



Implementing ERP in Small and Mid-Size Companies

This is an excerpt from the April 1, 2001 issue of *CIO Magazine* "ERP Implementation in 10 Easy Steps."

1. *Ask the board of directors for an arbitrary but large sum of money. (Suggestion: \$300 million.)*
2. *Give half the money to consultants. Ask them to select an appropriate ERP package for your company. Consultants will audit your business processes for six months and then select SAP, which they happen to resell.*
3. *Form cross-functional implementation teams. Hold meetings.*
4. *Reengineer all your business processes to match the software's model.*
5. *Give the other half of the money to consultants.*
6. *Install the software.*
7. *Train end users repeatedly.*
8. *Cross your fingers.*
9. *Turn on the software.*
10. *If you're still in business, immediately return to Step 1 because it's time for an upgrade.*

If you are a small to mid-size manufacturer this unfortunately can seem more truth than fiction. The purpose of this paper is to let you know that it doesn't have to be that way.

Implementing ERP can be a time-consuming, problematic, and costly undertaking for a company of any size. There have been many papers written on how to implement an ERP package, however these are largely aimed at larger organizations that can afford a full-time team and have mammoth budgets. For small or mid-size companies with limited resources, here are some ideas to make your implementation successful.

Selecting the Proper Package

The purpose of this paper is not to discuss the steps of selecting the correct package. However, so much of what goes on in the selection process is built upon to make a successful implementation that it must be included here. A basic rule of thumb is that an ERP package will provide 80 percent of the desired functionality. How the software vendor helps fills that gap is an important aspect in determining the success or failure of an implementation. It is therefore important to not only look at the software but also the other aspects that will facilitate implementation and maximize the benefits derived from software.

Look not only at the software package itself, but also at the other intangibles that differentiate the vendors. These intangibles could be a quicker implementation method, the software's flexibility, as well as the vendor's ability to quickly modify it. Another important factor to consider is the relationship between your company and the software vendor, which is very important for the small to mid-size company, as they will have to depend more heavily on the software vendor, or third-party implementer, than would a larger organization. Many ERP software vendors use Value Added Resellers (VARs). The VAR typically not only sells the software but offers implementation services as well. In this paper, VARs or the software vendor themselves will be referred to as the representative of the software vendor.

Select the team early and get them involved in the selection process. Once the decision is made to start looking for ERP software, it is time to assemble the team. The team should be in place from the beginning so they start to "buy in" to the whole process. By involving the team early and making them a part of the selection process your chance of a successful implementation increase dramatically. The team should be made up of individuals from the company who know why things are done a certain way, not just that things need to be done. Don't be afraid to include anyone from managers to clerks on the team, and don't exclude people with negative attitudes. It is sometimes easier to make someone part of the process than to try to fight them later.

Encourage natural functional leaders to develop within the team. It is often easier for a couple of people to pull the rest of the team through the implementation than to always try to get the consensus of the entire team.

In all implementation teams there will be people who become natural leaders in the implementation, either because of their position in the company or because of their knowledge of the business. In small companies it is not unusual for one or two people to do the majority of the work. In this case, it is the responsibility of those persons to involve the appropriate people at the proper times. These people usually will understand most of the business and will be involved in making most of the decisions of the implementation.

Use the Requirements list generated during the software selection process as a tool during the implementation. This document was not only important during the selection process but its continued use is important for the implementation effort. During the implementation process, this original requirements list should be a living document

expanded to cover not only any new requirements but also how the software will be used to satisfy the requirement. If this is done correctly, the document could be used at the go live phase for process instructions. The requirements document should be a document that is expanded and used through out the implementation process.

Getting Started

After the software has been selected a kick-off meeting should be held with the representatives from the software vendor and all team members. During this meeting the entire process of the implementation should be laid out. No details need be given at this point but the expectations, the methodology and the goals should be clearly defined.

Layout the expectations to the team. Here is a major differentiator between implementing in a large organization and a small organization. Depend heavily on the representative(s) from the software vendor since they should have done this many times before and should know what works and what doesn't. They should be both knowledgeable about the software and willing to learn your business processes. This is one reason why the selection process should look both at the software and the people who will be working with you. Because you will probably not have a full-time team, ask the implementer from the software vendor to help lead the effort.

The representative(s) from the software company should be actively involved and even lead the project. Use of outside consultants at this point should be avoided if possible. The only reason that one would be necessary is if the representatives of the software vendor were incapable of leading the project. The problem with outside consultants is that if they are any good, the company becomes dependent on them. When this occurs one of two things usually happen; the knowledge gained and the expertise walks out the door when the implementation is complete or the outside consultant has a nice long-term (read expensive) contract.

