

# Budgeting for ERP



## Table of Contents

- 1 Introduction ..... 3
- 2 Elements of an ERP Budget ..... 4
  - 2.1 Technical Costs .....4
  - 2.2 People Costs .....7
  - 2.3 Data Migration Costs .....10
- 3 Estimating Costs and Building the Budget ..... 12
  - 3.1 Estimates.....12
  - 3.2 Building the Budget.....13
- 4 Conclusion ..... 15

## 1 Introduction

One of the main criteria used to measure the success of ERP implementation projects is the comparison of actual versus budgeted costs. The first step to facilitate this comparison starts well before the implementation project, with the creation of a comprehensive and realistic budget.

A budget should present Total Cost of Ownership (TCO) over an extended time period, typically three to five years. Expected benefits should be quantified and included where possible, to provide an analysis of the project's Return on Investment (ROI).

Preparing an ERP implementation budget is no different to budgeting for any other type of project. The challenge is to identify all of the relevant costs and ensure the associated estimates are realistic and based on sound assumptions.

This whitepaper examines the steps required to build a good ERP budget, and the associated challenges.

## 2 Elements of an ERP Budget

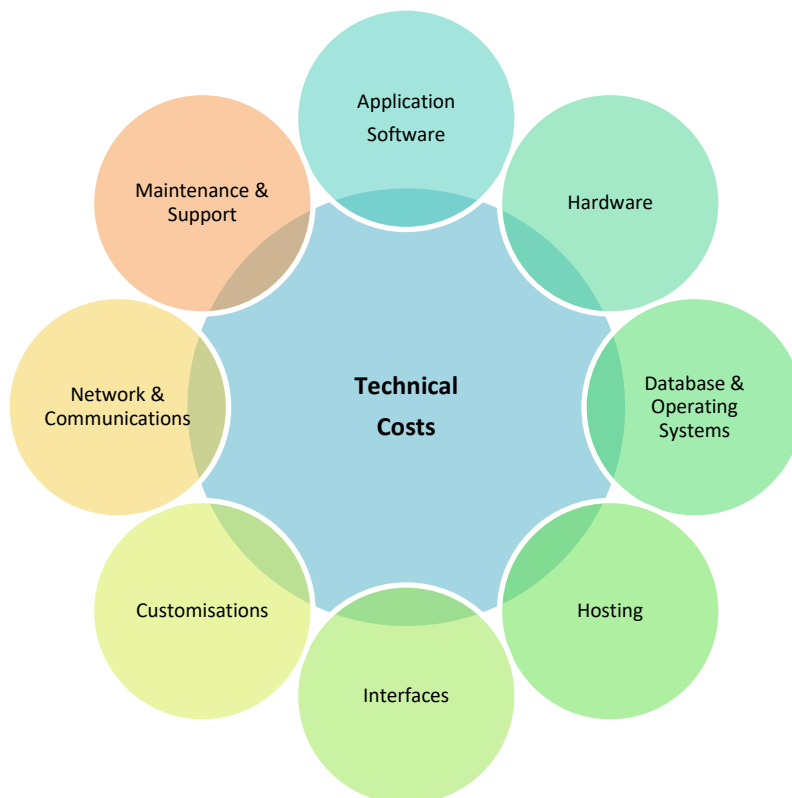
Costs generally fall into three categories, each of which is explored in the following sections: technical, people and data. Of course, every ERP project is different and so some of the costs described in this paper will not apply to all implementations.

It's important to note that the ERP landscape has changed in recent years, with a significant shift towards cloud-hosted Software as a Service (SaaS) solutions. Some of the costs associated with more traditional on-premises models, such as purchase of perpetual software licences, do not arise with SaaS or are wrapped up in the annual subscription fees.

The increasing uptake of SaaS for ERP has meant that financing options are shifting more heavily from Capex to Opex. Even so, budgets require businesses to account for their ERP projects using a combination of both.

### 2.1 Technical Costs

Technical ERP costs encompass software, hardware and technical consultancy costs. These are the most obvious costs that are almost always considered when preparing an ERP budget. Technical costs can be broken out as shown in Figure 1. Each cost type is detailed further below.



*Figure 1: Technical ERP project costs*

## Applications Software

Regardless of the licencing model used there is always a need to budget for ERP user licences. These costs may be categorised as once-off or recurring depending on whether the strategy is to implement an on-premises, full SaaS or hybrid on-premises/SaaS solution.

The number of users per business function and module is a key determinant of licence costs. These costs can also vary by user type. For example, 'power users' will usually be priced differently to reporting-only users.

