

“The City of Heritage”



INFORMATION TECHNOLOGY IT Project Management Methodology

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1. Introduction

From time to time, depending on the need, the Ulundi Municipality may initiate an Information Technology (IT) project to serve a specific purpose in the municipal business processes. A successful IT project always follow a certain methodology if it is to meet the business need. For this reason, Ulundi Municipality must adopt an IT project methodology to be used when embarking on a new IT project. The municipality will use the PProjects IN Controlled Environment (formally known as PRINCE2) IT methodology. And the extent to which the methodology is applied will depend on the nature of the project and factors affecting it.

2. Scope

The content of the document only highlights the key component of the chosen methods and how the method should be applied in the management of IT projects of the municipality. Further details of the method are obtainable from the literature and stakeholder will be workshopped about the methodology as and when the need arise.

3. PRINCE2 Overview

PRINCE2 is a matured and international recognised IT project methodology that has been used to manage thousands of IT project over the years since 1996. Every organisation that correctly apply the method is most likely to be successful in properly managing IT projects.

There are five major components of PRINCE2 method which make it to be a most preferred method in most organisations. These components are:

- Project Performance Aspects
- Principles of PRINCE2
- Structure of PRINCE2
- Themes and
- Processes.

3.1. Project Performance Aspects

There are six aspects of project performance that always need to be managed. The processes and themes of PRINCE2 keep these aspects of project management under control. Table 1 below details these aspects.

Table 1 Project Performance Aspects

ASPECT	DESCRIPTION
Costs	Estimating how much a project will cost is always a problem, followed by controlling efficiency and effectiveness to ensure that this cost is not exceeded.
Time	How long will the project take? How effective will resources be? Have you made allowances for meetings, training, holidays, learning cycles?
Quality	More important than getting cost and time right is getting the quality right. Do you know what quality the customer wants? Is that level of quality realistic in view of other constraints, such as time and cost? Have you allowed enough time and resources to achieve that quality?
Scope	How precisely are the requirements known? Have you got an agreed cut-off point for finalizing requirements? Have you got a change control procedure in place to avoid 'scope creep'? Does the customer understand that, after you have agreed a price and time frame, any changes to the specification must be paid for? If the customer's detailed knowledge of the requirements is going to evolve slowly, is the cost and time needed to provide the changing requirements also allowed to 'evolve'?
Risk	Have you reviewed the project for risks at the outset? Are you regularly reviewing risks? Do you have a risk management procedure in place? Do you know what level of risk the customer is willing to accept?
Benefits	Are there valid reasons for doing the project? Does the outcome fit with company strategy? Are the claimed benefits realistic? Do you have measurements of the situation now, before the outcome is delivered, in order to measure the achievement of benefits?

3.2. Principles of PRINCE2

PRINCE2 is founded on seven (7) principles, and these principles are unique to PRINCE2 method. The principles are characterised as:

- Universal: They apply to every project, any type and any size.
- Self-validating: They have been proven by use over many years.
- Empowering: They give the user of the method the ability to shape the management of the project.

The PRINCE2 principles a framework of good practice for people involved in a project and were developed from lessons taken from both successful and failed projects.

The seven principles are defined in table 2 below:

Table 2 Principles of PRINCE2

PRINCIPLE	DEFINITION
<p>Continued business justification</p>	<p>PRINCE2 emphasizes that a project should be driven by a viable Business Case</p> <ul style="list-style-type: none"> ○ Project shouldn't start unless there is a sound Business Case. ○ Ensure that potential benefits are realistic and measurements of the current situation have been documented. ○ The viability of the project must be checked at regular intervals. ○ Project must stop if justification has disappeared. <p>Most importantly, the Business Case</p> <ul style="list-style-type: none"> ○ Should be documented and approved. ○ Drives the decision making process. ○ Ensure that project remains aligned to the business objectives and benefits being sought.
<p>Learn from experience</p>	<p>Lessons should be sought at the beginning of a project, learned as the project progresses and passed on to other projects at the close. A Lessons Report should be issued at the end of a stage, without waiting until the end of the project, if a useful lesson is learned that could help other projects.</p>
<p>Defined roles and responsibilities</p>	<p>Projects require a temporary organization for a finite timescale for a specific business purpose. An explicit project management team structure is required. Good communication depends on people knowing not only what their own responsibilities are but also the responsibilities of others.</p> <p>The roles and responsibilities are divided into three groups, the interests of which must be represented in any project.</p> <p>These are:</p> <ul style="list-style-type: none"> ○ Business;

- User;
- Supplier.

Manged by stages

This comes from two different thoughts:

- If the Project Board is, in PRINCE2 terms, ultimately accountable for the project, and as PRINCE2 doesn't like the idea of regular progress meetings, there must be some key points in a project when the Project Board needs to review progress and decide if it wants to continue with the project – i.e. that the project is still viable;
- Very often a project will last longer and contain more detail than can be planned for with any accuracy at the outset.

The number of stages depends on the size, complexity and risk content of the project. At the end of each stage, a plan is presented, together with an updated view of the Business Case, the Project Plan, the risks and suggested tolerances for the next stage. Thus senior management can review progress so far and decide from the information presented to them whether or not to authorize the next stage.

