# APPENDIX A.2

**PID Guidance**

Project Initiation Document

Introduction/Background

* “Set the scene.” Write this section so that the reader knows how your project “fits into the picture”.
* Describe the nature of the need or problem that is being addressed.
* Move from the most general concepts towards those specific to the current project.
* Clearly state ***the purpose/reasons*** for this project, explaining the breakthroughs or advantages that it is hoped to achieve relative to the status quo. If necessary, compare the advances that are envisaged with the current state of the art/situation.

Aims

Summarise the purpose of the project in point form. What needs are being addressed? Each point should be at most two sentences long. There is rarely a need to list more than three aims.

Scope

[Note that it is normal practice to list all the stakeholders affected by a project, together with their contact details, and notes regarding any special characteristics and/or requirements that they may have. This is *not* always required for academic purposes.]

Describe the key elements/items that will be researched and/or designed and/or developed.

Be careful to state the nature of the work, e.g. “The daily water requirements of a typical rural Kenyan village of 500 people will be *estimated from the literature\**, and a manual water pump will be *designed* to meet these needs from a local groundwater resource.”

\*“From the literature” is shorthand for “published works on the subject that are recognised by professionals in the field”.

***Exclude issues that will not be reported upon.*** For example: “Parts will be designed and materials will be specified, but manufacturing methods will not be investigated.”

Objectives

In a very simple project it is unnecessary to have objectives – the aims will suffice. The objectives should delineate the major phases of research and/or the major items that are part of the design. The objectives tie the aims and scope to the project plan.

Example:

“Daily, seasonal, and annual variation in the power output of the selected wind farm will be ascertained from data recorded by the wind farm owners.”

“Daily, seasonal, and annual variation in the power demanded from the national grid will be ascertained from online data provided by the Dept of Energy and Climate Change and/or the National Grid.”

Plan

The project plan should be directly or closely tied to the project objectives. Each project stage should represent the completion of a specific item, whether it be design or research. Many project stages require something to be delivered.

The project plan should be shown on a Gantt chart.

[Large projects include sub-projects, each of which in turn comprises phases. A sub-project usually demands the delivery of a project milestone report. Stage gates refer to the formal review of a project after selected stages, to test progress and risks against predetermined measures. If a project fails a stage gate, it is stopped.]

Requirements

The degree of detail in the requirements depends heavily upon the amount of preliminary research that has been conducted. If there is an identifiable customer, that customer should have been asked many questions, and the requirements must be aligned with the answers.

List *specific* requirements wherever possible. For example:

* “The system is to be capable of delivering 20 litres/minute from a depth of 40 metres.”
* “The handle must be capable of being depressed by a force not exceeding 50 N.”
* “The device must be capable of being exposed to the elements for 20 years without any part requiring repair or replacement due to weathering.”

Resources

State the resources that you intend to use to complete the project: information/data, people, software, equipment, materials, and money.

Where will you look for information? Who will you ask for information?

Do you require special software? How can you access it?

Risks

It is advisable to consider risks after defining your objectives, plan, and resources. Risk stems from uncertainty, which in turn stems from a lack of knowledge. Risk can be minimised by finding out as much as possible about areas of the project where you have little or no expertise. There are several types of risk:

1. Risks to life, limb, and property. Formal methods of risk control such as checklists, HAZOP, FMECA, and/or event tree analysis are usually mandatory to reduce these risks to acceptable levels. There should be no such risks during your university projects. If there are such risks, you should bring them to the attention of an authority in the field concerned, as well as your project supervisor.
2. Risks to the project due to its technical nature. For example, work on the Edinburgh tramline was severely delayed due to unknown subterranean pipes and cables along the planned tramline, and also by a softer than expected ground bearing strength in one area. These are *technical/engineering risks*.
3. Risks to the project due to problems afflicting the execution of the work. For example, a project to install offshore wind turbines is delayed by the unavailability of a floating crane, which is undergoing unexpected repairs.

Where risks are due to limited material or equipment availability, (or the lack of any other resource), it is good practice to think of alternative ways to complete the same tasks.