Licences for ancillary modules and applications may also be required, for example:

- licences for employee HR self-service;
- Customer Relationship Management (CRM) user licences;
- portal licences for customer and/or supplier web-access; and
- reporting and Business Intelligence (BI) user licences.

## Hardware

Unless a SaaS or fully-hosted solution is envisaged, there will be a requirement for servers to host the ERP system. The number and specification of servers will depend on the scope and scale of the project, as server capacity will be required to support the application, database and presentation layers of the solution. Any previous investment in virtualisation technologies should be considered, as should requirements relating to scalability and Disaster Recovery (DR). DR implications can be significant in their own right, and some companies use their investment in ERP infrastructure as an opportunity to reconsider their broader DR strategy.

Other hardware requirements may include mobile devices, scanners, printers, barcode readers and, in some cases, PCs, laptops and ruggedised devices for use in harsh environments. Wi-Fi and networking technology may also need to be extended to various locations to allow users to access the new system. Installation, commissioning, and ongoing support services will also need to be factored in where external expertise is required.

## Database and Operating Systems

All ERP systems use a database and, therefore, require database licences. Likewise, a provision needs to be made for operating system licences. The way these licences are purchased can vary if the budget is for a SaaS solution; they may be included in the annual software subscriptions fees.

## Hosting

The decision to opt for an on-premises installation or hosted ERP solution can have a significant impact on budget. As well as ongoing monthly or quarterly service charges,

the hosting budget may need to include one-off costs such as hardware and application set-up, depending on the planned deployment model. Capacity planning will also be required to determine current and future data storage requirements.

*We explain more about the ERP hosting options in our Executive Briefing, 'ERP and the Cloud: What are your Options?'. All our whitepapers and reports are available for download at [www.lumeniaconsulting.com/insights](http://www.lumeniaconsulting.com/insights).*

### Interfaces

Budgeting for interfaces depends on the project scope and the degree to which integration with existing and new third-party applications will be required. The main cost in this area is typically consultancy for specification, build and implementation of the interfaces. Budgetary estimates for interfaces may need to factor in consultancy by both the ERP vendor and third-party vendors.

### Customisations

In most cases it can be assumed that a new ERP system will meet the majority of requirements without the need for customisation, on the basis that it has been rigorously assessed as part of the selection process. Unless there are known gaps – which should, of course, be sized and costed – there need be no allowance for customisation effort in the budget.

While this is a fair assumption, it would be a mistake to omit some contingency for customisation costs, as unforeseen gaps or requirements can arise during the implementation. The topic of project contingency is discussed further in section 3.2.

The ability to customise can be limited by some hosting options. In a multi-tenant SaaS environment, for example, the ERP vendor must ensure that any customisations, if allowable, are easily identifiable and supportable as future versions of the solution are released. In cases where SaaS upgrades are mandatory, the customer is responsible for regression testing their customisations as part of each SaaS upgrade and release cycle. The budget should account for this regression testing of customisations.

### Network and Communications

The ERP system must ultimately be accessible by the necessary business users, which may require additional network and technical communications infrastructure to be established as part of the project implementation. Requirements in this area will depend on the geographical scope of the project, the legacy communications infrastructure and the deployment strategy for the project. In the case of SaaS solutions, the solution will require broadband connectivity with adequate performance for efficient operation.

Additional technical or infrastructural requirements should be included as relevant, such as wireless access for warehouse handheld devices.

## Maintenance and Support

Recurring maintenance and support costs are paid to the vendor to cover helpdesk support and future upgrades. They are usually paid annually based on a percentage of the licence costs for purchased software, while SaaS solutions generally include support and maintenance as part of the annual subscription fees.

Customers should ensure they have absolute clarity on what is covered under the vendor's maintenance and support contract, to avoid any confusion.

## 2.2 People Costs

Not all people-related costs are obvious, and some of them tend to be overlooked when preparing a budget. Planning for both the internal and external resources required for a successful ERP project is crucial. Costs that should be considered are outlined in Figure 2, and explained below.



*Figure 2: People-related ERP project costs*

### Training

Organisations should never underestimate the degree of training required for a successful ERP implementation. The project team needs thorough product training from the start of the project, as well as training in the deployment methodology being used by the solution vendor and implementation partner. End-users need training on both the

new system itself and associated changes to business processes, roles and responsibilities, prior to go-live.

The training strategy for end user training can have a significant bearing on budget. For example, a ‘train the trainer’ approach may yield substantial savings on external costs, but requires budget provision to cover the costs of an internal training team. Conversely, use of external training consultants may be more appropriate in some instances, but may prove more expensive.