Always weigh the benefits of versus the cost of implementing functionality. Examine all functionality that is under consideration to be deployed. If the functionality is going to add complexity and lengthen the initial implementation, consider moving that piece of functionality to a future phase. The initial implementation is going to be chaotic enough without adding unnecessary complexity. The only exception to this is if the functionality is something your current system provides. Do not delay something that people are already used to, this will only give the perception that the new software is not as good as the old (which is a natural feeling for some people, so don't encourage it).

Stick to the basics and plan a phased approach to implementation with increased functionality added later. This type of phasing will provide the majority of the benefit for initial cost. It is better to start receiving 80 percent of the benefit now versus waiting a few months to achieve 100 percent of the benefits. One type of phasing the implementation that should be avoided if possible, is implementing the software module-by-module. This is sometimes a necessity but should not be a method taken lightly. The software you are implementing is integrated, so by breaking it apart, you are changing the

way it was meant to function. For example, if Accounts Payable is implemented but not Purchasing, you will either have to feed the new A/P system from elsewhere or use the payables as if everything is a miscellaneous invoice. As a result, your company will incur extra programming costs to provide interfaces or be using the system differently from the way it ultimately will be used. If possible utilize the “big bang” theory of implementation with all modules implemented at once.

If there are multiple physical plants, it is often helpful to install one plant at a time. If one plant is used as the “guinea pig” for the new implementation, rough spots are smoothed out and lessons learned will help ease the process. Unless they are vastly different businesses, the same software vendor representative should handle all of the different plants.

There must be a sponsor of the project. Though the sponsor may or may not be involved in the implementation itself, this person should have a position of power and be highly respected within the company. During the implementation there will be times when things get bogged down, since key personnel involved in the implementation might be tied up. But there are times when the sponsor must hold weekly meetings to assure that tasks are completed. It is amazing how things can get done if the person responsible must report on progress at a weekly meeting with the president or one of the higher-ranking officers of the company. **The Sponsor must be willing to step in when roadblocks appear.**

The Working Sessions

Working sessions involve representatives from the software vendor and representatives of the in-house team. These sessions should initially involve the entire team but as discussions get more detailed, the group can split into smaller groups.

The team members need to understand not only the functions of their own department but also the functions and needs of other departments with which they interact. It is actually an advantage of smaller companies that have people who understand not only the responsibilities of their own departments but also the responsibilities and needs of the departments with which they interact. When this is not true, it must be understood that in order to efficiently use an integrated software package, the team must at the very least know what events take place before they are involved and what happens immediately after. For this reason natural pairings should be made during the working session, A/P should be involved with Purchasing; Purchasing should be involved with Planning and Inventory Control, etc.

The role of the software vendor representative should be greatly expanded when dealing with small and midsize manufacturers. The software vendor representative should be able to, if not lead the way, then show the way. The representative should have done this multiple times whereas the team is probably working on their first implementation. The representative should begin by obtaining a brief overview of each department’s functional responsibilities and the processes they go through. After gaining

this basic understanding, the vendor representative may start to demo the software as a means to start the dialog comparing what the software capabilities are versus the needs of the functional department.

During the working sessions the gaps between what the software is capable of and the requirements of the functional department (GAP analysis) are identified. During these sessions, work arounds should be discussed as well as possible modifications. Changes to the software are often treated with much trepidation from both sides but need not be. Differing attitudes of the implementing company will determine the extent of modifications. Larger ERP vendors usually state the philosophy that their software is based on the best business practices of the time and should not be changed. Other vendors take the approach that, in some companies, there are aspects of their business processes that provide a competitive advantage or “best business practices” are too complex and would take too many resources to adhere to. In these cases, customization of the software to fit these needs would be encouraged. Depending on the outlook of your company and the vetting out process during the software selection, both sides should understand how many, if any, changes to the software might be required.

Gaps, when identified, should be documented. When the solution is settled on, it should also be documented. Whatever the approach, by the time the software goes live, all of the gaps should have some solution. It is not necessary to immediately resolve all gaps, instead they should be documented and when the solution is offered, it also must be documented. Do not rely on the human memory. Often an issue will arise that everyone knows was talked about but no one can remember the solution or have differing opinions as to what the solution was.

Working sessions should be scheduled for a week at a time. Both sides after the week will need a chance to digest the sessions and to work on the task list that will need to be completed before the next session (in addition to catching up on all the work they have missed working on the implementation). If custom programming is required—depending upon the scope of the changes—time is required.

