



Seven Steps in the ERP Process

An Overview of the Higher Ed ERP Journey

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If you're thinking about replacing some or all of your existing campus administrative systems with a more modern Enterprise Resource Planning (ERP) system, it will be helpful to first understand the steps you need to take and in what order you need to take them.

We believe there are seven such steps that define the best path for an ERP program.

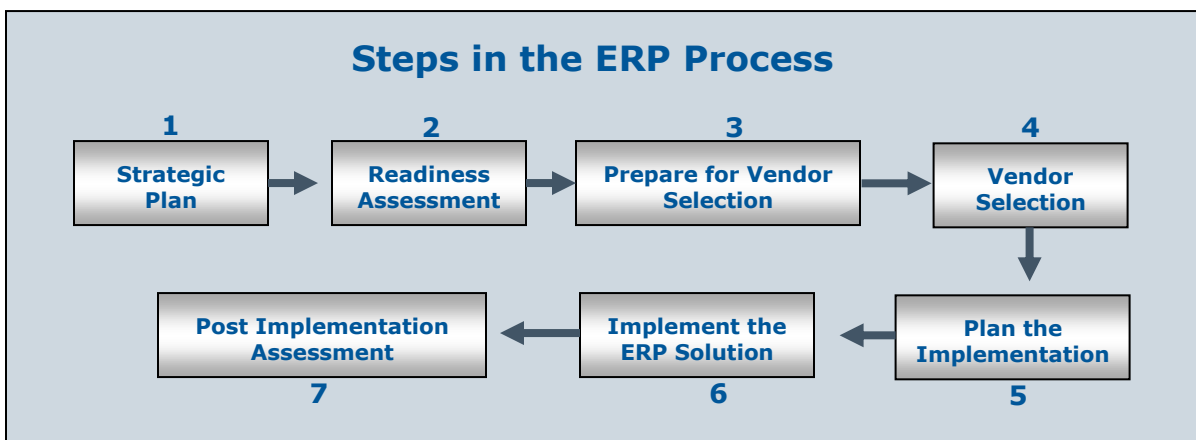
These steps start with the institution's strategic plan (which provides the context and rationale for the ERP undertaking), proceeds through a readiness assessment, vendor selection, and solution implementation; and ends with a post implementation assessment. These seven steps are shown graphically below.

For those just starting on your ERP "trek," what follows below is a summary of what you can expect to be doing at each step along the way.

Step 1. The Strategic Plan – Providing the Rationale and Making the Business Case

It is essential that the impetus for an ERP comes from the institution's strategic plan, and that the plan for the current time frame has the ERP project as one of the university's top strategic initiatives.

Why? There are numerous conflicting demands for scarce resources at a college or university. And with academic needs, student services needs, physical plant needs and other plans for these resources, it is often a hard sell to invest what may be millions of dollars to implement administrative process improvements that on the surface may not appear to directly benefit the university.



The president and the president's leadership team must make it clear, usually through the vehicle of a strategic plan initiative, that the ERP is a critical and important use of the institution's resources, and that the entire leadership of the institution supports this vital undertaking.

In short, the purpose of this first step is to lay the groundwork and make the business case that will drive the ERP initiative enterprise-wide. The campus champions of the ERP process must step forward and provide support for the cause by ensuring and demonstrating that the ERP program of projects meets the strategic objectives of the institution.

Step 2. Assess the "Readiness" of the Institution – Determining "preparedness" and Achieving Organizational Understanding

The ERP will likely be the most difficult and complex project that your college or university will undertake. The purpose of this second step is to conduct a formal assessment of the strengths and weaknesses of the institution to carry out such a project.

Unfortunately this type of readiness assessment is not usually carried out, even though this is one of the most crucial steps.