Other areas to consider in the budget include:

- **Training in reporting tools** – Some vendors use a ‘show and go’ approach to training customers in the use of their reporting tools. The responsibility then sits with the customer to develop the required reports.
- **Skills training for internal trainers** – Not all resources assigned to the project team will be experienced in defining, developing and delivering training to the business. Those resources will need to be trained to do so.
- **Project skills development** – Internal project team members may need to develop skills in presenting, report writing, test script development, etc. This may be the first time that some individuals have been involved in a software project. They will also need to be familiarised with the approach and deliverables for each phase of the project.
- **Technical training** – The internal technical team will need to be suitably up-skilled in system administration and database management to support the new solution after go-live. This might include, for example, the ability to set up new users with appropriate authorisation and access to company data.

For all project-related training, the budget should allow for development of training materials, creation/hosting of training instances with suitable data, and provision of facilities and equipment such as training rooms, computers and printers, in addition to delivery of the training itself.

Performing an initial Training Needs Assessment (TNA) will provide valuable guidance on the most appropriate training approach, methods and curriculum for the project as a whole.

### Project Management

The ERP vendor or implementation partner will have included a project manager in their implementation costs. The role of their manager, however, is to manage *their* team and *their* tasks. The customer needs to provide its own project manager or project management team to work alongside the vendor’s team and to oversee and drive the full programme of work.

Note that the structure of the project team and number of required resources depends on the size and scope of the project. ERP project management roles require specialised skills and experience that are crucial to the success of the project. Where these are not available within the customer’s organisation, the cost of hiring an external resource should be included in the budget.



## Change Management

Business change management is sometimes overlooked during project budgeting, and even during implementation, as its nature and importance are not always understood. Nonetheless, it is crucial to the success of any ERP project. While project management is predominantly concerned with planning, managing and reporting on resources, tasks, issues and risks, change management is concerned with:

- benefits realisation;
- stakeholder expectations;
- workforce transition;
- project communications; and
- training effectiveness.

Some of these tasks may be undertaken by the customer's project manager, whereas others may require a dedicated (internal or external) resource, depending on the scale and scope of the project. Regardless of how it is resourced, change management is too important to ignore and should be included in the project budget.

*To find out more about managing business change, read Lumenia's whitepaper, 'Organisational Change Management in ERP Projects'. All our whitepapers and reports are available for download at [www.lumeniaconsulting.com/insights](http://www.lumeniaconsulting.com/insights).*

## External Consultancy Support

These are the costs that usually come to mind when considering 'people' costs and they account for a significant portion of the overall budget. They cover all of the areas where external support is supplied by the ERP solution provider and other specialists required to deliver the project. External roles typically include the following:

- ERP vendor project manager;
- functional consultants;
- technical consultants;
- business intelligence consultants;
- validation consultants.

These services are usually charged at daily rates that vary depending on the expertise being delivered.

Consultants will need to travel to the customer's premises during the project, so it is also important to include a provision for their expenses. A budgetary figure of 15-20% of the external consultancy costs should be included. Note that some vendors will opt to locate their implementation team predominantly off-site during project deployment, which should reduce the budget for expenses.

### Internal Team

If external consultancy costs come to mind first when considering an ERP implementation, then internal team costs are probably amongst the last to be considered. This is usually because the internal team's salaries are already being paid by the business, regardless of the project.

Whether time spent on the project by internal resources is actually charged to the project or not, there are some costs associated with the internal team that should always be included in the budget. Most notably, these include the cost of back-filling any team members assigned full-time to the project.

Costs related to the supply of project administration and support, project branding and communications, office space and equipment should also be considered. Financial incentives for the successful delivery of the project by the project team should also be included, if appropriate.

### 2.3 Data Migration Costs

Implementation costs relating to data migration can often be underestimated when producing an ERP project budget. The key steps that need to be budgeted for are shown in Figure 3 and outlined below.