Manage by exception

PRINCE2 recognizes four levels of authority in a project. Authority is delegated from one management level to the next. Each management level is allocated tolerances within which they can continue without the need to refer to the next higher level of management. This is what is meant by management by exception.

There are six tolerance limits:

- Time: an amount of time on the target completion dates.
- Cost: amounts of planned budget.
- Quality: degrees off a quality target
- Scope: permissible variation of the plan's products; for example, mandatory requirements and desirable requirements.

	<ul style="list-style-type: none"> ○ Risk: limits on the plan's exposure to threats; for example, the risk of not meeting the target date against the risk of overspending. ○ Benefit: degrees off an improvement goal.
Focus on products	A PRINCE2 project focuses on the definition and delivery of products, and in particular their quality requirements. Planning, controls and quality needs are all product based.
Tailor to suite project	<p>PRINCE2 is tailored to suit the project's environment, size, risk, complexity, importance and the capability of the people involved.</p> <p>Tailoring is considered before the project begins: roles may be split or combined; processes and documents may be combined; it may be agreed that some reports can be oral; and some decisions made by phone or email, rather than at meetings.</p>

3.3. Structure of the PRINCE2 Method

There are three parts to the structure of the method itself:

- Themes;
- Processes;
- Techniques.

The method has a number of *themes* to explain its philosophy about various project aspects, why they are needed and how they can be used. This philosophy is implemented through the processes.

The method offers a set of *processes* that provide a controlled start, controlled progress and a controlled close to any project. The processes explain what should happen and when it should be done.

The method offers only a few techniques and the use of most of them is optional. You may already have a technique that is satisfactorily covering a need. The exception to this is the Product-based Planning technique. This technique is a very important part of PRINCE2. Its understanding and use bring major benefits and every effort should be made to use it.

3.4. Themes

The themes of PRINCE2 are depicted in Table 3 below:

THEME	DESCRIPTION
Business Case	PRINCE2 emphasizes that a viable Business Case should drive a project. Its existence should be proved before the project is given the go-ahead and it should be confirmed at all major decision points during the project. Claimed benefits should be defined in measurable terms, so that they can be checked after delivery of the product.
Organization	The project management team structure, with definitions of the roles, responsibilities and relationships of all staff involved in the project. PRINCE2 describes the roles, which can be combined or shared depending on the size and complexity of the project.
Plans	PRINCE2 offers a series of plan levels that can be tailored to the size and needs of a project, and an approach to planning based on products rather than activities.

<p>Progress</p>	<p>A set of controls that facilitate the provision of key decision-making information, allowing the organization to pre-empt problems and make decisions for problem resolution. For senior management, PRINCE2 controls are based on the concept of management by exception; i.e. if a plan is agreed, let the manager get on with it unless something is forecast to go wrong.</p> <p>A project is split into stages as an approach to defining the review and commitment points of a project to promote sound management control of risk and investment.</p>
<p>Risk</p>	<p>Risk is a major factor to be considered during the life of a project. PRINCE2 defines the key moments when risks should be identified and reviewed, outlines an approach for the analysis and management of risk, and tracks these risks through all the processes.</p>
<p>Quality</p>	<p>PRINCE2 recognizes the importance of quality and incorporates a quality-based approach to all the management and technical processes. It begins by establishing the customer's quality expectations and follows these up by laying down standards and quality inspection methods to be used, and checking that these are being used.</p>
<p>Change</p>	<p>This contains two complementary activities: managing changes and managing the products.</p> <p>PRINCE2 emphasizes the need for change control and this is enforced with a change control technique plus identification of the themes that apply the change control. Tracking the components of a final product and their versions for release is called configuration management. There are many methods of configuration management available, and PRINCE2 does not attempt to invent a new one – it defines the essential facilities and information requirements for a configuration management method and how it should link with other PRINCE2 themes and techniques.</p>

3.5. Processes

The steps of project management are described in seven processes: Directing a Project, Starting a Project, Initiating a Project, Controlling a Project, Managing Product Delivery, Managing Stage Boundaries and Closing a Project. Figure 1 below depicts these processes.

