



# ERP 101: A Primer for Busy Executives

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**When considering an ERP implementation, busy institution executives need a crash course. The purpose of this article is to provide such a course for busy executives.**

**This crash course includes six simple lessons.**

1. An ERP Overview
2. Steps Involved in Implementing an ERP System
3. How to Select an ERP System for your Institution
4. Staffing an ERP Project Implementation
5. What you Need to Know about ERP Budgets and Total Cost of ERP Ownership
6. The Top Ten Reasons ERP Projects Succeed

## Lesson 1: An ERP Overview

An ERP is an Enterprise Resource Planning system -- a software system that processes institution-wide transactions on a single software system and a single data base. These multi-functional systems are designed to streamline almost every aspect of how institutions operate. Simply put, an ERP integrates institutional data and processes through one system.

### What will an ERP do for your Institution?

Among other things, an ERP will:

1. Integrate information across all functions (examples include registration, financial aid, human resources).
2. Facilitate the flow of information among the institution's functions.
3. Track a wide range of institutional events in an integrated fashion, and facilitate planning future activities based on these events.
4. Support analysis of trends and thus improve the performance of the institution.
5. Allow users to:
  - a. Input data into one system to enable it to be processed with other data
  - b. Access data as information reports in a real-time environment
  - c. Share common data and practices across the entire institution
  - d. Re-engineer business practices

## What are the Software Components of an ERP?

In higher education, the major software components, or modules, of an ERP consist of one or more of the following: Human Resources, Payroll, Finance, Purchasing, Asset Management, Grants, Travel & Expenses, Student Information, Student Account Receivables, Financial Aid, and Advancement.

## Who are the ERP providers in Higher Education?

Several software companies sell ERP software within the higher education market. The most prominent providers include the following:

1. **SunGard Higher Education.** SunGard Higher Education provides a range of ERP software products under the umbrella of the “Unified Digital Campus.” Visit the SunGard Higher Education website at [www.sungardhe.com](http://www.sungardhe.com).
2. **Oracle.** Oracle is a global technology company with a variety of products. For higher education Oracle offers a range of products under the brand PeopleSoft Enterprise Campus Solutions. Visit the Research and Education division of Oracle at [www.oracle.com/industries/education/highered.html](http://www.oracle.com/industries/education/highered.html).
3. **SAP.** SAP is a global technology company with ERP solutions in a variety of industries worldwide. For higher education, SAP offers Finance, HR, Student and others. Visit the Education and Research division of SAP at [www.sap/usa/industries/highered/index.epx](http://www.sap/usa/industries/highered/index.epx).
4. **Datatel.** Datatel offers ERP solutions for higher education under the label of the “ActiveCampus Experience.” Datatel provides software and services exclusively for the higher education market. To learn more visit [www.datatel.com](http://www.datatel.com).
5. **Jenzabar.** Jenzabar offers software, strategies, and services for higher education under the umbrella of “Total Campus Management.” Visit this company at [www.jenzabar.com](http://www.jenzabar.com).
6. **Campus Management.** This firm has provided ERP solutions for post-secondary institutions since 1988. Visit their website at [www.campusmanagement.com](http://www.campusmanagement.com).

## Lesson 2: Steps Involved in Implementing an ERP System

Undertaking an ERP implementation is a major task for any institution. As perhaps the largest project an institution will ever implement, it will require commitments of money, time, and human resources from departments across the institution.

Seven logical steps define a proven path for your institution to follow in implementing an ERP project.

1. **Provide the business case for the ERP.** The leadership of the institution will need to provide the rationale and make the business case for an ERP. For many schools, implementing an ERP is seen as a way to implement important components of the institution’s strategic plan.
2. **Assess the Readiness of the Institution.** By carrying out a readiness assessment, an institution will be able to determine its “preparedness,” to identify potential roadblocks, and to begin helping the organization understand the ERP project and overall benefits.