ERP failures are in steady supply. As Peter Aiken puts it, "ERP implementations are more likely to fail, be delayed, cost more than forecast, or fail to deliver functionality than they are to succeed."¹

Determining Preparedness

What should your institution do to become prepared? The first step certainly is to address *technical preparedness*. Items to consider include the adequacy of network, servers, and client hardware and software platforms, not to mention the skill sets of the IT staff



and the existing staffing levels of the IT department compared to what will be needed. At the same time, the assessment should also cover *functional preparedness*, that is, the adequacy of the experience, staffing, and skill sets of key functional departments on campus affected by the new ERP. Other factors include *leadership, communication, resource* and *cultural preparedness*. For a discussion of these and other readiness assessment factors, please read the paper by Erickson entitled, "Ready or Not? Determining the Readiness of your Institution for an ERP Implementation."²

Achieving Organizational Understanding

An important outcome of a readiness assessment is to achieve organizational understanding of what the institution is about to do. For most institutions there is a great lack of understanding of ERP complexities. Inaccurate perceptions abound. This assessment will reveal the gaps between where the organization is in terms of ERP understanding and where it should be. Your institution can then begin to close the gap prior to the implementation itself.

Step 3. Prepare for Vendor Selection – Determining your Software Requirements and Documenting your Business Practices

There are several Higher Ed ERP providers (vendors) in the market place. Before going through a process for selecting one, there are at least two major tasks that need to be carried out. These are: (1) develop a list of the specific requirements you want in your ERP solution, and (2) acquire a high level understanding of how you currently conduct your business practices that will be affected by the ERP solution.

Specific Software Requirements

Your campus must reach consensus on the

¹ Peter Aiken, "Enterprise Resource Planning (ERP) Considerations." Institute for Data Research, Virginia Commonwealth University, Fall, 2002.

² Erickson, J., "Ready or Not? Determining the Readiness of your Institution for an ERP Implementation." Collegiate Project Services Working Papers series, ERP Library, www.collegiateproject.com.

“functionality” it wants in an ERP solution. In essence, your college or university will prepare an explicit list of desired features that will then later be matched against the availability of those features in the various ERP products on the market.

To do this you must canvas the functional users on campus about what features will be needed in the new software. This task can be accomplished any number of ways, including using modern, web-enabled group decision-making software. Historically the most frequent approach has been to facilitate focus groups of various university stakeholders to reach consensus decisions about desired functionality in each of the functional areas. (e.g., human resources, finance, student accounts, recruitment, admissions, financial aid, registration, advancement, etc).

Regardless of method, the end result of this effort essentially will be a consensus list of “must haves” and a separate list of “nice to haves” that will be used as part of the vendor selection process described in step four below.

Understand your Current Business Practices

The way in which you currently carry out your business practices on campus is likely to be changed when using a commercially available ERP solution.

Before you can evaluate a new software package your institution must first obtain at least a high level understanding of how you are currently doing business. In our experience many Higher Ed institutions have not formally documented their business processes, nor even the academic and business policies that underscore these processes. This process documentation will be critical in the vendor selection phase, because you will want to compare how the various ERP vendor products can handle the way you currently do business.

Both of these tasks represent an important “preparedness step,” and will give you the needed head start for beginning the process of selecting an ERP software provider.

Step 4. Select your ERP Vendors – Choosing Your Technology Partners

There are potentially two major types of ERP vendors that will be involved with your school, and both types can be important long-term technology partners for your institution. These are ERP

Providers and ERP Implementers.

ERP Providers refer to the commercial software companies that sell licenses to use their software. These companies will also sell the technical and functional training and consulting services necessary to get their software working at your campus. *ERP implementers*, on the other hand, refer to the various competing firms in the marketplace that specialize only in supplying the consulting and training you will need to implement the software that you have licensed from one or more of the ERP providers.

NOTE: Selecting the ERP Provider is potentially the most contentious step in the ERP process, and may divide university stakeholders who favor different ERP solutions. In extreme cases, conflict over which software is best for the institution, and the inability to resolve such a conflict, can cause delay or temporary abandonment of the project. Therefore it is important that this step is carried out using best practices in group decision-making.

Four key decisions must be made in the vendor selection step of the ERP process:

1. Using an ERP Implementer?

It is given that your institution will be selecting a particular ERP provider from those available. However, when it comes to implementing the software, do you want to use the professional services from the ERP provider or do you want to consider using the professional services of one of the available implementer firms in the market?

2. How many screening mechanisms will you use?

The screening process can consist of one or more selection devices. The most popular screening mechanisms include a Request for Information, reference checks, site visits, scripted demonstrations, unscripted demonstrations, a Request for Proposal, a fit-gap analysis, and oral presentations.

