



ERP Budget 101: Constructing the Initial Planning Budget

Ismail Jama, PMP

Putting together a cost estimate for an Enterprise Resource Planning (ERP) system is one of the most critical tasks in the initial planning phase of any ERP project.

This article is the first of two papers devoted to the ERP budgeting process. This first paper sketches out the steps in assembling an initial planning budget for the project. The subsequent paper will summarize the steps involved in refining this budget so it can be used in the management of the ERP implementation.

Purpose of a Planning-Level Budget

There are three types of budgets for an ERP implementation. These are:

- (1) the Rough Order of Magnitude budget,
- (2) the Planning-Level budget, and
- (3) the Managing-Level budget.

These budgets vary in purpose, detail, accuracy, and the time it takes to complete, as outlined in Table 1 on the following page.



Three Types of ERP Budgets

Type of Budget	Purpose	Time to Complete	Detail	Accuracy
Rough Order of Magnitude Budget (ROM)	To provide a general understanding of the range of costs of an ERP. Usually put together during initial strategic discussions of ERP feasibility.	A ROM budget can be assembled in a matter of days by an estimator experienced in ERP costs.	Rough approximations of costs for the major ERP budget categories; few details within the broad categories.	Depending on the experience and skill of the estimator, can be accurate within a range of 30 percent.
Planning Level Budget	To provide detailed ERP project costs and Annual Recurring Cost (ARC) prior to the selection of an ERP provider. Will often be the used as the basis for proceeding or not to the vendor selection phase.	A Planning Level budget will require from 2 to 5 weeks to complete. Much of this time is spent obtaining estimates from suppliers of various project resources.	Detailed estimates of the costs for all ERP budget categories. Will include all possible cost entries for each budget category.	Will be accurate to within 10 to 15 percent of the final budget used to manage the project.
Managing Level Budget	The final budget that will be used to manage the implementation. This budget is not completed until after contract negotiations with the selected ERP vendor(s).	The Managing Level budget may not be complete until the planning phase of the project is complete.	Will have exact figures for software licensing, maintenance, and ERP vendor consulting costs. Will also include cost adjustments for third party software and scope changes based on contract negotiations.	The Managing Level budget will be the most accurate, and should be within five percent of the final project costs, given no scope changes during the implementation.

As revealed in this table, the planning-level budget has considerable detail and will take substantial time and effort to gather the necessary information. The purpose of the planning-level budget is to provide enough information to help institution executives make informed strategic decisions. In fact, this budget is often used as a critical piece of information in deciding whether or not to proceed in the process of acquiring an ERP system for the institution.

Project Costs and Annual Recurring Costs

When putting together an ERP budget it is important to calculate and display both project costs and annual recurring costs (ARC). Project costs are one-time expenses that are charged to the project. Examples include licensing costs, hardware costs, consulting costs and project staffing costs.

Annual recurring costs are ongoing costs that are permanently added to the institution's operating budget, precisely because the new software is in place. Examples of these ongoing costs are annual software maintenance costs, hardware maintenance costs, and the cost of permanent positions, if any, that were added to operate and maintain the software.

Starting the Budgeting Process

We assume that those putting together the planning-level budget are fairly well informed about ERP solutions in the marketplace, and have a good idea of the software vendors that might be suitable for their institution's needs.

If so, we recommend starting the budgeting process by contacting all potential vendors to request an initial pricing proposal. Most vendors will offer a preliminary unofficial budget proposal that should list costs such as licensing, annual recurring costs and implementation costs. However, you should remember this is a preliminary sales proposal that may not include a significant discount you can obtain during a competitive bid process (such as an RFP) or through negotiations. Furthermore, the numbers you receive from the vendor will only cover the vendor's costs and will not provide the total budgetary requirements for an ERP implementation.

Cost Categories for your Planning-Level Budget

We believe there are ten cost categories for an ERP implementation. After gathering the above information from ERP vendors, you will have some beginning estimates for two of these ten categories: the software licensing and software maintenance category and the implementation consulting costs category. These two categories (along with hardware costs) are often called the "known" ERP budget categories.

Unfortunately, there are seven lesser known budget categories, sometimes called "overlooked" costs or "hidden" costs. Ignoring these remaining cost categories will result in a woefully inadequate budget estimate. To avoid this error we list below the different categories you must consider including in your initial planning budget:

1. ERP vendor licensing and Annual Recurring Cost (ARC)
2. Add-on software licensing and ARC
3. Database licensing and ARC
4. Reporting software licensing and ARC
5. Hardware costs and ARC
6. ERP Vendor implementation/training costs
7. Add-on software implementation/training costs
8. Project management and change management costs
9. Staffing costs
10. Miscellaneous other costs

As you see by this list, your budget research is just beginning. You must now make contact with a variety of other vendors, including third party software companies ("add-on" ERP software), hardware providers, reporting software vendors, professional project management firms, and change management firms.

