

IT Project Management Checklist

for Business Managers

INTRODUCTION

Information technology continues to play a major role in the running of most businesses. Whether it is used to drive efficiency or delivery services directly, the introduction of enabling systems and technology can be a complex process. Too often systems are implemented by organisations which don't meet what the business or users initially expected, take too long to implement or cost too much (or a combination of these). The failure of some IT projects can even result in no workable system being delivered.

One of the main causes of IT project failure is not the complexity or sophistication of the technology being implemented, but rather because the projects were poorly managed.

IT projects typically involve the introduction of new systems or technology to meet some organisational need. IT project management is the process used to co-ordinate the people and technology to achieve these goals.

This document presents a list of some of the key areas to consider when managing an IT project. It is not designed to cover everything required in running an IT project and may not be appropriate in all cases.

There are a number of formal project management methodologies which describe how a project should be initiated and managed. PMBOK (Project Management Body of Knowledge) and Prince 2 are examples of these. These methods can greatly assist in achieving project success. There are also various institutes and other organisations that can provide valuable information and resources in this area. The Australian Institute of Project Management (www.aipm.com.au) and Project Management Institute (www.pmi.org) are some of these.

CHECKLIST

Conduct planning at the commencement of the project

Planning is critical to the success of any IT project and the level of time and effort invested in this phase should reflect the type of project being undertaken. At the start of the project businesses should define and document the scope and objectives of the project. This is important as losing sight of what you initially set out to do can have major consequences on the time and costs of the project and on successful delivery. Other aspects of the initial definition of the project should include:

- details of the key milestones and checkpoints (dates on which certain steps of the project should be completed or evaluated);
- the allocation of staff responsibilities for delivery and approval of the project (these should cover both the business and technology stakeholders);
- the governance structure to oversee the project;
- an outline of the main tasks to be completed and their interdependencies; and
- what quality processes will be established to ensure required processes and tasks are actually completed (i.e. checks at each phase to ensure tasks are performed to an acceptable level of quality).

Senior management should endorse the outcomes of the planning phase before proceeding with the project.

Appoint a suitably qualified project manager

One of the key roles in any project is the position of project manager. This role performs the day-to-day co-ordination of project tasks as well as responsibility for advising senior management on the project's progress. IT project managers therefore often need to have a combination of both technical and management skills as well as an appropriate level of experience. Also, as large projects often require considerable time and effort it is important the project manager has been freed from other responsibilities such as existing work commitments.

Ensure adequate senior management representation on the project

A project sponsor is the other important project role that should be allocated to an appropriate person within the organisation. The project sponsor is the key stakeholder representative that should be able to make major project decisions such as whether to proceed with the project or not. They need to have financial and operational authority to obtain and direct resources, so should usually be a senior manager within the organisation. Without the commitment of senior management, issues or problems that arise during the project may not be able to be quickly and effectively resolved. They are also important in securing the right staff resources when they are needed and getting approval to spend money when required.

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Develop appropriate governance structures to oversee the project

A governance structure should also be set up for the project. The type of structure will depend on the complexity or importance of the project to the business, and for major projects should include an executive oversight committee. The role of this committee is to monitor the project's progress against timelines and budgets, track the major risks facing the project and how they are being actioned and assist with prioritising or obtaining staff resources. They should consist of senior managers within the organisation (even the CEO), should meet regularly and document all major decisions. The project manager should provide project progress reports to executive committee meetings to ensure they are regularly informed.

Assess and manage risks which could impact on the success of the project

The project manager, executive committee and project team should also determine and document the main things that could go wrong during the project and how they will act to limit or prevent these. A risk management process should be established which includes a risk management plan or risk register outlining the type of risk identified, their impact to the project if realised, the strategy to mitigate the risk and responsibilities for carrying out that strategy. While each project will have specific issues and risks some of the common ones to most projects include:

- Having insufficient staff resources to deliver the project;
- Failing to meet timeframes and budgets;
- Vendors failing to deliver on agreed outcomes;
- Underlying technologies not capable of delivering the required solution;
- Failing to contain the scope of the project or system; and
- Not managing the impact of change on the business.

As part of regular reporting of project progress, the status of risks and mitigation strategies should be regularly reviewed. Not all risks will be apparent at the commencement of the project. The risk management strategy should include the procedure for handling emerging risks. Project team members should be encouraged to identify and mitigate risks as they continue to emerge throughout the project.

In the planning phase it is also good practice to start documenting any assumptions that are being made. These can be managed in the same way as issues and risks, while reducing the risk of project scope creep later on.

