision making is often cited as a key driver of ERP. Executives want higher-quality, more-timely data and easier access to data to facilitate decision making. Line managers seek better information to improve day-to-day operations. Employees require accurate and timely data to better serve the organization’s customers, and to perform their roles more effectively and efficiently. However, a failure to understand where the needed data will be held and how it will be accessed will result in these benefits being eroded and in the raising of TCO, through the need for interfaces, data cleansing and reconciliation, and additional tools for data mining. Additionally, organizations increasingly seek to integrate analytics into their ERP implementations. Analytics integration can significantly raise TCO, especially if current legacy systems are retained to
enable analytical mashup applications. The application space is increasingly intersecting the business intelligence and performance management space, as vendors seek to respond to the information demands that organizations are placing on them. Understanding your organization’s overall information requirements, and what role ERP plays in fulfilling these needs, can help you better understand impacts on TCO.

3.0 Implementation and Support

3.1 What mix of internal and external resources will be used throughout the life cycle?

In many areas, costs are driven by the resources applied to the tasks. At the implementation stage, external resources are typically higher than internal ones. An unbalanced mix of external to internal resources can raise TCO. As such, expensive external resources should be used judiciously to help curb TCO. Additionally, alternative sourcing choices abound (e.g., hosted, business process outsourcing or software as a service), and organizations should look to a variety of models to determine what mix offers the best TCO, while delivering the quality of service desired.

Organizations also need to consider how to support the application once it is in production. Support decisions have an effect on TCO, through the mix of resources needed to adequately support and improve the application. Factors such as availability of resources, skill set desirability, industry or geographic expertise needed, the ability to leverage offshore support resources, etc., will affect TCO.

3.2 Will users accept the new application and its associated process and policy changes?

Preparing users from the start of the implementation program with a robust change management process provides a foundation for controlling TCO. Key change management activities contribute to project success and reduced TCO. Activities include involving users in application configuration workshops, validating process and functional capabilities, training users on how their jobs will change, and training them to use the new system. If end-user training is the first time many users will see the application, then change will be more difficult. In addition, postimplementation refresher training and certification programs can go a long way to ensuring proper system use, which, in turn, has positive effects on process and data quality through a reduction in user errors.

Organizations have to accept the need to support users by responding to their issues, and making changes to the software or configuration to match what is required or to change the process. Too often, end users are left to “manage,” and they create their own work-arounds in other systems that, at a minimum, lead to data quality issues. Even with the most efficiently run change programs, organizations should expect an initial dip in performance when a new system goes live. Focusing on the user aspects of the implementation provides the best chance for minimizing this dip and for achieving proper levels of productivity.

3.3 Do you have a project or program mentality?

A program mentality puts in place the long-term support needed to manage the application through its entire life cycle. Support in the form of a program office, with professional project management, governance and improvement structures, provides the long-term oversight. Business application users must remember that they are never finished with application initiatives. A project may end – hopefully, on time and on budget – but there is always another phase, new business requirement, function, version or technology that will need to be evaluated and implemented.

A program focus will maintain key resources and their knowledge after the implementation project is complete. This resource retention is critical to controlling costs, because resource costs are significant drivers of TCO. A program focus will also provide a framework for future project prioritization through the management of a portfolio of initiatives, preventing overlapping or conflicting initiatives, and optimizing the use of internal and external resources. Additionally, it provides the layer of governance that ties ongoing application sustainment efforts with application change efforts.

Business application deployments are often made up of a number of concurrent or subsequent projects that share objectives and risks, end users, and IT resources. Progress and decisions on one project may depend on or affect others. If individual projects operate alone, then the likely outcome will be decisions that misalign with other projects. Costs will go up when work efforts that could be leveraged across projects are duplicated on individual projects, or as decisions affecting the total solution are made at the project level. Coordination across the projects during key activities, such as design and testing, will improve the end solution, building higher end-user acceptance and yielding more-effective enterprise-level processes and lower TCO through leverage of resources and the elimination of duplication of effort.