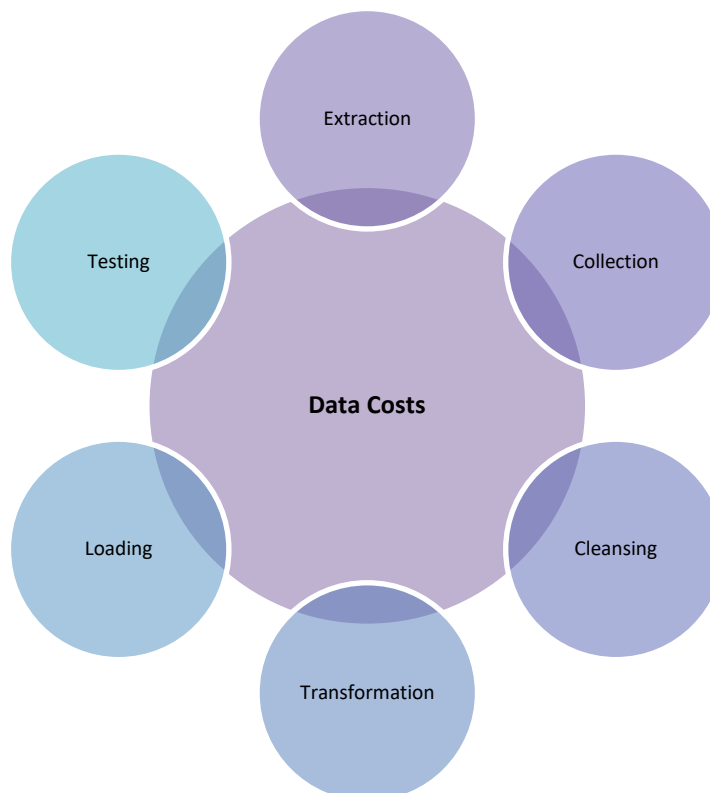


Figure 3: ERP data migration costs

### Extraction

The effort required to extract data from legacy systems depends on the format and structure of the data and the skills available in the organisation. Extraction usually requires a technical resource. There may be a skills gap in the organisation for this work, which may need to be filled externally. There will also be a requirement for business users to verify the extracted data, which should be factored into the internal team costs.

### Collection

Some of the mandatory data required for the new system may not be available from the legacy system, as it simply may not exist. For example, there may be materials or items in the legacy system but no corresponding bills of materials or production routings. New data will often need to be compiled manually, for automated upload, requiring the internal team's time and effort. In situations where data collection is a sizable piece of work, administrative support may need to be budgeted as well.

### Cleansing & Transformation

Data for migration needs to be manipulated into the format required by the new system, in addition to ensuring that it's relevant, current and accurate. Data structures may also require standardisation to ensure consistency across business entities and geographies. This cleansing and transformation may be a manual or programmatic exercise, and the budget should be planned accordingly.

Note that some legacy processes may need to be reviewed and redesigned to facilitate the setup and management of master data.

### Loading & Testing

Loading data into the new system is a task that may be performed by the ERP solution provider or the customer. If this is the customer's responsibility, the vendors will typically provide guidance, tools and templates for performing the data load. In either case, testing and verifying the data loads is a key task for the internal project team. Provision of time and appropriate knowledge and expertise should always be included in the budget for these activities.

*We explore more about the data management aspect of ERP projects, in our whitepaper, 'Data Migration in ERP projects'. All our whitepapers and reports are available for download at [www.lumeniaconsulting.com/insights](http://www.lumeniaconsulting.com/insights).*

### 3 Estimating Costs and Building the Budget

#### 3.1 Estimates

The previous sections of this paper outlined the ERP budget framework. With that in mind, there are a number of items to consider when calculating detailed cost estimates. We have listed the key inputs for each area in the table below:

Area	Inputs
<b>Licences</b>	<ul style="list-style-type: none"> <li>• On-premises or SaaS</li> <li>• SaaS single tenant or multi-tenant</li> <li>• Hybrid on-premises/SaaS</li> <li>• Number of legal entities in scope</li> <li>• Number of ERP instances delivered (Dev, Test, Prod, Training)</li> <li>• Number and type of users</li> <li>• Functional scope</li> <li>• Licence cost estimates</li> </ul>
<b>Hardware</b>	<ul style="list-style-type: none"> <li>• Re-usability of legacy equipment</li> <li>• Technical requirements</li> <li>• Technology constraints</li> <li>• Hardware cost estimates</li> </ul>
<b>Customisations</b>	<ul style="list-style-type: none"> <li>• Unique requirements</li> <li>• Reports: number and complexity</li> <li>• Expected daily rate for external consultancy</li> </ul>
<b>Interfaces</b>	<ul style="list-style-type: none"> <li>• Number required and complexity</li> </ul>
<b>Network &amp; communication</b>	<ul style="list-style-type: none"> <li>• Geographical scope</li> <li>• Functional scope</li> <li>• Technical constraints (e.g. high-speed connectivity)</li> <li>• Existing infrastructure</li> </ul>
<b>Training</b>	<ul style="list-style-type: none"> <li>• Training strategy</li> <li>• Number and type of users</li> </ul>