3. **What decision-making process will you use?**

We favor a weighted-factor decision-making approach in which one or more decision criteria are selected and weighted *a priori*. All vendors are then scored on these criteria based on their performance on each of the screening mechanisms used in the selection process. It is also important that decision values³ are agreed upon early in the process, and that it is made clear to all stakeholders who (or what group) has the authority to make the final decision. We further recommend that there must be involvement and ownership of the final decision by senior executives.

4. **Will you need the help of a vendor selection expert?**

A final consideration is whether your institution wants to use an outside firm to help guide you through the vendor selection process. Many universities and colleges now issue RFPs in order to contract for the services of a firm that is experienced in designing and facilitating Higher Ed vendor selection processes. An outside firm will manage the process of engaging stakeholders and help them reach a consensus decision efficiently.

A Note Regarding Additional Software

A final consideration is the issue of *third party software*. Often Higher Ed institutions will want to supplement their ERP solution with software that will perform functions in which the selected ERP solution is weak or can't handle at all. Typically, selection decisions regarding third party software are not made until after the ERP vendor selection has been carried out.

A Last Thought

Finally, it should be mentioned that the vendor selection step is extremely important in the sense that the decision you make regarding an ERP provider will be a decision that you will have to live with a long time. It will in fact be the start of a partnership that will proceed through periodic enhancements and upgrades for many years to come.

³ An example of a decision value is a shared commitment that the decision in favor of a particular ERP vendor would be made from an enterprise perspective, rather than a functional perspective.

Step 5. Plan the Implementation – Preparing for Success

Once the software provider has been selected (and the software implementer if it is to be different than the software provider), then your institution will put together a comprehensive project plan that will be the management guide for a successful implementation of the selected software.

Here are the major elements you must produce in the planning step of the ERP process:

- ◆ A project *scope document* which will specifically spell out the purpose, goals, rationale, budget, duration, and specific limits, or boundaries, of the implementation.
- ◆ A project timeline and *project schedule*, with an organized list of the hundreds of tasks that will be carried out, including an identified owner for each task and all the task dependencies linked with predecessor and successor tasks. The resulting project schedule should be comprehensive and include *third-party software* implementation tasks as well.
- ◆ A project *organization*, including project sponsor, a steering team, the implementation team, and the various functional and technical teams that will work with the ERP implementer to get the software adapted and working on campus.
- ◆ A final *project budget*, which will include project costs such as software licenses, professional services consulting, staffing costs, third party software, and other categories of expenditures.⁴
- ◆ A project *risk analysis* and list of critical issues that must be addressed.
- ◆ A project *communication plan*, to include for each stakeholder group the following information: content of communication,

⁴ For details on putting together an ERP budget please consult Herbert, Art, "How to Prepare a Budget for an ERP Project; Ten Critical Steps" that can be found in the ERP library at www.collegiateproject.com.

types of communication, frequency of communication, methods of delivery, and who's responsible for each type of communication.⁵

- ◆ A *change impact analysis* that will be used to help overcome resistance to change caused by the new software and the resultant changes in roles, business practices and university policies.
- ◆ A *training plan* that will include technical training needed to implement the software, functional training, end-user training, management training, and any teamwork or leadership development that will be needed to carry out the project successfully.
- ◆ A *scope management process* that will spell out in detail the steps to be taken to approve changes in project scope that may be proposed by stakeholders during the implementation phase.
- ◆ A *metrics tracking and reporting* process that will provide feedback on a weekly basis of progress against schedule and feedback on a monthly basis of progress against the budget, preferably in the form of an easy-to-read metrics dashboard format.

Good project planning is a critical step in the ERP process and must be carried out diligently. Thorough planning not only provides a blueprint for the implementation, but also becomes the most important risk mitigation tool you can have.

Step 6. Implement the ERP Solution – Working the Plan

Whereas selecting the software can be the most potentially contentious and divisive step in the process, implementing the ERP is the most arduous step. Many ERP veterans report that this step of the process can be the definitive test of institutional will.

And this step will take the longest to carry out. A student and financial aid implementation, for example, can take 18 to 24 months to implement. A

⁵ For a template and an example of an ERP communication plan visit the “tool of the month” for November 2006 that can be found at www.collegiateproject.com.

full suite implementation (including student, finance, human resources, advancement, a portal solution, etc.) can easily take three years and more.

