

1. Definitions

This Handbook is not intended to be a manual of project management theory, but to provide guidance on how to apply project management techniques in ISD, where appropriate. The suggested methods, tools, techniques and helpful hints are not hard and fast rules and tools that you should use on every project. Each project is unique in nature and appropriate methods, tools and techniques should be chosen and applied given the project's individual situation.

Project management can be defined as:

"...the process by which projects are defined, planned, monitored, controlled and delivered such that the agreed benefits are realised. Projects are unique, transient endeavours undertaken to achieve a desired outcome. Projects bring about change and project management is recognised as the most efficient way of managing such change." (APM Body of Knowledge, 5th edition).

In ISD terms, other than "business as usual", many pieces of work fall within this definition. It is not the intention to subject every such piece of work to formal project management; the trick is to identify where it is appropriate and helpful.

1.1 What is a project?

Making a decision on what is a project and what can be considered as change within the remit of business as usual is not a precise science. By way of guidance, projects and business as usual have the following characteristics:

Figure 1: Characteristics of a Project vs. Business as Usual

Project	Business as Usual
<p>The work is unique to the business, within some or all of these constraints:</p> <ul style="list-style-type: none"> • Time • Cost • Quality • Resources • Scope • Benefits <p>Work is finite or has a temporary lifespan Work is revolutionary, creating something new Work must be effective (doing the right job) Work carries risk and uncertainty</p>	<p>The work is repetitive in nature and something the business has already done / does on a regular basis.</p> <p>Work is on-going or has a permanent lifespan Work is evolutionary: consistent small change Work must be efficient (doing the job well) Work carries the benefit of experience; it has been done before within the business</p>

The decision should be taken, on a case by case basis, by the relevant ISD Director or Assistant Director. This will often be when the piece of work appears in a team plan; other points where work will emerge include the ISSC, ISDMT, CUBS bidding process, the Capital Planning and Accommodation Committee, the ISD Education and Research Boards, and the Student Administrative Systems Development Board.

Factors to be taken into account include:

- The level of risk involved in the project
- The impact of the project
- The audience affected by the project
- Whether more than one team is involved, and whether work is required from teams outside ISD
- The level of oversight of the project that is required
- The amount of financial resources involved, and the flexibility available for spending them.

If it is considered that a piece of work is indeed a project, see Section 2 for details on how to start.

1.2 Standard Terminology used in the Handbook

For the avoidance of confusion and misinterpretation, it is important that all the projects in ISD use consistent terminology. Certain words and phrases have specific meanings in the Project Management context, and some have subtly different meanings in different Project Management methodologies. There is also a Glossary at Appendix B.

- A **PROGRAMME** of work is a group of related **PROJECTS**, which may also include related business-as-usual activities. The annual ISD Programme of Work consists of projects, service plans and team plans.
- **PROJECTS** are often carried out in a number of distinct **WORK STAGES**. Stages are sometimes called “Phases” in project management methodologies. Note that these are not necessarily consecutive; they can be carried out in parallel. Each project will have a Project Plan, including a Schedule.
- Each **WORK STAGE** will comprise a number of **ACTIVITIES**. An activity can be described as a summation of **TASKS**. Work stages will usually have associated Stage Plans, containing more detailed task schedules than are shown in the project schedules.
- Each **ACTIVITY** will comprise a number of **TASKS**, which are the smallest indivisible part of an activity when it is broken down to a level best understood and performed by a specific person or organisation. It is the **TASK** that has resources and timescales allocated to it, and is subsequently carried out. All other levels in the work breakdown structure are for reporting and control purposes.

Schedules are included in Project Plans. They provide a view of the tasks against a calendar, and it is also possible to show dependencies between the tasks. Issued as an appendix to the plan, they can be amended and re-issued without the need to have their “parent” documents amended too, depending on the level of change involved.

Issues are events that have already occurred and are impeding further progress or the eventual achievement of project objectives, so that they need escalating and resolving. *Potential* problems that can be foreseen are highlighted as **risks**.

Constraints are highlighted in plans as restrictions or limitations on the scope of the project. They may include, for example, the maximum budget available, or a fixed date by which the project must be completed.

Objectives describe the tangible results of having completed the project, whilst **Deliverables** describe the elements that go to make up the objectives. Thus, an objective might be to complete a Business Process Review of Purchasing, with deliverables being: a report on the current position; an option appraisal of possible ways forward; policies and procedures for purchases in the future, etc. Objectives are things you *will* achieve, and should be Specific, Measurable, Achievable, Realistic, and Timely (SMART).

Quality Assurance is the means by which the deliverables of the project are checked before final completion. This will often include having someone external to the project look at the work.

Interfaces are the points where a project has a relationship with another piece of work taking place, or one that is likely to be affected by the project.

Critical path are activities within the project schedule which are dependent the completion of the previous task and where if a delay to one task occurs the project completion date will be delayed.

