



Evaluating ERP Software

The 6 Key Decision Drivers



Abstract

This white paper discusses the 6 Key Decision Drivers that you should consider as you evaluate ERP software products. These 6 criteria are:

- **Functionality**
- **Technology**
- **Software Vendor**
- **Implementation Vendor**
- **Support & Maintenance**
- **Total Cost of Ownership**

If you ask the right questions of software vendors you will collect the right information to make an informed decision when selecting an ERP solution. The software should provide you with more than a basic functional fit, it should provide a strategic advantage to drive efficiency and expand your business. You are buying a tool that you can use to support the business functions of your company and give you a competitive advantage. Because the technology business environment is constantly changing, evaluation of the software vendor is as crucial as the evaluation of the functionality. The right implementation partner brings experience, industry knowledge, best practices, and technical capabilities to the table. You should regard your ERP software as a key component of your organization that requires care, maintenance, and upgrading. By focusing on what you need and understanding the total cost of ownership of your software options, you make sure you pay the right amount for your software. When all six decision drivers are used, you gather the information you need to give you confidence that you have made the right decision.

Introduction

The process of selecting enterprise resource planning (ERP) software can be a daunting task. How can you be sure that you are selecting an ERP solution that is a good fit for your company? SoftResources has spent the past 15 years assisting hundreds of organizations of all sizes through their software selection process. Through this experience we have found six key decision criteria that drive an organization's software decision. Although there are never any guarantees that you will have a successful project, if you ask the right questions of software vendors you will collect the right information to make an informed decision, enabling you to maximize your chance to successfully select and implement the right ERP system for your company. Modern ERP systems offer expanded functionality, advanced technology, and enhanced reporting. A properly selected ERP system can be a strategic asset for your company.

The 6 Key Decision Drivers

You know that when you change the tire on your car you must follow a logical method in order to make sure the new tire is properly attached. First you loosely tighten one lug nut, then tighten the opposite lug nut, continuing until all the lug nuts are loosely attached. You then follow the same pattern to tighten each lug nut in turn until they all fit snugly on the wheel.

The six key decision drivers are like the lug nuts on a wheel in that you must continually ask questions as you investigate software. Just like gradually tightening those lug nuts, you gradually gather the information you need for each of the drivers as you go through the selection process. At first you will get high level information, but as you proceed through the software evaluation process, you “tighten the lug nut” as you get more and more information in your effort to select the best software fit for your company.

Six Key Software Evaluation Decision Drivers

- Software Functionality
- Software Vendor
- Support & Maintenance
- Software Technology
- Implementation Vendor
- Total Cost of Ownership

Software Functionality

Software functionality is the set of decision criteria that most people think about when they embark on a software evaluation process. The software must meet your basic functional requirements in order to be a useful tool for your business. Ideally, the software should provide you with more than a basic functional fit, it should provide a strategic advantage to drive efficiency and expand your business.

Three Components of Software Functionality

- Functional Footprint
- Industry-Specific Functionality
- Unique Functionality

Functional Footprint

The functional footprint is the scope of modules and functionality that is offered by a software vendor. Every ERP software product has a unique functional footprint. For example, one vendor may offer financials, manufacturing, distribution, and HR/payroll functionality, while another may not offer HR/payroll but does offer CRM capability. The footprint the software vendor you select offers should match your required functional footprint.

ERP software vendors expand their functional footprint with the goal to be a “one-stop-shop” for all functionality a company might require. Although no ERP software will ever be a 100% fit to every company, software vendors have been working to increase functionality in their systems in six different ways:

Development. ERP vendors employ programmers who continually expand and develop new functionality. Many new functional enhancements are driven by user groups that request new capabilities from the system. This is the most time consuming method to add functionality and can be costly for the vendor.

Enhancement. In the past, “enhancements” meant creating extensive customizations to the core software which more often than not kept it from being updated easily, or “taken off the upgrade path.” Now, using more flexible software products, vendors are offering “modifications.” This means that enhancements can be made that increase functionality while the core software remains on the upgrade path.

Acquisition. ERP vendors whose core system lacks specific functionality acquire other software vendors that have it. Be aware that if the acquired software was not written with the same toolset as the core ERP or doesn’t use the same database there may be integration problems. We find that it usually takes at least a year after an acquisition for a vendor to integrate its acquired functionality with its core system.

Partner. Partnering with other vendors is typically done for certain functionality that does not always require tight integration to the core ERP system such as CRM, payroll, and HR. If you are considering partnered software, you need to make sure that you are not one of the first companies to make the integration. Find out how many times the software packages have been implemented together.

