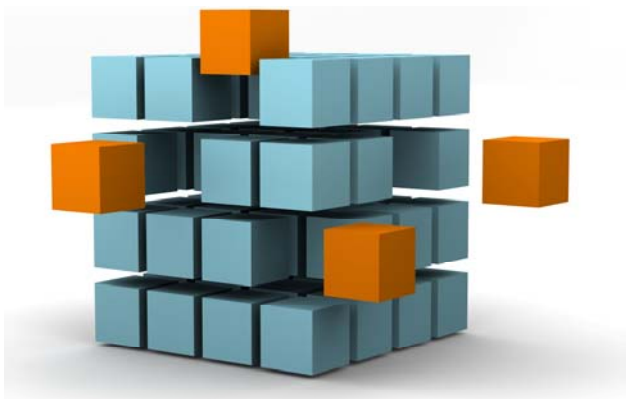


Buy vs. Build: A Question for Higher Education

Cynthia Hauck, PMP

Do we buy an Enterprise Resource Planning (ERP) system or do we build our own? We all know the question, but what's the right answer?



The Debate: Buy or Build Your ERP

The buy versus build debate has been going on as long as ERP systems have existed. This is because ERPs are considered one of the most crucial components of an efficient institution. ERP software extends to many areas of the institution, including finance, human resources, student registration, financial aid, advancement, and others.

Over time, this debate has become more complex. What was once a relatively simple “either/or” choice for institutions, has now become complicated. Today, institutions have more options, such as enhancing an existing system, customizing a purchased system, building a new system, or outsourcing the building of or customizing of a system.

Enhancing an Existing System

While ERP systems have evolved rather recently, institutions have been performing the administrative work of running their university for many years. Often, an existing legacy system is in place. This legacy system may be mainframe-based, a collection of different systems for different functions, or largely manual processing. Regardless, a viable option is often to simply improve on the systems currently in place through enhancements, upgrades, or tighter integration of systems.

If institutions choose to enhance their existing system, they need to consider the expected life cycle of the systems in place, take assessments of the strengths and weaknesses of the system, and remember that staffing can be a challenge for older systems as technology is continuously changing.

Customizing a Purchased System

Off-the-shelf ERP systems have made great strides in recent years in their attempt to be a “one size fits all” solution, but in reality most institutions need several components to be customized to their unique situation. Institutions can find ERP systems that are “close” to meeting their needs; however, they still have to look at the viability and costs involved in modifying that package and fine-tuning the functionality to match their needs. Institutions must also keep in mind that the more they customize a software package, the more difficult it will be to upgrade and maintain that system.

If institutions purchase a system, they should consider changing your business processes to match the software, rather than trying to find software to match their business processes.

Building a New System

Developing an ERP system from scratch is an overwhelming undertaking, even for the most skilled and well-staffed information technology (IT) department. Budget cuts in IT departments have reduced resources, and the continuous training on new technologies is more expensive than ever. While it is true that this is the most “sure fire” way of getting exactly what institutions want to meet all of their requirements, it is also the most expensive route to take. Institutions must make certain they have the staff, physical resources, skills, bandwidth, and experience to develop a quality product.

Outsourcing the Building or Customizing of a System

The stigma associated with sending jobs overseas for external development and support work has receded as the service options and quality of work has increased. In addition, the growing awareness of our global economy has spurred a new understanding of the value of using resources all over the world in new ways to benefit us all. A possible and viable option is to break down the work involved in the process of defining, developing, enhancing, and supporting any major software system and using external resources to fill these needs.

Join the Open Source Movement

Open-source ERP software packages, such as the Kuali Project, are an entirely new option for higher education institutions and is predicted to be available in the near future.

The Kuali Project began when several institutions joined together to build their own ERP system and provide it free to other institutions. "Kualि represents a third option for colleges and universities beyond 'build' or 'buy,'" says Barry Walsh, Senior Director of E-Business Services at Indiana University (IU). "Its design is of, by and for the

unique financial management needs in higher education, and IU has already integrated some early parts of Kualि with our recently implemented PeopleSoft Student and HR systems.”

Kualि is being built using J2EE and a services-oriented architecture to facilitate blending Kualि modules with homegrown and commercial software (Indiana University: April 8, 2005). The Kualि software allows anyone to use its source code, which will then help institutions better customize and manage accounting, billing, e-commerce, budget planning, and other campus functions. The project’s leaders anticipate the software will save institutions millions of dollars in the near future.

