

Hidden Costs of ERP Implementation

Be Forewarned and Forearmed

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ERP – The Hidden Costs

There is no disputing the costs and complexity of deploying an ERP solution. Everyone agrees that no matter what is budgeted for and how much time the implementation is allotted, there will likely be both time and cost overruns. Businesses are resigned to this, and in most cases managers will accept this reality with equanimity as long as the overruns are within reasonable limits.

Managers accept that ERP projects will face a time and cost overrun.

However, they do want to minimize surprises.

However, the real shock is when hidden costs surface, costs that had just not been anticipated, and are difficult to explain. This whitepaper can help you identify and plan for some of these costs.

Traditionally, the costs of an ERP implementation are listed under the following main categories:

- Cost of software licenses
- Additional hardware and data storage
- Cost of implementation
- Change Management and Training
- Initial Impact on Productivity
- Maintenance

Under many of these categories, there are costs that may only surface much later in the implementation phase. For example, users find themselves restricted by the report creation features of their ERP solution, which can be complex or inflexible. Eventually, these users may buy report writing software: not only will they incur a cost to procure the software, there will be the additional task of providing training, integration and support for the new software. All such activities add up as hidden costs that were not budgeted for.

The hidden costs of ERP implementation can be broken down into two subheads. One looks at organization and complexity issues and the costs they impose. The other looks at implementation and management of the ERP solution.

Organizational Costs

Cost of Complexity

An [article](#) in the Harvard Business Review discussed the complexity of enterprise-class software. These solutions, of which ERP is a prime example, usually consist of a large number of databases and software modules that are connected via complicated protocols and processes. Keeping them running is a major challenge and every modification and customization adds new layers of complexity.

The article brings up that businesses spend as much as 80% of their IT budgets just to keep their systems running.

As the software gets more complex and grows to incorporate more functions, it becomes more difficult to manage, more rigid and ever more intricate. The HBR article says that for every 25% increase in the complexity of the activities to be automated, the complexity of enterprise software increases by 100%. As the software becomes more complex, the cost of making any additional changes and improvements increases. Eventually a time comes when no single individual in an organization is able to predict how a change in one part of the system will impact others. This complexity adds considerably to the cost of running and maintaining ERP software and it is something that no vendor will ever bring up during the sales process.

There is another cost imposed on organizations due to this complexity: the loss of flexibility.

Recently, two researchers from University of Southern Mississippi and an independent IT consultant published a [paper](#) on the hidden financial costs of ERP software. The writers speak of the complexity of modern software and bring out that adding to complexity will result in diminishing returns.

The authors also detail how that large-scale data integration across the enterprise can have a negative effect on functional aspects of the business. Normally, in large organizations, operational decisions are a “line” function. These decisions are taken in the field and respond to unfolding situations. At the headquarters, people handling “staff” functions monitor data and work to create strategic directions. Typically, “staff” do not interfere with “line” functions.

With data integration brought about by the ERP, the distinction between staff and line gets blurred. People working as staff have access to the same data as line personnel and therefore they feel empowered to take decisions that would normally be taken by line personnel. This can result in disruption of work because it is line personnel who are regularly in close contact with customers and are aware of local issues. Think of headquarters personal in the US trying to run the operations of a subsidiary in Bangladesh.

It has also been said that ERP systems often stifle change and innovation in companies. One way ERP developers ensure the stability of their solutions is by imposing rigid rules and structures. These are often disguised under the garb of “best practices”.

Any business trying to innovate will run afoul of “best practices” that have been coded into the software. As a result, adding a new process, a new kind of relationship with a certain segment of clients, an innovative union contract, or adding a new product line can face difficulties, additional costs and delays due to integration issues with the ERP. These “costs” are real and take away from the firm’s competitive capability.

In some cases, ERP-induced processes can become so rigid and costs can be so high that businesses are forced to create an independent subsidiary to develop a new product. There are hundreds of

examples of this in the industry. The new subsidiary works without the constraints of the “best practices” that the ERP solution enforces and can therefore get on with the innovation tasks it needs to undertake.

Issues Related to High Software Costs

A very interesting hidden cost of ERP solutions arises from the high cost of the software itself. In traditional software procurement (for e.g. office software, database software etc.) the costs involved are not very large and therefore the purchase decision could be taken by an IT manager well qualified to make an informed decision.

With an ERP solution, costs can potentially run into the millions of dollars. As a result, the decision making shifts upwards to the CEO or the Board, individuals who typically do not have any recent experience with managing IT systems on a daily basis.

In the resulting situation, the costs involved are high, the expertise of the decision makers is low, future costs are not well defined and the sales personnel come up with unrealistic predictions of large savings and increased efficiencies. One possible outcome of such a situation is that more emphasis is given to information provided by the vendor and less to a long and thorough evaluation of the solution.

To minimize decision risk, senior management also tend to be more comfortable following the bandwagon. They would rather deploy a solution that “everyone else” is using rather than find one that was more suitable for their particular needs.

Implementation and Management Costs

While businesses are generally aware that the projected benefits from an ERP system will take time to become apparent, they are often taken by surprise by the delay and additional costs that the system can impose. Managers must therefore plan for additional time and money to cater to consulting, re-work on modules and processes, integration and testing issues, and many other pitfalls before they can reap the benefits.

ERP experts have identified some major areas with costs that are routinely underestimated by businesses. These are discussed below.