Independent software vendors (ISV). ISVs offer solutions that round out the functionality of a core ERP system for certain industries or functionality. ISVs build applications that link directly to the full ERP application and, unlike third-party applications, are developed using the ERP vendor’s toolset. The solution is tailored specifically for that system, making for a tighter integration. The larger ERP software vendors typically have a long list of ISV solution providers. You should consider this list if you are in need of some advanced or industry-specific functionality.

Best-of-breed. Many software vendors sell specialized software that can interface with your ERP or other applications. For example, a vendor that specializes in CRM software will strive to produce the best software of the CRM “breed.” SaaS vendors are more likely to use this method to expand their functional footprint and will typically offer software developed by one of these third-party vendors through their Web sites. You can round out your functional footprint by choosing from among the many best-of-breed applications on the market.

Your goal is to find a way for the software to handle all your functional requirements in an integrated manner. If the software is not functionally capable or is poorly integrated, you should consider eliminating it from your list.

Software-as-a-Service

Software-as-a-service (SaaS) refers to Web-based applications provided by application service providers. Customers access the application over the Internet through their Web browsers. The applications maintained and updated at the server level by the application service provider.

SaaS is subscription-based, usually paid for through monthly fees. Similar to standard software license fees, SaaS monthly subscription fees can be based on number of users, number of login names, degree of access per user or login name, depending on the software vendor’s business model.

The principal benefits of SaaS include reduced number of IT support personnel and reduced need for IT hardware infrastructure. SaaS subscription fees are usually charged as an expense rather than a capital asset with an onsite implementation. This can be either a benefit or a drawback depending on your specific situation.

The SaaS model works well for companies that have multiple locations or have employees that have a need to access the system from the road. It also works well for certain departments such as HR/payroll, and sales (CRM). It is important to keep in mind that SaaS, like standard on-site software implementations, has implementation costs that include set up, integrations, data conversion, and training.

SaaS is gaining momentum in the market, but there are some things to keep in mind as you evaluate if SaaS is right for you. Remember that you do not own the software, but you do own the data on the software so you want to make sure you have a plan for moving the data if you should need to change vendors down the road. You should closely evaluate your configuration and implementation options including any integration issues with third-party systems that may need to be resolved. Finally, make sure you consider the total cost of ownership of the software over at least five years.

Industry-Specific Functionality

Every industry has industry-specific requirements. The ability of ERP vendors to handle these requirements should be carefully evaluated because they can be a major differentiator in your selection process. You should evaluate both general ERP vendors as well as industry-specific vendors. Industry-specific vendors are very functionally focused and already understand many of the issues you need to resolve.

General ERP software vendors, on the other hand, do not focus on any particular industry. They are typically more advanced with regard to technology and functionality common to all industries such as financials, but lack the requirements for specialized industries. ISVs are a great way to add industry-specific functionality to a general ERP package. ISV functionality may include retail, e-commerce, maintenance management, manufacturing, warehouse management, distribution, or a host of additional functionality.

Unique Requirements

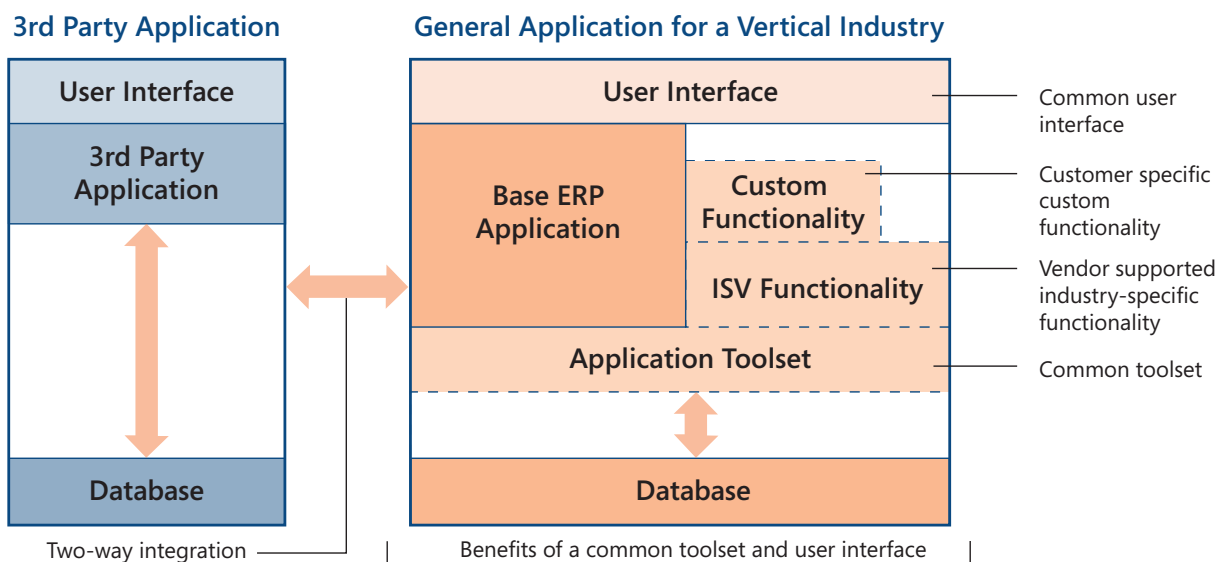
Remember, every company is unique. We have found that often companies in the same industry end up selecting different software solutions because they have different needs and requirements. Do not assume that just because somebody else in your industry uses a particular software solution it will be right for you, too.