Area	Inputs
<b>Project management</b>	<ul style="list-style-type: none"> <li>• Availability of skills in-house</li> <li>• Scope and scale of the project</li> </ul>
<b>Change management</b>	<ul style="list-style-type: none"> <li>• Availability of skills in-house</li> <li>• Organisation size</li> <li>• Geographical scope</li> <li>• Number of sites involved</li> <li>• Level of business process and system change envisaged</li> </ul>
<b>External consultancy</b>	<ul style="list-style-type: none"> <li>• Functional scope</li> <li>• Level of complexity</li> <li>• Estimated effort</li> <li>• Average daily rates</li> </ul>
<b>Internal team</b>	<ul style="list-style-type: none"> <li>• Skill level in-house</li> <li>• Costs for temporary labour (e.g. back-filling)</li> </ul>
<b>Data migration</b>	<ul style="list-style-type: none"> <li>• Data migration approach of ERP vendor</li> <li>• Availability of skills in-house</li> <li>• Quality of legacy data</li> <li>• Amount of data for collection</li> </ul>

## 3.2 Building the Budget

### When to Build the Budget

Once the elements and inputs are known, when is the right time to start building the ERP implementation budget?

Ideally budgeting should start during development of the business systems strategy, when the need for a new ERP solution and other business systems is first assessed and aligned with the broader business strategy. During that process the benefits associated with a new ERP system should be quantified, the high-level project scope established, and the strategic approach agreed.

Estimated costs are compiled by requesting information from potential suppliers based on user numbers, project scope and high-level functional requirements. These, along with internal costs, should be used to build a preliminary version of the project budget. Together with the expected benefits, this forms a major input to the business case.

As the project moves from strategy to system selection, more detailed information is gathered, the scope refined, and the budget amended accordingly. By the time contracts have been agreed with a preferred supplier and the project implementation is ready to commence, a detailed and comprehensive budget for all elements of the project should be in place.

### Budgeting for Larger Projects

The duration and phasing of the implementation project can be an important factor for larger projects so phasing of spend may need to be considered when preparing the budget. For example, some of the licence costs may not need to be incurred initially, and consultancy costs may vary depending on the nature of each phase. It may also be necessary to allow for knowledge transfer mid-project, for example if different phases of a global implementation will be delivered by different project resources.

### Contingency

Despite the best efforts of everyone involved, despite strong project management controlling scope and costs, and despite setting out to do everything possible to execute a project within budget, the unexpected can and inevitably does occur during ERP implementations. This can be for any number of reasons, many being legitimate and deliberate business decisions. It is best to recognise this as a fact of life when budgeting, and to be realistic in terms of the impact this may have on costs.

For example, it may be appropriate to allow a contingency of five to ten percent on functional consulting costs if the project scope has been defined in detail, while a contingency of 25% or more of estimated customisation and interface development costs may be prudent, as these tend to be less certain.

Clearly, any additional spend should be tightly controlled and justified. However, it would be foolhardy to assume that the project will go exactly according to plan, from start to finish.

## 4 Conclusion

Budgeting for an ERP implementation should not be a 'hit or miss' exercise. Carrying out a thorough analysis of the cost elements at key stages during the systems strategy and ERP selection processes will result in a budget that is both comprehensive and realistic.



Lumenia is a leading independent ERP and digital consulting organisation, specialising in business transformation through the implementation of Enterprise Resource Planning, Digital and related enterprise software applications. Specifically, we provide services in the following areas:

- ERP strategy and planning
- ERP business case development
- Business process transformation
- ERP selection
- ERP readiness
- ERP deployment services
- ERP business change management
- Digital transformation

*For more information, please contact Lumenia at:*

Lumenia Consulting Ireland (HQ)

Parkmore Business Park West,  
Galway H91 PTT8,  
Ireland  
T: +353 91 746940  
E: [info@lumeniaconsulting.com](mailto:info@lumeniaconsulting.com)

Lumenia Consulting UK

167-169 Great Portland Street,  
5<sup>th</sup> Floor, London, W1W 5PF  
UK  
T: +44 203 8831716  
E: [info@lumeniaconsulting.com](mailto:info@lumeniaconsulting.com)

*Copyright Lumenia Consulting Ltd. All rights reserved. No unauthorised reproduction without the Author's written consent. All references to this publication must cite Lumenia as the author and include a link to Lumenia's website. Lumenia is not liable for any errors contained within this article.*