Manage the scope of the project

The definition and subsequent management of scope is of critical importance to the successful delivery of a project. As a project progresses, people will often come up with more ideas about what could be delivered. Working to tight budgets and time lines requires keeping an equally tight reign on the projects scope.

A scope change management process should be established which incorporates the involvement of senior management in decision making. Analysis of scope change requests should consider all of the defined elements of scope, as well as the impact on the ability of the project to deliver according to the time line and budget.

Communicate with the business and key stakeholders

Communication is also a critical part of any project, and the way this is conducted should be established during the planning phase. As it is usually the business that will use the system or technology being implemented it is critical that plans address how they will be informed about the project and how the project team will get their buy-in during all the project phases.

Typical approaches to project communication include releasing newsletters advising the business of the project's status, and having users and management involved in project committees and project decision making.

Develop detailed project plans taking into account the timing of the delivery of the solution and the approach to implementation

More detailed project plans should also be prepared in line with the project definition. These should outline all the detailed tasks required to be performed to deliver the project, when each should commence and be completed, and who is responsible for delivery of each.

When agreeing on the timing of project deliverables the overall size of the project and risk to the organisation should be considered. Large IT projects which adopt a big-bang approach to delivery of a system (i.e. implementing a complex system with multiple functions or modules at one point in time) risk a substantial loss of time and money if the system fails to meet expectations or does not work. It may be better to split a larger project into more manageable chunks with quicker deliverables (e.g. delivering one large system by implementing a series of smaller modules at staged intervals). This approach has the advantage of getting users accustomed to the new systems over time and reduces the overall complexity of the project. It also provides the opportunity to halt or re-evaluate the project if major problems with the implementation of initial modules occur.

Project plans and any changes to them, such as the timing or budget, should be approved by the project executive committee.

Understand and document the solution requirements

Before a system can be developed or purchased the organisation must understand and communicate its requirements. Requirements should specify all the processes and functions required of a new system, be detailed, and measurable so that they can be confirmed when the system is delivered. Requirements should also cover non-functional aspects of the system such as security and performance.

There are a number of techniques for developing user requirements such as conducting workshops with staff and flowcharting business processes. However, all require significant involvement from actual users that have the relevant experience and expertise to define what the system should do. Requirements are usually documented in a requirements specification which should be approved prior to commencing the design or acquisition of the system.

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It is particularly important that user requirements are comprehensive and detailed as changes later on during the project are usually more difficult and costly to implement. They can also delay the project or add additional complexity which could affect the project's success. Managers should also be aware when dealing with vendors that changes to requirement specifications after initial approval may result in contract variations and additional costs.

Consider developing software from scratch or acquiring a packaged solution

When an IT project relates to the implementation of new software, user requirements are used to develop a system from scratch or evaluate existing software products. The decision of which to do will depend on whether existing software products are available in the market which meet or closely meet those requirements and the cost of the alternatives. Businesses should also recognise the additional risks associated with using new technologies and/or building a system from scratch. Existing software products usually have the benefit of being successfully implemented within other organisations and can usually be viewed as part of the evaluation process. Most major packaged software applications can be tailored by vendors to meet specific organisational requirements, however too much altering of the core software can result in instability. These should therefore be kept to a minimum in most cases.

When working with new or untried technology, consider running a proof of concept before embarking on a full scale project. This will assist in providing stakeholders with confidence in the proposed solution and will assist in identifying risks and issues early.

If a prototype is created and then tested with users, this creates additional buy in from stakeholders while informing further improvements to the software in subsequent development.

Test the system thoroughly before implementing

Before implementing any system it is important that a suitable level of testing be conducted. Users should be directly involved during the testing phase and this activity should be fully planned. Testing strategies should be prepared which outline the timing, resources and approaches to testing. These should ensure that all functionality, system performance and other requirements be evaluated.

The time allocated for testing activities is often seen as being flexible and can be reduced if overall project timeframes are brought forward or other project phases take too long. This can be a major danger to the project success. Once a system is live, errors can cause problems with data, resulting in system instabilities and be more difficult to fix. All these factors can result in loss of user confidence and ultimately on the success of the project if severe.

Various methods of testing a system exist. These include manually checking the functionality of the system as well as using software to automate the testing process. Also, when the business impact of a system having errors is high, it may also be appropriate to run the new system in parallel with the legacy/existing application for a short period of time. While this may result in additional costs during the period of parallel operation, it should provide greater comfort over the accuracy and stability of the new system when finally live.