Also keep in mind that there is no perfectly functional software available that will handle all your requirements. You are lucky if you can get 80% of what you are looking for. Although the basic functionality vendors offer is the same, their focus and capabilities vary widely when applied to certain industries or types of companies. Here are some key questions to ask as you evaluate a vendor's functionality:

- Can the vendor handle your most important functional requirements?
- What industry-specific functional requirements will be necessary in the future? Can the vendor provide that functionality now? If not, do they have a path to get there?
- Does your functional footprint match the software vendor's?
- What third-party add-ons or ISV solutions may be necessary to round out your functional requirements?
- What strategic advantages does the software bring to the table for your company?
- What enhancements may be necessary to make the software work for your company? Will these enhancements take you off the upgrade path?

The following graphic shows the advantage of using a VAR that can implement industry-specific enhancements that have been written using the ERP software's toolset. You are able to add functionality that operates together in the same database as the ERP software and uses a common user interface. From the perspective of your users, the final result looks like a single, totally integrated application.

Support for Industry-Specific or Customized Functionality



Software Technology

The most important thing to remember as you evaluate technology is that you are not buying technology for its own sake. You are buying a tool that you can use to support the business functions of your company and give you a competitive advantage. Therefore, although technology is a strong consideration in the evaluation of ERP software, the functional needs of your company should drive the selection process.

Software Technology Evaluation Points

- The IT Environment
- Development Tools
- Personnel
- Forward-Looking Technology
- Integration
- Peripherals

The IT Environment

The first thing to consider as you evaluate technology is to look at your current technology infrastructure and IT capabilities. This may include hardware, operating systems, database, and IT staff expertise. Consider the following:

Current technology platform. Can you leverage your current systems and hardware for the selection and implementation of a new application? Is your technology so outdated that you will need to replace your platform no matter what? If you are considering SaaS, hardware is less of an issue than with onsite systems, but keep in mind that your desktops will have to meet minimum system requirements and you will need a very stable Internet connection with large bandwidth.

Expertise of IT staff. What technologies is your IT group proficient in? Will you be able to retrain current staff, or will you need to hire new people to adapt your company to a change in technology such as SaaS? You will want to make sure the technology you implement has significant technical resources available to you: If you select a system that uses an uncommon technology whose support resources are difficult to find, it will be difficult to maintain.

Industry IT requirements. Certain industries have very important technical requirements. For example, wholesalers are often required to communicate with the retail outlet via EDI or e-commerce. How the software vendor handles this technical requirement may be a key factor in the selection process.

Once you have a good idea of your internal capabilities and direction you can begin to evaluate the software vendor's technology.

Forward-Looking Technology

As you evaluate your technology options you want to make sure that you select a technology that will enable you to move forward for at least the next seven to twelve years. There are a number of concerns surrounding implementing older technology that is not being continuously improved:

1. **The ability to service your customers adequately in the future**
2. **Difficulty finding resources and personnel to support your technology in the future**
3. **More difficult reporting associated with older technology**
4. **Limited user interface options.**

The main idea is to implement a tool that can be used now and in the future, and that will enable you to use technology as a strategic advantage.

Development Tools

You need to find out what tools were used to develop the software. Is it proprietary or is it an open toolset? Either would work, but make sure you will easily be able to make customizations and enhancements to the software. Will you be able to find people that can make customizations using the toolset provided with the software? Similarly, your software vendor or reseller should have some capability to create enhancements using the software's toolset. What capabilities does the software vendor offer to make enhancements?