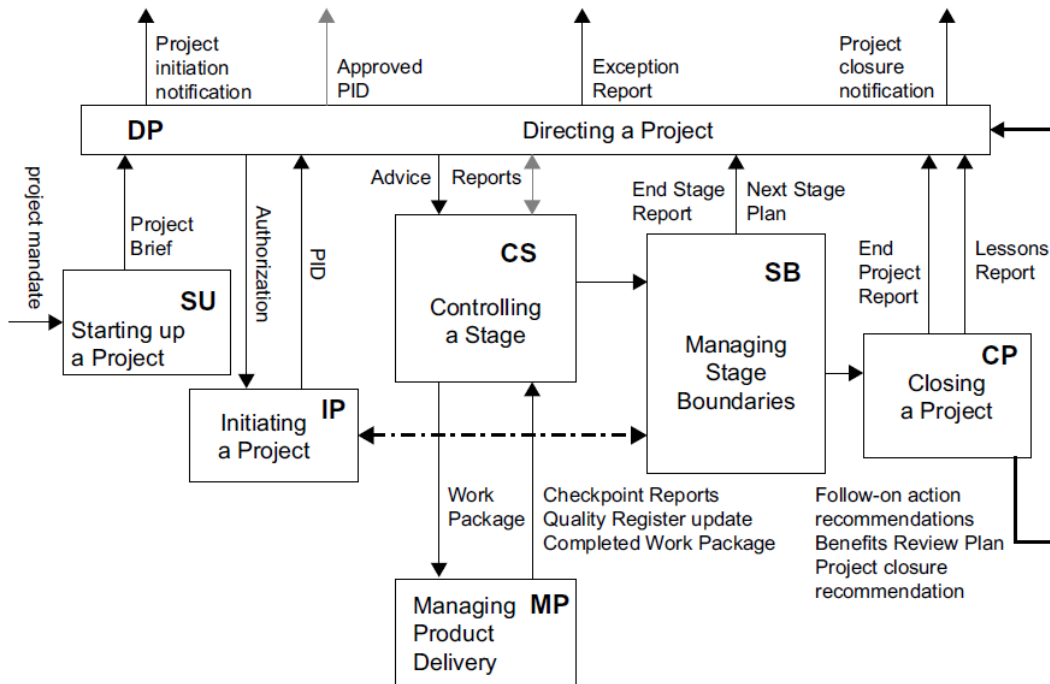


Figure 1 PRINCE2 Processes

Any project using the PRINCE2 method will need to address each of these processes in some form. However, the key to successful use of the process model is to tailor it to the needs of the individual project. Each process should be approached with the question “How extensively should this process be applied on this project?”

4. Alignment of the PRINCE2 Methodology to Municipal Structure

Base on the overview given in section 3 above, the management Ulundi Municipality should organise project management team for each project by following the organisational structure recommended by PRINCE2 method.

Establishing an effective organizational structure for the project is crucial to its success. Every project needs direction, management, control and communication. Before the municipality starts any project, management should establish what the project organization is to be. *Questions must be asked even if it is a very small project.* Answers to these questions will separate the real decision makers from those who have opinions, will identify

responsibilities and accountability and will establish a structure for communication. Accountable stakeholders should ask questions such as:

- What is the Project Manager's authority and who sets those limits?
- Who is providing the funds?
- Who has the authority to say what is needed?
- Who is providing the development resources?
- Who will manage the project on a day-to-day basis?
- How many different sets of specialist skills are needed?
- Who will establish and maintain the required standards?
- Who will safeguard the developed products?
- Who will know where all the documents are?
- What are the limits to each individual's authority?

Answering these questions will help the municipality to accomplish the goal for each IT project done by the organisation.

In order to ensure success of the project, a proper management of the project must be setup. The management structure of the project should have four layers as described in PRINCE2 methodology. Figure 2 below shows the four layers of management in respect to the municipal structure.

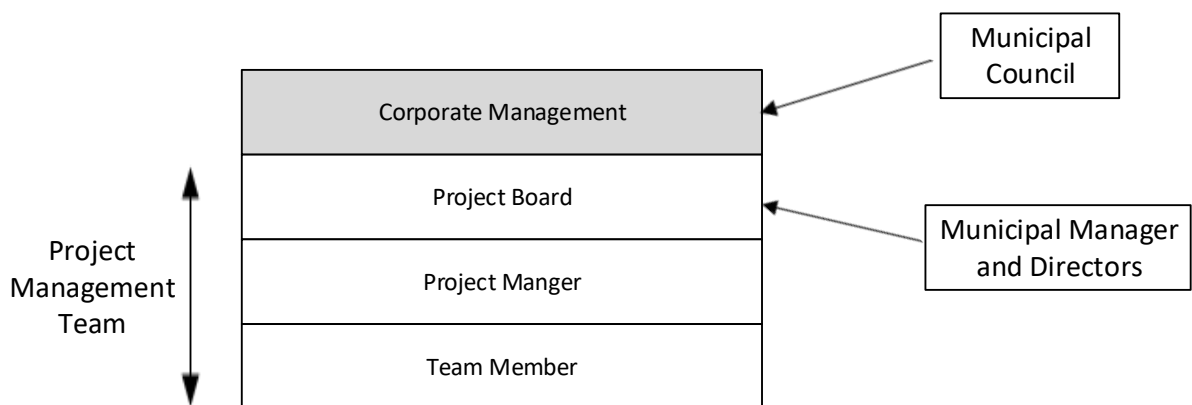


Figure 2 Four Layers of Management

5. Conclusion

The application of PRINCE2 methodology to the IT projects of the Ulundi Municipality will ensure success of projects when correctly use. This method has proven to be efficient over the years of its application to projects of different sizes in multiple sectors around the world. The municipality will surely benefit when using the method.

6. Approvals

The table below provides necessary approvals of this strategy.

Approver	Signature	Date
Chairman of the Council		
Chairman of the Audit and Risk Committee		
Ulundi Municipal Manager		