3. **Prepare for Vendor Selection.** To prepare for selecting the best vendor for your institution, the functional offices will document current business practices and determine the features required of a new software system. This list is commonly called the ERP system software requirements.
4. **Select a Vendor.** This phase can be the most contentious if the institution's stakeholders cannot agree on an ERP vendor. Therefore, running the selection process as a project itself provides a structured process for choosing your technology partners, both the ERP software that best fits your institution's needs, as well as the technology firm you will use to configure and implement the software.
5. **Plan the Implementation.** Using proven project management methodologies, tools, and techniques, your institution will prepare for a successful implementation by developing a comprehensive project plan and schedule. At this step, an experienced project manager can guide you through the hundreds of tasks that must be scheduled, tracked, and controlled throughout the project.
6. **Implement the ERP Solution.** The actual implementation will be the longest and most expensive step in your ERP journey. In this step thousands of person hours and countless dollars will be spent in carrying out the necessary work to implement your new software over a multi-year period.
7. **Carry out a Post Implementation Assessment.** A final exercise for your institution will be to determine if the business objectives of the project were met and to determine how much of the software's functionality is actually being used.

### Lesson 3: How to Select an ERP System for your Institution

Institutions should focus on three sets of tasks to prepare for selecting and implementing an ERP.

1. **Learn what's available in the market.** Begin to learn about the software products in the higher education market. This process could include attending various user conferences and scheduling vendor demonstrations on campus. The critical functional and technical staffs of the institution should be heavily involved in this learning process.
2. **Conduct a formal "readiness" assessment.** This formal assessment identifies the strengths and weaknesses of the institution to carry out this project. Here is a checklist of questions you should answer:
  - Is the top leadership of the institution aligned and supportive of the project?
  - Do you have the necessary funding in place for this project?
  - Do you have the IT staff and IT skills that will be necessary?
  - Do you have the hardware and network in place that you will need?
  - Are your functional offices fully staffed?
  - Do you have a skilled and experienced ERP project manager in place?
  - Do the various working groups across campus get along well, or have they historically worked in "silos"?
  - Has your institution historically done a good job of communicating with institutional stakeholders?
  - Are there good leadership skills at the level of functional and technical department heads?
  - Are the various institutional stakeholders, including faculty, aware of what is about to happen, how long it will take, and how much effort it will take?

The answers to these questions will help you determine how prepared the institution is to undertake an ERP project. Institutions should be prepared to deal with the deficiencies or gaps that need to be closed before beginning the implementation.

- 3. Prepare for the Vendor Selection Process.** To prepare for your vendor selection process, you must implement two key tasks. The first is to ensure you have current documentation of the business processes in the various administrative departments impacted by the new ERP. Having these processes documented will be an aid in both the vendor selection process and the first phase of the ERP implementation itself which is called the “business process analysis” (BPA) phase.

The second task is to determine and gain consensus regarding the specific requirements the institution has for a new system. In particular, the institution must create a list of functional and technical specifications required in the new system. This list must be created so that you can compare the capabilities of ERP solutions in the marketplace against your institution’s specific needs.

- 4. Carry out the Vendor Selection Process.** The purpose of the vendor selection process is to select the vendor with the ERP product that best fits your institution’s needs. At the same time, your institution will want to select a vendor that you feel would make a good technology partner for a number of years.

Many colleges and universities use a formal Request for Proposal (RFP) process for selecting an ERP vendor. Typical screening mechanisms used in such a process include:

- a) A fit-gap analysis** – This exercise attempts to quantify how close the various software vendor products can match the specific functional and technical requirements the institution has specified.
- b) Product demonstrations** – Each vendor demonstrates the various modules of the product. Participants then rate the product according to the preset decision criteria.
- c) Scripted demonstrations** – Scripts are developed by the institution. A script poses a particular scenario and a particular problem. The vendors then must demonstrate how their product will handle this situation.
- d) Site visits** – Many institutions will take a team to one or more universities who are using the particular software under consideration. The team will spend time interviewing users of the software as well as viewing the use of the software in action.
- e) Reference checks** – Some institutions interview selected personnel from different universities who are using the software under consideration. These interviews follow a structured format, and will be scored using decision criteria. A variation is to have online questionnaires for users to complete.
- f) Scored responses to the RFP.** Most institutions will develop a set of weighted factors that will be used to score the RFP responses from the various vendors



A common practice is to narrow the field down to two vendors and then ask for final and best offers. This tactic often helps the institution receive the best pricing possible.

- 5. Choosing an ERP Implementer Firm.** You will find two types of technology partners when considering an ERP: ERP providers and ERP implementers. ERP providers are the firms that have developed the ERP software and sell licenses for the use of their software. The most prominent of these firms in higher education were listed earlier.