Integration

Depending on the size and complexity of your company, there may be other systems the ERP must integrate with. What integration tools does the software use? Are they compatible with the technologies of the ancillary systems the ERP needs to integrate with? Application program interfaces (API) are often used to connect systems. Does the software have open APIs?

Another key integration that directly impacts users is integration to desktop tools that enables them to manipulate data and produce reports. You should evaluate the level of integration offered by the ERP vendor with desktop tools such as word processors and spreadsheets. End users are very interested in the ability to link to spreadsheets and other office productivity tools.

A key issue to consider when integrating your system to ancillary systems is how upgrades affect the integrations. As you upgrade your systems a see-saw effect develops. When one system is upgraded, you need to make sure that the links to the other systems are updated. Then, when the other systems are upgraded, you once again need to make sure that the links are upgraded. This can make for a difficult environment for your IT staff to maintain. You need to keep the see-saw effect in mind as you evaluate your system options. Ask the vendors what similar environments they have implemented in and how they resolved this issue.

Personnel

When you have completed your evaluation of your current internal IT strengths and platform, you need to consider the impact on personnel of moving to a new technology versus staying on the old one. The effects of moving to a new technology will not only be felt by the IT department, but users will feel the difference as well. You need to consider the impact of any change in technology to the entire organization. For example, a change from AS400 to a Windows environment will bring both good and bad changes that will permeate your organization in areas such as reporting. While many users like the rapid hotkey data entry of older software systems, you will have to weigh that preference against the much improved reporting capability of new systems.

Peripherals

With the implementation of new technologies comes the ability to add efficiency enhancing peripherals such as bar code scanners, handheld radio frequency devices, and other hardware that may be useful to your company. You can take advantage of these technologies to improve operational efficiency on the shop floor, warehouse, retail floor, and elsewhere. As you evaluate peripherals, use the software vendor to learn more about how you can use them to improve your business. User site visits provide an opportunity to observe new technologies actually in use by similar companies to yours.

Software Vendor

The software vendor is the company that develops software product and functionality and will continue to develop it in the future. Because the technology business environment is constantly changing, evaluation of the software vendor is as crucial as the evaluation of the functionality. You should not merely look at the vendor's current strength as a company, you should look at how the vendor plans to develop its software going forward. Because you will pay annual maintenance for several years, you want the vendor to create new functionality and technology that will continue to be useful to your company.

Software Vendor Evaluation Points

- Vendor Viability
- Strategic Direction
- Vendor Partnership and Organizational Compatibility

Vendor Viability

Over the past decade there have been a myriad of mergers and acquisitions that have altered the landscape of the ERP software market. Although this has led to some consolidation in the market, there are still many vendors and software products available. The difficulty comes in guessing what will happen within the next few years to the vendor you are evaluating. Acquisitions are frequent, and it is not just small vendors that are being gobbled up. Even large vendors such as PeopleSoft, Symix, and SSA, are being acquired at a rapid pace. In fact, it is impossible to predict if a vendor or software product will be acquired. Because an acquisition is always possible, it is important to understand what may happen to your software product upon acquisition.

Software vendors use four main strategies when they acquire other software vendors or products:

- 1. To add additional functionality to its own product**
- 2. To eliminate a competitor**
- 3. To gain entry to a vertical market**
- 4. To obtain its user base**

Each strategy presents a danger that the software product you purchase could eventually be discontinued. Therefore, it is very important to select a strong software vendor with a significant install base to serve as a buffer. The more installs a particular product has when acquired, the more interested the acquiring company will be in maintaining the product over an extended period of time in order to continue to collect maintenance revenue. Occasionally the acquiring company will maintain the software without actively developing or selling it. Eventually the maintenance revenues will diminish to the point that the vendor will discontinue support and customers will be asked to migrate to another software product.

The vendor's strength can be a good indication of its ability to remain independent. A good way to evaluate the strength of a vendor is to look at its size. What is its financial situation? How many employees does it have? How many locations? How many installations has it completed? Does the vendor seem to have momentum in the marketplace or does it seem to be losing market share?

Make sure you do not completely disregard small, up and coming vendors that have few employees but have a lot of momentum. New companies bring fresh ideas to the market and can bring new capabilities that can give them a strategic advantage over their larger competitors. Indeed, all ERP software companies were small at one time. If there is a compelling reason to select and implement software from a small vendor, by all means proceed, especially if the vendor offers industry-specific functionality.

