

## Tutorial 9

### ERP Implementation Issues - Risk Management

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#### **Objectives:**

- Discuss reasons for IT project failure
- Describe a risk management approach
- Discuss risk assessment and risk response

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#### **Discussion Questions:**

*These discussion questions will be useful for your Assignment 3 and should be discussed together with your assignment group members.*

1. Each team select one case from either of the following articles and do a bit more research on the case:
    - **15 famous ERP disasters, dustups and disappointments**  
<https://www.cio.com/article/2429865/enterprise-resource-planning/enterprise-resource-planning-10-famous-erp-disasters-dustups-and-disappointments.html>
    - **Top 10 biggest ERP software failures of 2011**  
[https://www.pcworld.com/article/246647/10\\_biggest\\_erp\\_software\\_failures\\_of\\_2011.html](https://www.pcworld.com/article/246647/10_biggest_erp_software_failures_of_2011.html)
      - i. Discuss the reasons for the ERP failure. Compare these with some of the project risks mentioned in Lecture 8 Slide 4 – 5 and 15. Are there any similarities or common trend that you can identify?
      - ii. What lessons can you draw from the case and if you have a chance to manage the project, what would you do differently?
    - ➔ Most of the reasons for ERP failures are quite similar to those mentioned in the lecture slides (Slide 4 – 5 and 15).
    - ➔ When managing an ERP endeavour, the project manager and his team should be proactive in terms of assessing the potential risks and have a stringent risk management plan to manage and monitor the risks.
  2. Like the “canary in the coal mine” (Lecture 8 Slide 12 – 13), it is important to recognize the value of early warning signs. Read this blog to learn some of the common warning signs of ERP implementation risk.
    - i. Discuss amongst your group and draw up a list of action points that you will follow through if you are embarking on an ERP endeavour.
- ➔ The action points may include steps to address the warning signs:
- Reviewing the project with the executive team on at least a bi-monthly basis.
  - Having a dedicated project team.
  - Making sure the training is scheduled way before go-live (minimally more than 3 months ahead).

- Proper organisational change management.
- Set aside a certain percentage for contingency budget when setting cost baseline.
- Have at least three iterations of conference room pilots or integration testing.
- Be realistic in setting budget and should not assume that software license cost is the only major cost – other costs not accounted for can blow up the budget.
- Having a strong program management team and the project team has the necessary skillset.
- Ensure there's a strong and realistic business case, performance metrics, or a benefits realisation plan.
- Ensure that the timeline is realistic and not trying to rush the project and prematurely rolling out the system.
- Have a contingency plan and buffer for error at go-live.
- Ensure that the software selected should support the business process and not the other way round and some form of customisation is unavoidable (though too much customisation can spell disaster)

ii. Discuss the process you will adopt to manage risks.

➔ Slide 21 – 22 (23 - 38 detailed discussion)

➔ Risk Identification

Identify risks and opportunities – events that may have a negative (represent risks) or positive impact (representing opportunities). Involves identifying those incidents, occurring internally or externally, that could affect strategy and achievement of objectives.

➔ Risk assessment

Understand the extent to which potential events might impact objectives. Assesses risks from two perspectives: Likelihood and Impact.

There is a connection between the objectives of an organization and the risks to which it is exposed. In order to make an assessment of risks, objectives for the organisation must be established. Having established the objectives, the risks involved in achieving those objectives should be identified and assessed, and this assessment should form the basis for deciding how the risks should be managed.

➔ Risk response

Identifies and evaluates possible responses to risk. Evaluates options in relation to entity's risk appetite, cost vs. benefit of potential risk responses, and degree to which a response will reduce impact and/or likelihood. Risk response could include Transference (Sharing), Avoidance, Reduction (mitigation) or Acceptance.

➔ Risk monitoring and control

It involves overseeing the effectiveness of risk responses, monitoring residual risks, identifying and documenting new risks, and assuring that risk management processes are followed.

3. What would be your risk response in the following case:

ABC Solutions are assessing a new contract to provide ERP integration services for a prestigious company. They would be rewarded handsomely if the project goes well. However, for every day that they are overdue from the Go-live date or for any systems fallout due to integration issues, ABC will face a fine of sufficient magnitude to cause the company severe financial hardship. The directors assessed the gross risk as high impact and due to the complexity of the system, there is a high probability of not meeting the deadline or an error occurring with the integration. The client is unwilling to reduce the penalty or to change the criteria and ABC's internal controls are already at a high level. What action should ABC take?

***Solution:***

It would appear that the gross risk cannot be reduced since the client will not renegotiate the level of the penalty then the impact remains high and as ABC's internal controls are already at a high level it is unlikely that the likelihood can be reduced.

As the likelihood is high then it is unlikely that ABC will be able to get insurance against this event occurring so transference is not possible. Acceptance is unthinkable in this case and there appears to be no further scope for reduction.