Characteristics of Successful Implementations

Many articles have been written about ERP implementations, and today there are known best practices. Chief among them are good communication, management of stakeholder expectations, a sufficient budget, adequate staffing, professional project management, functional ownership of the project, and a sound relationship with your technology partners. For a more detailed account of the top ten reasons ERP implementations succeed, consult the paper by Moore and Whiting.⁶

The Importance of Professional Project Management

One of the most often cited drivers of success in implementing an ERP is finding top-notch people to fill the key ERP leadership roles.⁷ In particular, the project manager role is among the most critical.

Managing an ERP project is a staggering undertaking. Strong project management skills are a must. During the life of the project hundreds of tasks must be staffed, scheduled, and controlled. The project manager will build and execute a communication plan, carry out a risk analysis, maintain issues logs, produce reports and conduct efficient meetings. A good project manager is organized, disciplined, and uses schedule and budget metrics.

David Schwarz, the CIO at George Washington, and Ken Orgill, the former CIO of West Virginia University, have argued from a lessons learned standpoint that the selection of the project manager is “without question one of the most important decisions on an ERP project.” In addition, these authors advise that professional project management is critical on an ERP project, even if you have to hire

⁶ Moore, Emory and Whiting, David, “Top Ten Reasons ERP Projects Succeed.” *Collegiate Project Services Working Paper Series*. ERP Library at www.collegiateproject.com.

⁷ An important part of the implementation is the selection of the right kind of people to fill four critical leadership positions. For guidance, consult Cornelius, Edwin, “Who Should Lead Your Campus ERP Implementation.” *Collegiate Project Services Working Paper Series*. ERP Library at www.collegiateproject.com

a third party from outside the university to bring the ERP management skills and experience to the project.⁸

Step 7. Post Implementation Assessment – *Where are We Now?*

Many institutions end their ERP journey at step six. If so, they miss out on important lessons learned as well as opportunities to improve the use of all their new software’s features.

There are three types of post-implementation data that should be collected during this step.

First, *lessons learned sessions* should be carried out with project stakeholders regarding the completed implementation. The purpose of these sessions is to decide on what was done well on the project and what could have been done better. These lessons learned can then be used to improve the implementation of subsequent projects on campus, and can be used to improve the overall level of project management sophistication at the school.

Second, a formal assessment of the degree to which project objectives were met should be carried out. A sample of data that should be collected and analyzed include: satisfaction ratings of users, degree of expectation met by users, extent to which productivity and service objectives set forth were achieved, extent to which cost objectives were achieved, the degree of improvement in the quality and availability of management data from the new system, etc. We believe it is important to bring closure to the issues that provided the rationale, purpose, and direction for the ERP project in the first place.

Finally, after some time has elapsed (say, a year after implementation), a good exercise is to check the extent to which the users of the software are aware of and are using functionality that is available to them. This is basically a fit-gap between the features of the software that are available to users and the features that are currently being used. Many times gains in process improvements can be made by software features that users are not aware of, even after using the product for a year. This exercise thus provides an

⁸ Swartz, David and Orgil, Ken, “Higher Education ERP: Lessons Learned.” *Educause Quarterly*, 2001, pp 20-27.

opportunity for the school to increase services, improve productivity, and get a yet greater return on its software investment.

Summary

The table below summarizes the seven steps of the ERP process, as discussed in this paper. By following these steps you will improve your school’s chances of having a successful ERP implementation.

Step	Activity	Purpose
1	Strategic Plan	Provide the rationale and make the business case for the ERP project
2	Readiness Assessment	Determine institutional “preparedness” and achieve organizational understanding of the ERP process
3	Prepare for vendor selection	Document business practices and determine software requirements in preparation for vendor selection
4	Vendor Selection	Choose your technology partners, both the ERP software and the ERP implementer
5	Plan the implementation	Prepare for a successful implementation by developing a comprehensive plan
6	Implement the ERP solution	Work the implementation plan; schedule, track and control the hundreds of project tasks
7	Post implementation Assessment	Determine if objectives were met and determine the extent of functionality of the software that is being used

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