Strategic Direction

You should evaluate the vendor's strategic direction to make sure it supports your company's strategic direction. What are the vendor's plans for taking the software into the future? Is it in a direction that will help your company? Although you can get some of that information from marketing collateral, press releases, and salespeople, we find that it is best to speak directly with the VP of development and the technology developers at the vendor's headquarters who actually develop new functionality and technology.

Vendor Partnership and Organizational Compatibility

Do not overlook the vendor's compatibility with your organization. You are in the process of forming a strategic partnership that will last for many years. As the vendor continues to enhance its software, and as your company's business needs evolve, this should be a synergistic relationship that you both feel comfortable with. This cannot be an objective evaluation of the vendor; it is a subjective evaluation of your comfort level between two companies that is impossible to quantify. Do you feel you can work with this vendor? Is it easy to communicate your needs to them? Does its culture match the culture you have worked to develop in your company? Will it be a good partner that will help you achieve your goals as a company?

To sum up, software vendor evaluation is a very important aspect of your selection project. Always keep in mind that you are forming a strategic partnership with this vendor. We have seen companies walk away from a software vendor even though the software product could handle all their functional requirements simply because of compatibility issues. You will be paying an annual maintenance fee for the software which allows the vendor to fund new enhancements and technology. Will the vendor be adding new functionality that is of interest to you? Will you be able to take advantage of strategic capabilities not only in the initial implementation but in years two through five? Will the vendor be a long-term partner for you?

Implementation Vendor

The most overlooked, yet often the most important, aspect of the ERP software selection process is selection of the implementation partner. The right implementation partner can bring experience, industry knowledge, best practices, and technical capabilities to the table that will have a big impact on the success of your project. It is important to understand that you have implementation options available to you. You should exercise your right to select an implementation partner on your own terms.

In order to better understand your implementation options and how to go about selecting an implementer, we need to first discuss the software sales models that vendors employ to distribute their software. Software vendors use two sales models, direct sale from the software vendor, and sale through a value-added reseller (VAR). Some software vendors only sell direct to the customer, some vendors sell exclusively through VARs, while others use both sales models depending on the situation. It is important that you understand the selling method of the vendor you are evaluating in order to do a proper evaluation of the software and implementation partner for each individual vendor.

Implementation Vendor Evaluation Points

- Direct Sales Model

- Value-Added Reseller Sales Model

- Evaluating a VAR

Direct Sales Model

If the software vendor sells directly to the customer, you need to deal directly with its sales force. This is usually the case with high-end ERP vendors, SaaS vendors, and small industry-specific vendors. Small industry-specific vendors will expect you to use their in-house implementation teams. High-end vendors require you to purchase the software directly and usually expect you to use their implementation teams, but a few allow third-party implementers which can give you access to better rates, expertise, availability, and industry knowledge. SaaS vendors might expect you to use your own staff to implement, but an increasing number of SaaS VARs are forming.

Value-added Reseller Sales Model

Many major mid-market software vendors such as Microsoft and Sage sell exclusively through a network of VARs. If you are considering a vendor that uses this model, you actually need to select the VAR before you begin the software evaluation. The VAR will be your contact during your evaluation, will conduct product demonstrations, and will supply the resources for the implementation. In the future the VAR will be your point of contact for maintenance, upgrades, training, and support. The VAR supports but does not warranty the software it sells.

Evaluating a VAR

Evaluating a VAR requires the same level of effort as vendor selection with concentration on the people who will be performing the work. What else should you consider when evaluating a VAR?

Company size and background. How many employees does the VAR have? Does it have sufficient resources to implement for you and to provide product support after go-live? Keep in mind that sometimes a small “boutique” VAR may service you better than a large national chain. Concentrate on the qualifications and experience of the staff.

Product focus. Find out how focused the VAR is on the product that you are considering. What other applications do they implement? Does the implementation team have real-world experience in your industry? It is important to understand how many products they implement, how many people are supporting each product, how many installs they have with each product, and their plans for each product. This allows you to see where their focus and capabilities are.

Location. Is this a local VAR or is it a national chain? If you have a need for a national or international implementation, do they have the resources to support the size of your project? On the other hand, a local company that has a vested interest in your region might suit your needs better.

Industry focus. Are there particular industries that the VAR seems to focus on or has a lot of experience with? If possible, you should find a VAR that has experience working with similar companies in your industry or similar industries. In some cases you may need to look at VARs located in other states to find the particular experience you are looking for.

