How to Select and Implement an ERP System

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What is ERP?

ERP is a term that is widely used but still not well understood. Although ERP (Enterprise Resource Planning) was initially targeted to manufacturing companies, today it encompasses any product that can be used across an enterprise. When implemented effectively, ERP enables companies to break down traditional organizational silos, replacing them with a tightly integrated horizontal structure in which strategy, organizational structure, process and technology are closely aligned. Applications can include financial, distribution, manufacturing, human resources, and payroll.

There is also confusion about the difference between an accounting system and ERP. In the past, an accounting system was limited to just financials, but that has changed over the last few years and it's now hard to distinguish between an accounting system and an ERP system. The difference between them is a matter of degree as can be seen in the following chart.

Criteria	Accounting System	ERP
Enterprise-wide	Maybe	Yes
Scalable	Partially	Yes
Fees	Low to Medium	High
Ratio of Implementation Fees : License	< 1.5	> 1.5
Customization capabilities	Basic to Extensive	Extensive
Functionality	Basic to Extensive	Extensive
Technology Platform	Usually Single	Multiple

Analysis

Start with an understanding of Critical Success Factors (CSFs)
CSFs are defined as those things that you must do well in order to be successful. You can use CSFs as a way to determine whether a requirement is really critical. If a requirement can't be mapped directly to a CSF, then it's not critical.

Define measurements of success

Before starting any project, you should know how to measure success in terms of saving money by streamlining operations, increasing revenues, increasing market share... Measurements of success act as a motivator for staff during the implementation, help keep the project on track and focus effort on attaining important business objectives.

Understand existing business process and seek opportunities for business process improvement

Until you have understood the existing business process, you are not ready. Employees may not know that what they are doing is atypical. Roll up your sleeves and talk to the people who do the work. Remember the devil is in the details. Along the way, your value-add may be in identifying ways to improve business process.

Don't be ambiguous in the definition of requirements

The more ambiguous the requirement, the more interpretation is needed in whether a particular vendor meets the requirement. You need to be precise so that you can compare apples to apples.

Don't waste time on basic functionality

Systems have matured to the point where the basics are done well. Focus only on the requirements that are unique or could vary by vendor.

Prioritize

Not all requirements are created equally. Use a numbering system such as "5" for critical, "4" for high, "3" for medium, "2" for low, "1" for N/A. If you have mostly "5"s, there is something wrong.

Manage scope, budget and timing

Project management is the key factor in predicting success of any project. Project management includes management of scope, budget and timing. Rather than using the

school of hard knocks, you should consider working with a structured methodology such as published by the Project Management Institute (PMI).

Get employee involvement

Recognize the significant amount of employee knowledge and the potential contribution of the employees. Unfortunately, the knowledge is typically in the heads of the employees and care must be taken to include their input. At the same time, you are effectively including them in the process and securing their buy-in for the process.
Assign an internal champion
An internal champion should be allocated to the project. Even the most difficult projects can become successful when you have an internal champion who is ready to do whatever it takes to get the job done. It is best to assign the internal champion at the beginning of the system selection project to ensure their commitment and agreement with the system selected.

Manage the risks

Seek out potential risks, their impact, and their likelihood of occurring. Encourage all interested parties to develop strategies to mitigate the risks. Every organization has at least 1 naysayer, who can cause a lot of problems, but who is also very knowledgeable. The naysayers must be included in the risk management process. By getting their input early, you can avoid problems and you effectively limit their negativity.

Ensure management buy-in

Communicate scope of project and get sign off at critical steps along the way. Management should develop or ratify the measurements of success.

Vendor Selection

Identify potential vendors

Type	Advantage
Generic/Horizontal - apply across different industries	Typically have more customers and more resellers, which means more access to support. The generic systems usually shine when it comes to financials and user interface.
Vertical - apply to a specific industry	Additional functionality for the specific industry as well as more knowledge of best practices for that industry.
Custom - built to your specification	These vendors start with a base product and will build exactly what you want.

There is typically more risk associated with vertical and custom vendors. However, the benefits could outweigh the potential risks. To obtain lists of potential vendors:
- use internet searches
- contact your accountant
- contact colleagues
- contact consultants
- contact industry associations
- look at trade journals for articles and advertisements
- attend trade shows

Find a good reseller

The reseller or Value Added Reseller (VAR)/implementer can make a big difference. Often, companies selecting new systems spend a lot of time analyzing the product and the vendor but not enough time analyzing the capabilities of the VAR.