A second type of technology partner is the ERP implementer. These firms do not sell software or software licenses; instead they focus on helping institutions configure and implement the ERP software that they have chosen. Your institution must decide whether or not to use the professional services of the ERP provider, or to use the services of one or more of the available ERP implementer firms in the marketplace.

6. **Help in Vendor Selection.** A final consideration is whether your institution wants an outside firm to help guide you through the vendor selection process. Many colleges and universities will contract for the services of a firm that is experienced in designing vendor selection processes. Ensure that such a firm is shown to be “vendor neutral,” and does not benefit from nor have a stake in the final selection decision.

## Lesson 4: Staffing an ERP Project Implementation

Staffing an ERP implementation project is a critical challenge for institutions implementing ERP projects. The question most often asked is this: “Will we be able to find the time to devote to the project work itself, given the existing loads in our departments?”

Generally, institutions have addressed the ERP staffing challenge in four different ways.

1. **“Work on both and do the best you can.”** This is the directive often handed down to staff asking that they do both jobs the best they can. Often with this option, employees cannot effectively do both jobs, and they excel in neither. As a result, either service to the customer suffers or the work on the project suffers, or both.
2. **Pay employees for their extra work.** This option is similar to the first. That is, staff members will be asked to both work on the project while at the same time deliver adequate service levels to clients. In this case, however, management offers to pay staff extra compensation for doing both jobs. Unfortunately, the end result is the same. Staff members are unable to do their regular jobs and focus on the required project implementation tasks.
3. **Dedicate certain people to work on the project and everyone else “covers” their work.** This is the staffing strategy that is used the most in ERP implementations. Departments affected by the implementation will dedicate one or more critical people to work full time on the project, while the remaining department members pick up the extra duties.
4. **Hire temporary workers to “backfill” job duties.** Backfills are temporary workers who are hired in a department to cover many of the daily tasks that need to be carried out. This option then allows one or more members of the department to dedicate more time to the ERP project. (*Visit our online library to learn more about ERP Staffing Options*)

## Lesson 5: What you Need to Know about ERP Budgets and Total Cost of ERP Ownership

Costs for an ERP fall into the following three major categories:

1. Acquisition costs (costs for software, hardware, the vendor selection process, etc.)
2. Implementation costs (training, consulting, backfills, travel, etc.)
3. Life cycle costs (maintenance, support, upgrades)

*The total cost of ownership* of an ERP refers to the one-time acquisition and implementation costs, plus the maintenance and support costs across the life of the ERP software product. For planning purposes, most institutions use a ten-year period (or less) as the life of the software, even though many institutions are likely to use the software for many years beyond that timeframe.

## What You Should Know about ERP Project Budgets

The three types of ERP project budgets follow:

**Rough order of magnitude budget.** This budget is a rough first estimate that is figured early in the planning processes and is only accurate within +/- 30 percent.

**Planning budget.** Once the scope of the ERP project has been refined, a skilled estimator can put together a budget within +/- 15 percent.

**Managing budget.** This budget is the final, refined budget with full, detailed cost estimates of all the components of the project. This budget is used to manage the ERP implementation.

Two types of costs are included in an ERP implementation budget: project costs and ongoing costs. Institutions should account for and track both of these types of costs.



**Project costs.** These expenditures will be incurred as part of the ERP implementation project, but not afterwards. Examples include consulting fees to configure and implement the software, new hardware costs, licensing costs, etc.

**Ongoing costs.** These are the annual recurring costs that you will have as a result of implementing the software. Examples include annual software maintenance fees, annual salary and benefits of new hires that you now need to maintain the new system, etc. Institutions should keep track of the ongoing costs, since these costs will increase your institution's annual operating budget.

Finally, in our experience we have found that most institutions underestimate the real costs of the project by a factor as much as 50 percent! In studying this phenomenon we notice that institutions are aware of some of the cost categories, but usually not all of the categories. We call these "Known Costs" and "Overlooked Costs."

**Known costs.** As a consequence of negotiating a contract with an ERP vendor, institutions know that their ERP budgets will have software licensing fees, annual maintenance fees, and costs associated with the consulting and training services needed (plus travel expenses) to implement the software package.

**Overlooked costs.** Many institutions are unaware of other types of costs. Examples include third party software and consulting services, hardware and network (including the costs of upgrading desktops to handle the new ERP software), staffing costs (backfills), new hires, professional project management, additional training, site visits, user conferences, offices for the project team, bonuses for project participants, and so on.