Technical resources. How does the VAR mesh with your internal IT team? If you do not have an internal IT team, how will the VAR support your technical requirements? Do they have enough resources to properly assist you? Are they conversant on the technology that you are most interested in? Can the VAR integrate the system to other systems you are using such as a separate billing system for a unique business requirement?

Selecting the right VAR or implementation partner is crucial to the success of your implementation. As you evaluate your implementation options your main focus should be the actual implementation team members. You need to consider whether you feel comfortable working with the project team the vendor recommends. The actual team members are the ones you will be working with on the implementation. If you do not feel comfortable with them, ask the vendor for another team. You need to get the right team that understands both the software and your industry. You are forming a long-term partnership and you need to be a good fit for each other.

Maintenance and Support

The main thing to keep in mind with regard to maintenance and support is that you are not implementing a static system. You should regard your ERP software as a key component of your organization just as you would a machine on the shop floor that requires care, maintenance, and upgrading. As the software vendor improves its technology and functionality, you should be able to take advantage of those enhancements. You will then be able to maximize your investment and use the system to gain a strategic advantage.

Maintenance and Support Evaluation Points

• Maintenance

• Support

• Training

• Periodic Review

Maintenance

After implementation you will pay an annual maintenance fee, or monthly subscription fee in a SaaS environment. This fee is used to fund continuing development of new functionality through upgrades. Your maintenance fee entitles you to these upgrades, which allows you to continually improve the functionality and technology of your software without having to replace your system every few years. Thus an ERP system actually becomes a continually evolving and improving tool for your business.

Companies sometimes decide to stop paying their annual maintenance fee for any number of reasons. They may feel they do not benefit or get support value from the maintenance fee, or they may have customized the software so much that it took them off the upgrade path. The result is that their ERP software basically remains in a static state. This can work fine for a few years, but as technology and functionality becomes outdated the company will get farther and farther behind the technology curve. They are then forced into selection of a new system.

Support

Support is a very important consideration, particularly during the first year after go-live. Vendors that sell direct will also provide support. If you buy through a VAR you will usually receive two levels of support—from the software vendor and from the VAR. The vendor typically provides general support, while the VAR who is familiar with the nuances of your specific installation provides more detailed support. While some level of support is included in the maintenance fees, you can buy additional support based on a fixed number of hours, or number of incidents.

Among the many types of support programs are:

FAQs and system manuals. This is the most basic level of support and is sometimes included with maintenance. You do not get personalized service, but if you are adept at researching problems and figuring things out on your own, it is a good way to get answers to common issues. In cases where configurations and customizations are planned, your implementer should provide specific documentation and support manuals for that work.

Online support. Online support comes in various forms including email, chat sessions, and message boards. Response time may or may not be instantaneous, so you will probably need to be patient with this type of support.

Phone support. Depending on the level of support there can be either instant support, or a guaranteed call back timeframe. Off hours support is available with some large vendors. Small vendors typically have support personnel on call who will call back if there is a major issue during off hours. You should find out what the phone support hours are, if there is a callback guarantee, and what the coverage is both geographically and during off hours. You need to be aware of the support coverage of the VAR or implementation vendor. In some cases you will need worldwide 24/7 support. For small companies, local support can be more important than round-the-clock availability. You need to match what the vendor or VAR can support with your requirements.

Onsite support. Software vendors often have the ability to remotely log into your system to fix issues and problems, saving a significant amount of time and money for both you and the vendor. However, it is necessary at times to have the vendor come onsite to deal with major issues. This is a common method for support during and immediately after the initial implementation, but, depending on the complexity of the problem, it is not used as often after that because of the cost.

All these support methods have different cost levels. It can be difficult at first to know what the right level for your company will be. Most of the support cost is typically in first year. You may want to have a comprehensive plan for the first year, with subsequent years scaled back.

Training

One of the biggest problems with software systems has nothing to do with the actual capabilities or technology of the software. It has to do with user training. Typically, post-implementation training is very comprehensive. However, unless ongoing training is offered, bad habits can develop which break down user knowledge and understanding of the software's capabilities and functionality. New hires might be trained by users who do not use the system correctly, passing on the bad habits they have developed. This causes frustration with the system that induces users to devise workarounds using resources outside the system such as spreadsheets. After a few years of working outside the system, users become completely dissatisfied and demand change. Even though the system may be completely adequate, users think the system does not do what they need it to. A new software selection might be warranted because users will not use the current system.