Implement the solution after taking suitable precautions and gaining approval by the business

After testing is conducted and approved by users, preparations for actual implementation should be carried out. These should involve having strategies to roll back the implementation and re-establish old or legacy systems in the event of major problems. Testing of the implementation process is also recommended. Timing of the go-live dates should be carefully selected. Introducing a new system during the busiest part of the year could put the both system and users under too much strain. Any problems occurring in these circumstances could have a major impact on business operations. It may be therefore better to delay a project in these circumstances.

The decision to go-live should be made by the executive committee or senior business managers, after having assurance that a suitable amount of testing has been conducted and that there are no outstanding issues that are likely to result in problems with the system once live.

Ensure adequate support after the implementation

The go live date is not the end of a project. The success of the project is determined not only by the delivery to agreed time lines and budget, but also on the experience of users after implementation. It is important to ensure that users have not only received appropriate communication and training, but also that they know what to do if they encounter problems.

A support structure or process should be established for the solution post implementation. This may involve transitioning to an already existing support or help desk procedure or establishing new ones. The project team should ensure knowledge transfer to the support structure prior to the project being finalised & resources moving on to other things.

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Project governance

Project initiation

- Consider using a recognised project management methodology, outlining how the project should be initiated and managed (refer to www.aipm.com.au and www.pmi.org)
- Define and document the scope and objectives of the project
- Determine key project milestones and checkpoints (dates on which certain steps of the project should be completed or evaluated)
- Define the budget for the project
- Allocate staff responsibilities for delivery and approval of the project (these should cover both the business and technology stakeholders)
- Outline of the main tasks to be completed and their interdependencies
- Determine what quality processes are needed to ensure required processes and tasks are actually completed (i.e. checks at each phase to ensure tasks are performed to an acceptable level of quality)

Appoint a suitably qualified project manager

- Ensure project managers have skills and experience commensurate with the size and complexity of the project
- Ensure this is the project manager's main responsibility

Ensure adequate senior management representation on the project

- Select a project sponsor of sufficient authority within the organization to make financial and operational decisions

Develop appropriate governance structures to oversee the project

- Establish a management committee to oversee major projects
- Appoint senior managers within the organisation (even the CEO) to the oversight committee
- Monitor the project's progress against time lines and budgets and track major risks facing the projects success

Assess and manage risks which could impact on the success of the project

- Establish a risk management process to identify project risks and determine their likelihood and impact to the project if realised
- Develop strategies to mitigate the risks identified and allocate responsibilities for carrying them out
- Continue to identify and mitigate risks as they emerge throughout the project

Manage the scope of the project

- Consider the impact of changes to the scope of the project on timeframes and budget
- Ensure all scope changes are formally evaluated and approved by management prior to implementing

Communicate with the business and key stakeholders

- Develop plans which outline how stakeholders will be informed about the project throughout its life

Develop detailed project plans

- Outline all the tasks to be performed to deliver the project, when each should commence and be completed, and allocate responsibility for each
- Consider splitting up large projects into more manageable 'chunks' with quicker deliverables (e.g. delivering one large system by implementing a series of smaller modules at staged intervals)
- Ensure all changes to project plans are approved by management or the project oversight committee

System development life cycle

Understand and document the solution requirements

- Specify all the processes and functions required of a new system, ensuring they are detailed and measurable so they can be confirmed when the system is delivered
- Ensure non-functional aspects of the system such as security and performance are included as requirements
- Conduct workshops with staff and flowchart business processes to determine system requirements
- Ensure users with the relevant experience and expertise are involved in the development of requirements
- Approve user requirements prior to commencing the design or acquisition of the system

Consider developing software from scratch or acquiring a packaged solution

- Consider existing software products that meet or closely meet the solution requirements and developing a system from scratch
- When working with new technology, consider running a proof of concept before embarking on a full scale project

Test the system thoroughly before implementing

- Prepare a testing strategy outlining the timing, resources and approaches to testing
- Ensure a suitable level of testing is conducted, addressing all system functionality, performance and other requirements
- Ensure end users are directly involved in testing the system
- Consider running the new system in parallel with the legacy/existing application for a short period of time

Implement the solution

- Develop strategies to roll back the implementation and re-establish old or legacy systems in the event of problems
- Consider business pressures when selecting a go-live date
- Management should approve the decision to go-live after assurance that a suitable level of testing has been conducted and that no significant outstanding issues remain

Ensure adequate support after the implementation

- Ensure users have been trained
- Develop procedures to support and administer the system after go-live
- Transfer knowledge from the project team to end users and administrators prior to finalizing the project