Issue a Request for Proposal (RFP)

An RFP is a good tool to communicate your needs uniformly to vendors and to create a short list of vendors. Ask vendors to answer questions related to cost, technology, customer base, developer and implementer qualifications, and similar customers. Have the vendors respond to each requirement with a number such as "7" in current release and quoted in estimate, "6" in current release, "5" available in 6 months, "4" minor modification or workaround, "3" third party, "2" available in a year, "1" major modification or workaround, "0" not available. By extending the priority of each

requirement times the vendor response, and then summing the results, you get a score that will give you an indication of closeness of fit for each vendor.

Attend demonstrations

The vendors should now know your Critical Success Factors and key requirements, and should be given an agenda so that time is allocated properly. You should attend no more than 4 demonstrations, and limit the time to 2-3 hours. There will be time for a more detailed review later. Ask each attendee to identify major strengths and weaknesses, as well as score (-10 to +10) how well they did for each topic on the agenda as well as indicate its importance (1 to 10).

Call references

You will be amazed at how much you learn and how little some of the vendors know their customers. Have a checklist of questions to ask so that you don't forget anything. See below for a more detailed discussion on reference checking. Tell the reference a little about yourself before asking any questions so that they have a level of comfort with you.

Prove that the system will work for you

Prepare a script that contains sample transactions that should be processed through the entire system. The script is a day in the life at your company will contain the most important business processes with sample documents and reports. You could ask 1-2 vendors to prepare a proof of concept. This is a time consuming task for the vendors as well as for you in attending the demonstration. But you are only focusing on the vendors most likely able to win your business.

Know the Total Cost of Ownership (TCO)

You need to understand all the costs including license fees, implementation, support, hardware, networks and communications before making a decision. There should be no surprises later. See below for more about TCO.

Do a Boardroom Pilot

You need to work with the system to understand the many options. You may think that a customization is required until you better understand the various workarounds. The vendor has an idea of the customizations, but has probably not created a specification or given you a firm quote. Use the boardroom pilot as a way for the vendor to understand your requirements and for you to better understand the system before signing a contract and purchasing the software. You will need to pay the vendors for their time. You should get a fixed price as one of the deliverables of the boardroom pilot.

Vendor Demonstrations

Be prepared. Before you have scheduled a demonstration, you should have already completed a preliminary vendor analysis that evaluated each vendor's degree of fit to each of your requirements. This means that you should already have eliminated any systems from the demonstration if there are major problems with the system related to functionality, cost, technology and support.

Keep the 1st one brief. The first demonstration should be an introductory session for approximately four vendors. Share the priority of your requirements with each vendor. Each vendor will want to spend time with you to better understand your business. Just as important from their perspective, they will want to establish a relationship with you. Resist their request at this point. The vendors also have a lot to show you. They will want to spend as much time as you can give them during the demonstration. Keep the first demonstration up to 2 hours. Tell the vendors they can forget about everything except your highest priority requirements. There's no point spending a lot of time with each vendor at this point as you hardly know them.

Over the internet

Consider doing the 1st demonstration over the internet especially if some of the vendors are not local. There are great tools to demonstrate systems over the internet. In this way, it's a level playing field for all the vendors. And it's faster.

Create a team

You need to have a team of people to attend the demonstration that represent all the major business processes in the company. They don't need to stay for the entire demonstration. However, you should let all your people involved in the demonstration attend the introduction session as well as the session on generic features.

Keep a tight schedule

Provide a schedule, which shows exactly how much time they have on each section. In this way, you won't run out of time. As well, you will be able to schedule certain people to attend the sections that apply to them.

Keep score

You need a way to evaluate each vendor. Each person from your company attending the demonstration should be keeping score. Have each person complete the following chart identifying any strengths and weaknesses. Each person could score the vendor for each of the criteria (from 1 to 10) and its importance (from 1 to 10). Result = Score * Importance. There will always be follow-ups, so these should be recorded too. At the end of the

demonstrations, you need to bring all the participants together to decide which vendor should be evaluated in more detail.

Strengths	Weaknesses	Score	Importance	Result	Follow-Up required
Vendor and Developer qualifications/background					
Functionality - Generic					
Functionality - Distribution					
Functionality - Production					
Functionality - Financial					
Total Costs of Ownership					
Implementation / Support					
Technology					
Total					

Proof of Concept

The idea is to narrow the field to only two vendors and focus your attention on them. Send them a script of a day in the life of your company. The script should contain the business processes that you want to see. Attach forms and reports to give the vendors a better understanding. Give them a tour of your facilities and answer all their questions before the proof of concept demonstration. Give them enough time to do justice to do the proof of concept. The vendors will do this at no charge to you. It's a significant investment and you don't want to waste anyone's time on vendors that are unlikely to win the day.