So Where Do You Begin?

Begin by identifying your business needs. Understand exactly what your requirements are and learn of any internal constraints, such as staffing or budget. By clearly identifying your goals, you can form a solid basis for answering the buy versus build question.

A typical process for making this decision includes the following steps:

1. Identify stakeholders needed to help make the decision.
2. Map processes and process improvement efforts.
3. Identify functional and technical requirements.
4. Assess current culture and attitudes.
5. Assess possible constraints and enablers.
6. Identify the criteria for making the decision.
7. Outline a software selection process.

1. Identify stakeholders needed to help make the decision.

Stakeholder identification is a critical first step in the ERP decision-making process. The buy versus build answer cannot exclusively be an IT decision. While IT departments will clearly have a crucial role in the implementation process, you must involve the functional areas and key leadership across the institution. This involvement will

facilitate buy-in for the ultimate decision and implementation process.

2. Map processes and process improvement efforts.

Understanding how your business processes are conducted with your current system will help you identify requirements for a new software package, regardless of the final buy versus build decision. Before a decision is made, process mapping should be conducted and process improvements should be identified. In addition, look at best practices from other institutions and their implementations.

3. Identify functional and technical requirements.

Gathering requirements is crucial. Key personnel in each of the administrative system's functional areas should assess the degree to which their needs are currently being met and identify technical requirements. Be careful that you are defining what you need and want, and not being swayed by all the "extras" that vendors may provide in a packaged system.

4. Assess your current culture and attitudes.

Understanding the culture of your institution is important. Often decisions are not clearly communicated or do not have enough cross-functional input to ensure buy-in for the final decision. Culture clashes can occur if the IT department has a pre-disposition for building systems in-house and has extreme opposition to spending a large amount of money on an off-the-shelf solution. During this process, it would be a good time to examine the long-term IT plans to determine how this decision will affect the institution in the future.

5. Assess possible constraints and enablers.

Assess your institution's available resources. Include both personnel and software within the IT department especially in terms of workload on existing projects and excess capacity for new project work. Evaluate your current software sys-

tems to determine their extensibility for supporting a new ERP system or expanding existing systems. The IT department should perform an assessment of the financial resources available for either the software development or the purchase of an ERP system.

6. Identify the criteria for making the decision.

The IT department should identify the criteria for making the final buy versus build decision. Some common factors include performance, functionality, cost, impact on institution functions, state mandates for reporting, etc. Make sure you understand the software selection and vendor procurement processes at your institution so the work can be factored into your planning process.

7. Outline a software selection process.

The software selection process is the next step. Before a final decision can be made, you must evaluate existing off-the-shelf ERP systems to determine if they meet the requirements and constraints developed during the early stages of the process. You should realize this might cause you to reevaluate your preliminary decision. If you were leaning toward a buy solution, but cannot find a package that meets your needs, you may want to revisit your selection criteria; likewise, if you were leaning toward a build decision, but find a package that will suffice, you may want to look over your decision again.

Issues to Consider

Following are issues to consider when making a *buy* decision for an ERP system:

- ◆ Cost is often the first factor institutions consider, because the price tag can be high. Remember to add the cost of any required customizations to the standard package by completing the process mapping and enhancements step. Other typical costs include ancillary systems, maintenance, training, licensing, and technical support.
- ◆ Create a clear set of requirements to use during the procurement process.

When making a *build* decision, consider the following factors whether you will be starting from scratch or enhancing an existing system:

- ◆ Think about the ongoing cost of maintaining a support staff for enhancements and future development. Accurately assess the capabilities and bandwidth of your IT department for undertaking a large implementation project.
- ◆ A tremendous amount of time and effort are involved in building an ERP system, so make sure you adequately account for delays in development schedules.

Cultural and Change Management Issues

No matter what decision your institution makes, implementing a large ERP project will raise significant cultural and change management issues. To help handle these issues, ensure you employ a strong project management methodology, consult with other institutions for lessons learned, and talk with experts in change management to decrease the chances of failure. Outsourcing resources may also provide alternatives to help increase your likelihood of success whether you build or buy.

While this article deals with ERP systems, the questions and decision-making process apply to other enterprise-wide applications, such as Customer Resource Management (CRM) systems, portals, networking solutions, and security applications. With a strong foundation and solid decision-making, communication, and leadership, your institution can be successful whatever path you choose.

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