Because they want to reduce costs, companies sometimes curtail training after initial implementation. In actuality, setting up a proper schedule of continuous training saves a company more in the long run than any short term cost savings. Ongoing training helps users gain full, effective, proper use of the system for many years to come and helps preserve your initial investment.

Periodic Review

About every four to five years, you should review your ERP software to see how it is supporting your business. Businesses change and evolve over time, so you may no longer have the same functional requirements you had a number of years ago when you purchased your software system. A periodic review enables you to identify requirements for adjusting the system to fit your current needs, or to provide solid reasons for making a change.

The three main areas you should review are:

- 1. Functionality.** Does the system still have the functionality you need to run your business? Are there new requirements in your industry that require enhancements or add-on software products?
- 2. Technology.** Are you keeping up with the rest of the world technologically? Are you maintaining your competitive advantage?
- 3. Integration.** Are integrations with ancillary systems working properly? Is new technology or functionality now available that will allow you to eliminate some of your third-party applications?

If you periodically review your systems you will be able to keep the system focused on being a usable tool for your company and industry.

Total Cost of Ownership

In general, companies spend more money on software than they should because they buy more software than they need. By focusing on what you need and understanding the total cost of ownership of your software options, you make sure you pay the right amount for your software. The challenge with evaluating the total cost of ownership of a software solution is that not all costs can be known before you begin implementation. Also, there is usually some discounting of the software license during the sales process that may obscure the total cost. The key is to look at cost from a long term perspective—usually five years—to help you get past the initial “sweet deal” discounting process and focus on what the real costs will be.

You should consider three main cost areas: software license, implementation, and maintenance and support.

Total Cost of Ownership Evaluation Points

- Software License
- Implementation Services
- Maintenance and Support Cost
- SaaS
- Infrastructure Cost
- Internal Cost
- Return on Investment

Software License

There are as many methods of software license pricing as there are software vendors. Therefore you need to understand the key price drivers for the software vendor you are considering. This typically comes from a discussion with the salesperson before you request a quote. You can then look internally at your organization's needs and requirements and provide the vendor with enough information to provide a price quote.

The software license cost is generally calculated based on the modules, or suites of functionality you purchase and the number of users on the system. Make sure you understand the vendor's definition of a user so you can accurately estimate the number of users you will have. In addition to user counts, some vendors base cost on factors such as the modules purchased, number of locations, number of servers, transaction volumes, and number of companies or subsidiaries. Some vendors offer enterprise pricing, which allows unlimited users and gives the ability to add any other modules within a set of modules.

Make sure you buy only the functionality and modules you need. Many companies buy modules and functionality that they then never implement, paying maintenance on software they never use. If you focus your analysis and purchase only the functionality you need, you should be able to save some money. If you think you might need a particular module in the future, you can negotiate the future purchase price of additional modules before you close the deal. Keep in mind that you are buying your system for the long term and you need to be able to grow and add functionality and users as necessary.

Don't forget to include third-party add-on modules or ISV products in your pricing estimate. This is an additional cost that you will want to include in your analysis of the total cost.

The software license has the most flexibility with regard to discounts. Vendors have been known to offer significant discounts depending on the situation. This is particularly true at the end of a quarter or fiscal year. The key is to use your negotiating power before you sign a contract. The software vendor is just as interested as you are in signing the deal and moving forward. Discounting can move the agreement along.

Implementation Services

As you begin your conversations with vendors and VARs you will discuss the cost of implementation services as a ratio. This is typically expressed as the ratio of implementation cost to software license cost. Every implementation is unique, so actual costs vary widely. Complex requirements with many integrations drive the implementation costs higher, but a typical mid-market average implementation ratio will be in the 1:1 range. In other words, for every dollar you spend on software expect to spend a dollar on implementation costs. For more complex implementations, the ratio could be in the 2:1 or 3:1 range.

Implementation services commonly include installation, setup, custom configuration, data conversion, integrations, initial training, and initial troubleshooting. In short, everything you need to get the software up and running as a useful tool for your business. Some vendors and VARs will provide a fixed fee proposal, but the scope of the project must usually be very closely defined and anything outside the scope will incur extra costs.

Every VAR and implementation vendor sets its own billing rates. Higher rates do not always translate into better and more qualified service. Look for the right mix of price and experience, keeping in mind that you have multiple implementation options. Implementation services are so critical to the success of the project that this needs to be a strong consideration in the software evaluation process.

Maintenance and Support Costs

You can expect to pay between 18% and 25% of the software license cost on an annual basis for maintenance and support. Maintenance cost includes upgrades, patches and some level of support depending on the support plan you select. The net effect is that you actually end up paying for the software over again every five years. Remember, you are not buying a static product, but an ERP solution that is constantly evolving and improving.