That's not all

You're not finished yet. You will also want to do reference checking. The vendors don't want to give you references too early in the sales cycle. This is understandable as they don't want to bother their clients unless they are on your short list and have a decent probability of being successful. Other activities include contract negotiation and even more demonstrations if necessary.

Be honest

The vendors may have invested a lot of time with you. The least you can do is to tell them the real reason they have been eliminated. As well, you may have made a mistake in your evaluation. By telling the vendors the real reasons, you give the vendors a chance to come back with perhaps a different approach or clarification.

Reference Calls

Get the right references

Make sure that you are talking to a company in the same or similar industry, at about the same size as your company and implemented by the same company, which will be responsible for your implementation. It's not enough that the reference company be in the same or similar industry – they should also be using the same software as proposed to you. Size matters – performance can be different as you increase the number of users or the volume of transactions.

Schedule it in advance

Be respectful about the time of the reference. Call the reference to schedule a good time for him/her to take you call.

Keep it brief

Let the reference know approximately how much time it will take and try to keep it within the allotted time – unless of course the reference loves to talk…

Work from a checklist

It's easy to be sidetracked during these calls, but you don't want to forget about key questions.

Introduce yourself

The reference call should always start with a short description of your company. This helps personalize the conversation, which becomes another reason for the references to be reluctant to lie or leave out important facts.

Ask the right questions including

- Reference Company Background
- Modules installed and when
- Implementer
- Database
- # of users
- Why software chosen
- Has software met your needs
- Any areas not met
- Software ease of use ok

- Flexibility/ability to modify ok
- Any modifications
- On-time and on budget
- Performance/response time
- Any problems
- Implementation process ok
- Support ok
- Overall satisfaction
- Do it again
- Any recommendations or things to avoid

Be specific

The above questions are all generic. You should also ask specific questions on the areas of most concern.

Be appreciative

The reference took time out of their busy schedule to take the call.

Bottom Line

You may be wondering what's in it for the company taking the call. Most people do it to show their appreciation and support of the vendor. They do it because they feel obliged to help considering all the times they have been helped. They do it because they once made a reference call and now it's their turn. They did it because it's the right thing to do. Whatever the reason, they are not about to compromise their integrity if asked a direct question by someone who they may meet them down the road.

Total Cost of Ownership (TCO)

TCO is a very good way to evaluate the costs related to a new system. You need to include not just the software license costs, but also all the other direct and indirect costs. Sometimes vendors will give a low-ball cost for software, but will make up for it in later charges. You don't want any cost surprises part way through an implementation. What can you do?

Avoid ambiguity

You need to be very specific about your needs so that there is a minimum of ambiguity. If there is ambiguity, the vendors will be able to say that the needs were not communicated clearly enough, and that additional costs are required.

Avoid time and material quotes

The vendors would prefer to bill you on a time and material basis especially when there are unknowns. For example, they may tell you that they don't know how much training is required as they don't know the aptitude of the staff. This particular concern can be dealt with by taking a train the trainer approach, whereby the vendor only trains key people over a defined number of hours, and the key people train the rest of the staff. However the big unknowns are in conversion, customization and integration. The vendors have a legitimate inability to fix costs for these activities. Get the vendors to prepare specifications, which will enable them to provide a fixed price. The specifications should be prepared before the purchase of the software. The vendors are entitled to be paid for the time to prepare the specifications.

Boardroom Pilot

Consider doing a board room pilot before you purchase the software. One objective of the board room pilot is to ensure that all costs are defined before purchasing the software. This would be a good time to have the specifications prepared for conversion, customization and integration.

Include all direct costs

The vendor could be involved in many implementation activities. Make sure you have quotes on all the costs. In the higher end systems, the implementation costs could easily be twice the costs of the software license.

Maintenance costs

Maintenance costs are usually charged on the list price and not a discounted price. You should also get a quote to maintain any customizations if there are upgrades to the core

product. Same goes for third party products – you want to know the costs of upgrading the third party products.

Hardware costs

You could be surprised by additional hardware costs. Make sure you know the recommended configuration for your workstations and server. You could also have additional costs if you require remote access. Most systems today are not web-based (i.e. you need more than a browser on a workstation). These systems often use Terminal Services or Citrix as a way to get good remote performance. But you may need to invest in additional hardware and software.