Therefore unless ABC are an exceptionally risk seeking organization, they will need to avoid this risk.

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**Case Study:**

1. Being a systems analyst you are required to carry out both cost-benefit calculations and risk analysis as part of the proposal for a new ERP system.

Required:

- a) Describe one method for demonstrating the costs and benefits of such a system over a period of time.
- b) Explain the specific problems associated with the measurement of information systems cost and benefits.
- c) Explain the factors you would take into account when undertaking a risk analysis of the costs and benefits of a proposed computer project.

***Solution:***

a) Cost-benefit analysis techniques:

Techniques of cost-benefit analysis fall into two main categories: those that ignore the time value of money (TVM), and those that take into account the TVM.

Two techniques, which do not take into account the TVM: Payback period and ROI.

***Payback period***- this method measures the number of years taken by the project to recoup the initial investment. Obviously, the shorter the payback period the better. Companies use this method frequently because it is easy to apply and comprehend. Use of the payback period does, however, have a number of drawbacks. The determination of the cut-off period is essentially an arbitrary decision. The payback period ignores cash flows, which occur after

the cut-off date; it also ignores the timing of cash flows within the payback period itself. As a result, viable projects may easily be rejected.

In its favour, the payback period does allow for risk and uncertainty by attempting to recover the initial outlay in as short a period as possible.

**Return on investment-** using this method, the benefits of the project are expressed as a return on investment in terms of a rate per year.

This technique assumes that the investment is repaid over its economic life in a straight-line way. As with the payback period method, it is easy to apply and comprehend but it, too, does not take into account the time value of money. It does, however, provide a useful indicator; organisations obviously seek to invest scarce resources where they will derive the highest return.

**Discounted cash flow (DCF) methods** take into account the TVM: the two principal DCF methods of project appraisal is Net Present Value (NPV) and Internal Rate of Return (IRR).

**Net Present Value-** this method takes the discounted present value of the future cash flows generated by the project, less the initial outlay. If the NPV is equal to, or greater than, zero the project should be considered as it will at least attain the required rate of return; when greater than zero it will enhance the value of the firm. When using this method to compare projects the one with the largest NPV should be selected.

**Internal Rate of Return** -this method identifies the rate of return which produces an NPV of zero for the project. If the IRR of a project is greater than the firm's required rate of return (usually the cost of capital), it should proceed with the project.

### b) Measurement of information systems costs and benefits

**Costs** - some categories of costs associated with a computer system can be quite precisely ascertained, while others are less easily defined. The main costs related to information systems are those of building the system, installation costs, and operational and maintenance costs.

The costs associated with building the system include:

- staff costs (the average salaries for all levels of staff participating in the project; lost time due to sickness, holidays etc; staff training where the use of new software or hardware is necessary, and travel expenses incurred when making associated trips to suppliers etc); and
- computer-related costs (computer time incurred during system development, and any new equipment which may need to be bought).

Many of these costs cannot be accurately defined, but can only be estimated.

The cost of installing the system, which may include recruitment and training, commissioning and installation, conversion of files, user training, parallel running or phased implementation etc, may be easier to quantify.

Operating and maintenance costs, (usually contributing to as much as 70% of the total cost of the system) would include the costs of financing the system, maintenance contracts, etc.

These costs are often predetermined, and therefore their measurement is less problematic.

**Benefits-**

**Tactical benefits** are those, which enable the company to continue functioning in the same way, but at a lower level of costs, or with increased profits. These can be moderately straightforward to define, although the accuracy of any estimation will be determined by the effectiveness of the new system, and its ability to accomplish the required functions.

**Strategic benefits** are those that enable the company to enter new markets, either offering a new product/service or reaching new customers, or both. These are of fundamental importance, yet are so difficult to predict, or quantify.

The improved system will enable better use to be made of information, which should enhance decision-making and the productivity of managers. Monitoring and quantifying these could present difficulties.

The information system may help in attracting new customers and retaining existing ones; and it should improve stock and credit control. Again, attempts to quantify and classify these benefits may be problematic.

### c) Risk analysis of the costs and benefits

The majority of investments are exposed to at least some element of risk. It may be categorised as systematic (factors that affect all organisations) or unsystematic (events that affect one project).

Most managerial decisions involve an element of uncertainty, and are therefore subject to some level of risk. Identifying, and being able to quantify, the risk factor is of great consequence.

Management want to have their vulnerable assets identified, their security requirements outlined, and protective measures delineated. The costs of safeguarding against risks can then be balanced against the estimated costs, which would be incurred if the event took place. The project may be affected by prices that are higher than anticipated.

This may be caused by:

- Bankruptcy of hardware suppliers
- High turnover of staff on the project team
- Technology not meeting expectations
- Opportunity being lost
- Unforeseen problems with contractors, unions, etc
- Inadequacies in the project team
- Instability in the economic environment
- Unforeseen costs/overheads;
- Inadequate information from the users with regard to their needs of the system.