Some Typical Hidden Costs

- Training
- Consultants
- Customization
- Integration & Testing
- Data Management
- Analysis Tools
- HR Costs

Training

This is the number one item on most lists. While businesses are aware of training needs, they often underestimate them. If workers only needed to learn a new software package, then training needs would not be so critical. However, with an ERP, the very definition of the work a person does changes and training is required to perform the necessary change in mindset.

As an example, think of a store clerk who receives new inventory. The clerk is now required to directly key in inventory details into the system. Previously, she would check the items against various documents to forward to accounts. Now she functions as an extension of the accounts branch and her entries will impact the availability of the store for other users throughout the company. This requires a change in her mindset and attitude to the system.

Consultant Costs

In many ways, consultant costs are linked to training needs. Consultants are expensive and it is important to lay down specific targets they must achieve when they train internal staff in a company. Failure to do so will lead to steadily increasing costs.

Customization

Any customization of ERP modules would have added to costs in the initial procurement process. However, many users do not realize that every time the ERP vendor creates an upgrade for the module that has been customized, there will be additional costs incurred to re-customize the upgraded module. Over time, the cumulative costs of customization can match that of the original purchase.

Integration & Testing

For ERP systems to be truly useful, they need to be integrated with other major software applications that the business is running. Some of these systems can be legacy systems following protocols that are no longer supported and using hardware that is obsolete and cannot connect to other systems with ease.

In many such cases, integration with other systems will have to be done individually and will require careful documentation, testing and monitoring. Naturally, this will add to costs. No vendor will be able to give a good estimate of what it would cost to interface to legacy systems without a comprehensive study. The potential for surprise here is enormous.

Data Cleansing and Management

Vendors pricing an ERP system will always consider that backend data is clean, accurate and correctly organized. It is only when data is being ported to the new system that its errors and lack of proper organization will emerge. In most cases, legacy data will invariably have to be cleaned and re-organized. This can be a complex and expensive proposition. These costs are seldom included in the cost of the ERP solution.

Invariably, businesses will underestimate the costs of cleaning and managing their data before it can be used by the ERP.

Analysis Tools

While most ERP vendors will claim that their systems will perform all required analytical functions, there may be functions requiring third party tools to be procured. Very often, ERP data may need to be combined with data from other sources to meet data analysis needs. The cost of additional tools, integration with the ERP, and training needs will all add to hidden costs.

If a business anticipates heavy analytical needs, they should include this as part of the original planning so that compatible systems can be procured and integrated as part of the original set up.

Employee Costs

Much of an ERP's success depends on the quality of the users who run it. Over the course of an ERP implementation, certain key persons are bound to distinguish themselves and these often attract attention of the consultants or the vendor implementing the ERP. Almost invariably, there is a brain drain after the project is over. Businesses have to anticipate this and be ready to offer a retention bonus program to the people it deems critical.

There is also a related issue of ERP management and maintenance. Unlike many other types of software, ERP deployment does not finish when the system goes live. People involved with the implementation are required to continue working on the project to iron out wrinkles, train other users, manage change related issues, and create the required reports. While these people may still be in the company, they will not be available to the department they originally came from. This is yet another hidden cost of the ERP system.

Hidden Costs of Cloud Based ERPs

Cloud-based ERP solutions are getting increasingly popular. Since the upfront costs are low, many small and medium businesses are able to implement these solutions much earlier in their life cycle than would normally have been possible. However, there are several hidden costs of cloud-based ERPs as well.

Cumulative Costs

For many SMBs, lower upfront costs are a strong incentive to begin using cloud-based enterprise class solutions. However, it is important to calculate costs over at least five years to get a reasonable estimate of whether it is cheaper to purchase a solution outright or to use a subscription based model. Businesses must also check the licensing policy followed by the vendor. Will they allow a business to release seats that are not being used?

Premium Features

All solutions will have a list of 'premium features' that will be billed for separately. These could be the very features a business needs and therefore they will add to the basic subscription. Careful research and investigation is required before signing a contract.

Customization

While some customization may be necessary, cloud-based systems can only be customized to a limited extent. Most of these will be confined to the look and feel of the GUI and reports. Fundamental changes to the software will seldom be possible because cloud-based systems need to have a large user base to be economically viable.

Data Storage Costs

Storage costs of data in the cloud vary considerably with the kind of storage that is used and the frequency with which data is moved in and out of storage. Most vendors will offer a basic storage option with their subscriptions, but one can expect to run out of space quickly.

It is important to check whether one can select a cloud storage or if one will be forced to use a service provided by the vendor.

Service Level Agreements

With most contracts, users will have no option but to accept a standard service level agreement. Given that any disruption in the ERP can have severe impact on a business, it will be very critical to understand what liability the cloud service provider will carry in case of such a disruption of service.

In most cases, the service provider will expressly insert a disclaimer that will ensure that there is no liability for any disruption of service or consequential losses and that the service provider's liability will be restrict to the cost of rental for the duration that the service was not available. Businesses need to be aware of this, and make adequate provisions to ensure they stay protected.

Conclusion

The foregoing discussion details the various hidden costs of implementing an ERP solution. It is evident that there are some costs that can be easily anticipated and planned for. These are the ones discussed in the second half of this paper and comprise issues of training, consultants, and customization and so on. Careful planning and project management can help businesses manage these costs and keep surprises down to a minimum.

However, the first few pages of this paper showed there are some hidden costs that many companies may never even detect. These are the costs associated with a loss of operational flexibility, costs arising due to the great complexity of ERP solutions and the pitfalls of decision making done by those with a superficial understanding of ERP. These costs could eventually be much higher than the more easily understood ones. Business executives have to understand these issues and take actions to protect their businesses.

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