Include all indirect costs

There will be internal costs. You may need to hire additional resources. Many key employees will be spending time on the project, and will not be able to complete their normal work activities.

Talk to references

Don't just ask about the software. You should also ask about the implementation costs.

Include future costs

By doing a present value calculation (it's assumed all Bottom Line readers know how to do this), you may find that the solution with the higher license costs is less expensive after 3 years.

Put it in writing

Your contract should include details on what is included in the implementation.

License costs

Beware of license costs that go up with more users. You may find that the 1st 15 concurrent users cost much less than the next 15.

Avoid customization

Don't automatically think you need to customize something that you're currently doing, but does not exist in the software. There could be a workaround that will present itself after you have better understood the software. There could in fact be a better business process available with the new software. Many companies are stuck with old versions of software because of all the customizations that have been done. They are reluctant to upgrade to the most current release because the customizations need to be redone, which

will be costly. There will be situations where customizations do make sense, but you should understand the total costs before proceeding.

Business Process Improvement

You have a big opportunity to improve business process when implementing a new system. Don't simply just re-implement your existing processes. You may be able to not only save costs during implementation, but also achieve significant benefits from an improved business process on an on-going basis.

Phased Implementation

One effective way to deal with heavy up-front costs is to break out the implementation into phases. Do the essentials in phase one. Get the vendors to quote for each phase. In a year or so, you may find that some of the things you thought you required are not really necessary after all.

Implementation

Business Case Foundation

Don't forget what you should have known during the selection process. You should have already understood Critical Success Factors (CSFs). CSFs are defined as those things that you must do well in order to be successful. As well, you should have defined measurements of success. Before starting any project, you should know how to measure success. Measurements of success act as a motivator for staff during the implementation, and help keep the project on track and focused on CSF's. Even if you have not done it for system selection, it's not too late.

Business Process Improvement

Don't assume that your existing business process is the best way to get the job done. Even worse, don't insist on modifying the new system to do exactly what was done before. First, ensure there is an understanding of existing business process. Roll up your sleeves and talk to the people who do the work. Ask them to tell you how much time is spent on activities. It may not seem serious if 1 person wastes 15 minutes per day - but what does it cost if there are 10 people doing the same thing throughout the year? Assuming a rate of $25/hour and 1,800 hours or work per year, that little problem has cost the company $112,500 for the year.

Project Management

Project management is a key factor in predicting success of any project. Project management includes management of scope, budget and timing. Rather than using the school of hard knocks, you should consider working with a structured methodology such as published by the Project Management Institute (PMI). A good project manager has support of upper management, and can be tough. If the project manager wants to please everyone, he/she is not the right person.

Internal Champion

An internal champion must be allocated to the project. Even the most difficult projects can become successful when you have an internal champion who is ready to do whatever it takes to get the job done. It is best to assign the internal champion at the beginning of the system selection project to ensure their commitment and agreement with the system selected.

Employee Involvement

You need their involvement for many reasons. Without it, you could risk missing critical business process that only they know about. And just as important is the psychological

component. People are often threatened by change. By getting them involved, they are more likely to be supportive.

Best People

You want your best people involved in the implementation. They have the confidence of their colleagues, know the business well, and usually have the right attitude. The implementation is going to take time. You must reduce their normal workload.

Risk Management

Seek out potential risks, their impact, and their likelihood of occurring. Encourage all interested parties to develop strategies to mitigate the risks. Every organization has at least 1 naysayer, who can cause a lot of problems, but who is also very knowledgeable. The naysayers must be included in the risk management process. By getting their input early, you can avoid problems and you effectively limit their negativity.

Communicate

Don't keep people in the dark. Communicate formally, informally and frequently.

Train the Trainer

This is a good way to cut training costs, and force employees to know the system. The best way to learn a subject is to teach it.

Extensive Prototyping

There are many options in the setup of a new system including setup options, conversion, integration, and customization. An iterative process is required until the prototype is completed. It may take a few times before you get it right. Take a small, representative sample of transactions through the system including reports and controls. Don't go live before everyone is ready.

Beware of Customizations

Customizations can bite. The first bite is that it slows down the implementation and the costs soar. The second bite occurs when you want to upgrade to the newest release. This is not to say that some customizations are warranted and have a compelling business case.

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Phased in approach

There is also what is called the big bang theory, when you do it all at once. Big Bang could able be so named because everyone on the implementation shot each other out of frustration. Small and mid sized businesses especially don't have the manpower to do it all at once.

Post Implementation Review

Learn from your mistakes and there's always room for improvement.