Infrastructure Cost

Infrastructure comprises the hardware such as servers and wiring necessary to operate the new system. This cost is sometimes included in the implementation cost. If your company has already made a significant investment in infrastructure that will have a big influence on the software you will select. In cases where functionality drives the software decision process, infrastructure change needs to be considered as a possible expense. Although it is an important consideration, the relative cost of hardware and infrastructure has come down significantly over the years as compared with the software license and implementation costs. Companies typically let software functionality drive their decision and adjust the hardware to optimize the selected software.

SaaS

In a SaaS environment you avoid the large up-front software license fee and the annual maintenance fee. SaaS vendors roll those two costs into their fixed monthly subscription fee. Infrastructure cost is typically lower in a SaaS environment because there is no hardware to purchase and maintain, all you need is an up-to-date browser and good Internet bandwidth. Depending on the complexity of your situation, implementation costs can be very comparable to an onsite implementation if you have significant configurations, customizations or integrations. In order to properly analyze the cost of SaaS you need to add together all the monthly fees over a five-year period and compare that side-by-side with the software license and maintenance costs over the same five-year period of an onsite implementation.

Internal Cost

Internal cost is extremely difficult to estimate and quantify. It is the cost of productivity that will be lost during the implementation, possible disruption of business as you implement, and other costs that are not actually paid with a cash outlay.

The two components of internal cost are direct and indirect. Direct cost is the cost of your employees assigned to the project team and any temporary staff necessary to complete day-to-day work on behalf of project team members. It also includes the time for training on the new system.

Indirect cost includes the downtime that occurs due to the implementation, duplication of data entry, and other work that must be done to accommodate the implementation. This is difficult to quantify as users become involved with the new system over time and gradually learn how to effectively use the software. To quantify the indirect cost of an implementation, you will have to make a number of assumptions because this cost has no specific guideline.

Although it raises your internal cost, we have found that the more internal resources you can commit to the project, the shorter the implementation time will be and the likelihood of a successful implementation increases. Companies that experience trouble with implementation often have not dedicated adequate resources to it. They end up paying more for the system in the long run.

Return on Investment

Some companies are required to perform an ROI analysis to justify selection and implementation of a new ERP system. ROI analyses depend on assumptions of intangible benefits.

ROI is typically determined by estimating the cost outlay and comparing that to the long run cost savings from assumptions of efficiency and time savings that result from use of the new system. In order to calculate these savings, you either need to reduce headcount or cut hours for employees that are using the new system. In reality, people are typically not let go, and the hours that had been spent in data entry into the old system shift to other new, more productive activities. Ultimately, if you have an ROI requirement, you will need to make good estimates for the efficiency and hours of savings.

Although there are many different methods of ROI analysis including payback period and economic value-added, the basic components include:

- **Software license cost estimate**
- **Implementation cost estimate**
- **Software maintenance cost estimate**
- **Cost of capital**
- **Estimated hours of savings**
- **Time period**

Because ROI is based on estimates, the validity of the ROI analysis is dependent on the accuracy of your estimates. It is important to understand that ERP software is typically not purchased based on an ROI analysis. Rather, it is used to increase efficiencies and make sure that you are able to take advantage of both the functional and technical capabilities of the system.

Conclusion

When we share or teach the principles presented in this article, we represent them as puzzle pieces which must be fitted together to complete a whole picture. If one of the pieces is missing, or if a piece is not connected to the others in the right manner, the resulting picture is incomplete. So it is when selecting software. None of the decision drivers can stand alone nor can anyone decision driver identify an accurate solution unless the other decision drivers are considered as part of the whole. It is not that the solution becomes more perfect, rather it becomes more obvious that you have made the right decision.

Software selection is every bit a process of elimination as it is of inclusion. Knowing what was not selected and why has tremendous value in post-decision reviews. We encourage clients to keep a list of the products that were eliminated along with the reasons for exclusion.

Know from the outset that the final solution is not going to be perfect; in fact, you will trade away some attractive features in order to preserve the core gains you must achieve in the new system. It is easy to become bogged down in details or to get caught up in "analysis paralysis," so identify the key issues first to eliminate most of the packages and then climb into the details as the process continues. Knowing what the core gains need to be and keeping them in focus throughout the process is critical to keeping the team pointed in the right direction. Our experience is that if you consider all six decision drivers, you will come up with a solution that will propel your company in the direction you want it to go.

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