If software customizations are required, the representative from the software vendor should take the lion’s share of responsibility for making sure that gaps are eliminated. This should be agreed upon from the beginning. This is a huge difference between implementing in a large organization and a small or midsize organization. Because of the size of the company, the more you can push to the software vendor, the better chance of keeping progress moving forward without disruptions to daily business.

The Pilot

The most critical task in the implementation cycle is a good thorough pilot test. A successful pilot can assure a company that it won’t crash and burn when the software is put into production. The flow of all business processes in which the software is going to be implemented should be tested. Special attention should be paid, not only to normal business flows, but occasional events as well as reversals. For instance the shipping

transaction is usually tested but the reversal of a shipping transaction is often not. Special attention should be paid to any work arounds to make sure they make sense and do the job. If new programming has been done, pay closer attention to these programs, as they are more likely to have bugs. The software representative should be present during the pilot to help answer questions and to run the pilot. By this time the representative should be the expert on how the software is going to be running at your company.

An often-neglected step is to test against converted data. For example a user will enter a sales order and ship against it. What should also be tested is a sales order that has been converted should be shipped. The first few weeks after implementation users will be working against data that has been converted, not data that was originally entered into the new software. There are many problems that could occur if the conversion was not done correctly. These problems will not be found until going live unless they are tested in the pilot.

In addition to team members, bring in people from the functional areas to participate. These people should be strong users who understand the importance of the test and can bring different points of view to the process.

If a lot of problems are identified during testing, congratulations! Just think what might have happened if you skipped this step and went live with the software the way it is. Depending on how much time has been spent by the team up to this point, a lot of problems occurring in a pilot are not unexpected. Again the difference between a larger organization with people who can be full time on the project and a small or midsize organization is the time spent actively exercising the software. Depending on the scope of the problems encountered, plan on another pilot or test changes as they are installed on the system.

This is another point at which having a good representative of the software vendor pays off. He or she should be able to quickly recognize problems and put fixes in place. If new situations arise—and they will—he/she should be able to deal with these quickly as by now they should thoroughly understand your business operations and how it relates to the software.

Training

Training is ideally done with “Train the Trainer” methodology. In this method the team member will be responsible for training personnel in their functional area. In small organizations this is sometimes not practical. Your software representative should have enough familiarity with the way the software should be run in your environment that he or she should feel comfortable doing the training.

Be sure to have someone, preferably the “sponsor”, address the people being trained as to why the system is being put in place. For some, this may be the first time they have been

exposed to the new system. It is important to get their “buy in” to the idea of the new system so they won’t revert back to old manual methods just to get things done.

Do not be surprised to learn even at this late stage that some things are missing and have not been thought of before. The users who use the system on a daily basis may think of things never before brought up. This is why the team member responsible from the area should be present during the training to ascertain whether this is indeed something new or something where a work around has already been provided.

The Decision to “Go Live”

There reaches a point at which the decision to go live on a certain date is made. This decision should be made by the team but should be realistic. Certainly everyone should feel comfortable with the situation, but don’t let the team get carried away.

Don’t sweat the small stuff. If a critical requirement is missing or has not yet been tested, the project does not go live. If a report is not yet done or an inquiry screen is not yet ready, a decision will have to be made to delay the benefits of using the new system versus waiting for the unfinished program to be delivered.

Go Live

Representatives from the software vendor should be physically in attendance at each physical site where the implementation is taking place. If multiple plants are being installed simultaneously, a representative should be in place at each physical site. A certain amount of comfort is gained knowing that someone is on site addressing the problems as they occur.

Watch for “tribal knowledge” taking place. People doing it the “old” way just because that’s the way they are used to doing it. Communication is the key; make sure everyone is aware of what is going on. If possible, turn off the old system so that it cannot be accessed. Beware of the person who says “I’ve been doing it the same way for twenty years.” There will be at least one. Chances are this person will need to be watched so that he or she doesn’t continue to do it the old way for another twenty years.

Post Implementation

Chances are there are things that did not get implemented, either because of planned phasing in of functionality or there just wasn’t enough time. Make sure that arrangements have been made to have your software vendor representative continue on with the project. Do not let the support of your implementation be switched to a support help desk.

Summary

For small and midsize manufacturers that don’t have the resources, a different method of implementing ERP software must be utilized. The limited resources of smaller

companies make the relationship between the software vendor (or its representative) and the client crucial. The software vendor representative should be more involved in the entire process than in larger organizations. Time and budget constraints will probably eliminate the possibility of a full-time implementation team, making it imperative that an experienced representative from software vendor is there to pick up the slack. The implementation of the software should be viewed as the beginning of a long-term partnership with the software vendor. The working relationship between the person representing the software vendor and the leader(s) of the implementation team can determine the success or failure of the implementation project.

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