Line Items for Each Category

Now that you are aware of the ten ERP cost categories, you are ready to expand each category into different line items and include the supplied, estimated or projected cost in each line item. Don't be afraid to be too detailed. Include every possible item you can think of even though your organization may not yet be considering some of them. Your goal is to budget for the maximum cost for the project and eliminate the need for further budget increases in the future.

To guide you in this effort we have prepared typical line items for all ten budget categories. These are shown in Table 2.

TABLE 2: Possible Line Items by Budget Category

No.	Budget Category	Possible Line Items
1	ERP vendor licensing and ARC	<ul style="list-style-type: none"> ▪ Software licensing ▪ Integration licensing ▪ Additional required software ▪ ARC (Annual Recurring Cost) with annual escalation percentage
2	Add-on software licensing and ARC	<ul style="list-style-type: none"> ▪ Version control software licensing and ARC ▪ Load testing software licensing and ARC ▪ Database access software licensing and ARC ▪ Software licensing and ARC for all additional desired software
3	Database licensing and ARC	<ul style="list-style-type: none"> ▪ Database developers ▪ Identity management ▪ Database security ▪ Partitioning ▪ Any other desired components
4	Reporting software licensing and ARC	<ul style="list-style-type: none"> ▪ This can include business intelligence reporting
5	Hardware cost and ARC	<ul style="list-style-type: none"> ▪ Production, test/development ▪ QA/Disaster Recovery ▪ Printers ▪ Scanner ▪ PC's ▪ Load balancers ▪ UPS's ▪ Other hardware and environment development costs
6	ERP vendor implementation/training	<ul style="list-style-type: none"> ▪ Implementation, training and travel cost for the ERP software supplied by the vendor ▪ ERP vendor fit-gap consulting cost ▪ Internal staff travel cost for training ▪ Consulting/training contingency cost ▪ Customization cost
7	Add-on software implementation/training	<ul style="list-style-type: none"> ▪ Implementation, training and travel cost for all add-on software
8	Project and change management cost	<ul style="list-style-type: none"> ▪ Pre-planning cost ▪ Independent project management cost ▪ Internal project management office cost ▪ Change management/organizational development cost ▪ Travel cost associated with project and change management

TABLE 2: Possible Line Items by Budget Category (continued)

No.	Budget Category	Possible Line Items
9	Project staffing costs	<ul style="list-style-type: none"> ▪ Backfill cost should include the annual cost of the backfill staffing required for the project. This must include the burden cost and any other associated cost for hiring the temporary backfill. Backfill cost should be calculated based on the required length of time for the backfill
10	Miscellaneous other costs	<ul style="list-style-type: none"> ▪ National/state conferences ▪ Off-site visits ▪ Training class room set up cost ▪ Training materials production cost ▪ Project office cost and technical training cost ▪ Additional training costs and travel ▪ Bonuses to key participants ▪ User conferences ▪ Hardware housing sites

Remember: Add-on Software can be Significant

Determining the cost of Add-on software can be difficult. Costs usually depend on the institution's size, needs and complexity. Some integrated Add-on software solutions can cost hundreds of thousands of dollars in implementation costs and annual recurring costs. Others will not add up to a total of more than a few thousand dollars. In most cases, institutions can contact the vendor directly to request a no-obligation estimate. Generally, vendors will be willing to provide a potential customer with an initial licensing fee cost of the software and the cost of the annual maintenance fees based on the size of the institution and the acquired Add-on software.¹

Finishing Touches

Once you have collected costs from all possible vendors, and once you have estimated your institution's staffing costs (backfill) and other miscellaneous costs, it is time to put together the accumulated information into a budget document.

The final step is to add a contingency to your budget. The contingency is included to deal with omissions, under-estimates, and possible scope changes that could occur during the implementation project. The size of the contingency depends on how comprehensive and detailed you have been in putting together the budget. As a rule of thumb we usually place a up to fifteen percent as the contingency of a planning level budget. If the budget was developed by an ERP expert, and if the budget is fairly detailed and robust, we will usually still add at least a ten percent contingency at this stage of the budgeting process.

The Next Step

The highest level budget, the managing-level budget, will be much more accurate because it is put together after the contract negotiations with the various vendors have been completed and before the implementation begins. In this case the licensing fees, consulting fees, and maintenance fees are exact and fully determined. Further, there will be cost adjustments for additional add-on software and scope changes based on contract negotiations.

The next paper in this series will outline the process used to further refine the budget to produce the final Managing-Level budget. In addition, we will describe how to put together a cash flow budget, how to track budget expenditures against an expenditures mode, as well as how to limit scope changes to the budget.

If you found this article helpful and would like to read more, please go to our website at www.collegiateproject.com and browse our ERP Library.

¹ For a comprehensive list of typical Add-on software please visit the ERP Library at www.collegiateproject.com.