## What You Should Know about Budget Cash Flow

Following are critical points regarding the *cash flow implications* of a typical ERP budget.

1. Project costs are not evenly distributed over the life of the ERP project.
2. Licensing and first year maintenance charges are typically collected in the first year of the project.
3. In a typical three-year, "full suite" ERP implementation, as much as 50 percent of the project costs are due in the first year.

## How to Avoid Running over Budget

Horror stories abound related to ERP projects running over budget. Higher education institutions all too often find themselves going back to the Board of Trustees for additional funding – often more than once. Following are two ways to avoid this issue:

First, put together a *realistic budget*.

1. Use all the cost categories in putting together the budget
2. Use robust estimates of every cost category
3. Put a 10 percent contingency in your budget

Second, use professional project management methods and tools to manage the project and thus control costs. A professional project manager will:

1. **Prevent schedule delays.** Delays in schedules always cost money. A professional project manager will be able to schedule, track, and control tasks to stay on schedule.
2. **Limit scope changes.** A professional project manager will put in place a hard-nosed scope management process. Most ERP budgets run over because additional scope is added to the project as the project progresses.
3. **Limit modifications.** Modifications to the software raise costs. Many cost overruns on ERP projects are due to costs associated with re-engineering of the software. A professional project manager will limit the number of modifications to the software code by insisting that the institution make changes in business practices and policies to be consistent with the base line software code.
4. **Monitor professional service expenditures.** A professional project manager will carefully monitor and manage the professional services fees and expenses of the ERP vendor to stay within budget.

## Lesson 6. The Top Ten Reasons ERP Projects Succeed

In closing, following are the top ten action steps you can take to increase the likelihood of your ERP project success:

1. **Create a partnership with your software vendor.** Institutions should take a win-win approach to negotiations and build a positive relationship with the ERP vendor. This should be a true partnership, with give and take. The relationship with the vendor will likely be ten years or more, and neither party should see the other as adversaries.
2. **Constantly communicate to your stakeholders.** Implementing ERP systems are extremely complex and take months and even years to implement. If your stakeholders understand the long-term benefits of the system, they are much more willing to accept any perceived temporary steps backward.
3. **Adequately resource your project.** Committing the personnel required to successfully implement the project is key. Remember, hiring backfills is the most ideal of the four basic staffing options.
4. **Communicate and manage expectations at “Go Live.”** Many constituents across the campus community expect the ERP to be an “everything for everybody” solution. Even in the best case scenario, this is rarely true. Regular communication across campus will help parties understand the process and avoid disillusionment with the new system.

5. **Ensure the project has sufficient funding.** Careful planning during the budgeting process helps project teams make better decisions on timing and allocation of resources. If budgets are not sufficient to support the deadlines, project resources find themselves working extensive overtime and under constant pressure.
6. **Encourage functional ownership of the project.** While it is tempting to let IT lead the ERP implementation, in the long-term, the ERP will be owned by the functional areas, not IT. Therefore, functional ownership should be in place at the beginning of the implementation project.
7. **Develop dependency-driven project schedules.** Successful ERP project implementations have well-planned project schedules that allow you to track and manage your progress and provide early warnings of problems. Schedules should be built with a realistic view of the amount of time needed for the various tasks and each task linked with clear dependencies or what must happen before a task can begin.
8. **Carry out a “readiness” assessment.** A readiness assessment conducted prior to the project kick-off can help identify areas of strength and potential problem areas in need of improvement. This information is extremely helpful when planning the project budget and the project task.
9. **Implement professional project management processes.** The magnitude of an ERP implementation requires aggressive and structured project management processes. Without the structure of project management processes, and a project manager who understands this methodology, the project runs significant risks in time, quality, and costs.
10. **Ensure that decision making and issues resolution happens quickly.** The toughest problems with any project implementation involve people issues. Pre-project planning must include the creation of clearly defined roles and responsibilities. These project roles must be filled by people who have dedicated time to the project; are willing to be accountable for dealing with issues and making timely decisions.

Your ERP implementation will probably be the most complex technology project ever undertaken on your campus. Therefore, executives at your institution must know as much about ERPs and the ERP project as practical. A crash course is just the answer you need for busy institution executives.

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