Project Support provides project managers with mentoring support, guidance in use of tools, expertise in areas such as quality assurance, finance and risk analysis.

Project Board provides management representation from areas of the business, the main client of the project and any suppliers. The role of the board is to own the project, provide direction and advice.

Project Team is comprised of individuals who are defined as responsible to create products or complete tasks within the time and cost constraints defined by the project manager. They report to the project manager.

Project Manager is the individual who plans, co-ordinates, monitors, reports on and provides direction for the project. They act as an agent for the project board to ensure the project delivers the desired benefits at the right time and cost.

1.3 Project Roles and Responsibilities

Each project will have management arrangements following a standard pattern, although there may be some variation of detail from project to project. These roles and responsibilities will be laid out in the Project Plan so that all concerned are clear about their level of involvement.

Each project has a:

- **Project Sponsor** who is responsible for promoting the project and acting as its “champion” in the senior ranks of the University. The project sponsor is the

primary risk taker who is accountable to the University. Project sponsorship is an active senior management role, responsible for identifying the business need, problem or opportunity. The sponsor owns the business case, ensures the project remains a viable proposition providing value for money, ensures benefits are identified and realised, and resolves any issues outside the control of the project manager. The project sponsor will provide the project manager with advice, direction and delegate a level of authority with a definition of types of issues and actions that should be passed back to the sponsor and those which the project manager is able to deal with directly. The project Sponsor is the chair of the project board.

- **Project Board**, which owns and oversees the project. It should consist of representative stakeholders including the senior users or customer to receive benefits from the project, the senior supplier (i.e. software supplier), the project Sponsor and the project manager. The Project Board will provide high-level monitoring of the progress of the project and will therefore meet regularly for the duration of the project. The Project Board is responsible for:
 - **Monitoring Progress** – the project board will receive a regular highlight report which describes progress, emerging issues, risks and a summary of the budget position. Issues that the project manager is unable to overcome, and does not have the authority to handle, will be escalated to the board for their consideration and approval of recommendations.
 - **Mandating Changes** – providing a very clear and concise message to the University community when needed about the changes that are required by ISD in support of the project.
 - **Quality Control** – provides authority for “sign off” of deliverables. Issues are escalated to the Board for them to try to resolve. If the Board is unable to resolve a problem, it may be referred to ISSC and the Executive Team as the ultimate authority.
- **Project Manager** who has the authority, accountability and responsibility for managing the project to achieve defined objectives as set out in the project plan. The Project Manager acts as an agent of the Project Board, seeks approval for Plans from the Board, reports progress to the Board, and brings to the Board key points of principle or policy for consideration, or Issues for resolution. The project manager produces the Project Plan which can be thought of as a contract between the Board and the Project Manager. The plan defines the scope, objectives, benefits, quality levels, timescales and costs for the project. The project manager is responsible for ensuring the project plan is fulfilled. The project manager is responsible for:
 - information gathering;
 - consultation;
 - production of documentation;
 - monitoring progress against the Plan and updating it;
 - publicising and promoting the project to the UEA community.

In conjunction with the Project Team(s), the Manager produces Stage Plans, each having their own schedules. The Project Manager has the responsibility of ensuring that project and stage plans, schedules and all other “official” project documents are filed correctly according to the standard file structure set out in section 2.2.

- **Project Team.** The project team members will take responsibility for specific strands of work or individual tasks within timescales, quality and costs as defined by the project manager. They will report progress to the project manager. The project manager will oversee the process, looking for elements of risk and ensuring resources are managed and timescales met. The role of team members is to:
 - **Complete Deliverables:** Ensure production of deliverables defined by the Project Manager to an appropriate quality, in a timescale and at a cost acceptable to the Project Board.
 - **Tasks:** Report to, and take direction from, the Project Manager to complete defined tasks ensuring the project manager is kept up to date if any issues occur that may cause delays to the delivery of tasks or if risks have been identified that affect the project.
 - **Seek Authorisation:** if other work outside of the project has been allocated to team members which may affect delivery dates of the project tasks then authorisation is needed from the project manager to divert agreed resources. The project manager should be consulted if project team members have requested leave to ensure that this does not affect the end delivery date of the project tasks.
- **Consultative Groups,** whose role is to put forward ideas and give advice to the Project Manager. They will be used to check out ideas, discuss principles, test workability and acceptability of ideas, and to act as champions for the project.
- **Users:** The group of people who are intended to benefit from the project. They assist in the specifying of the requirements, test the requirements are being met as products are produced, involved in the acceptance of the service/product and use the service/product when it is operational. Senior Users usually represent this group on the project board.

As can be seen from the above, projects have complex relationships with many other parts of the University: by their nature, IT projects in particular are unlikely to be self-contained within ISD. The Project Plan forms an essential link between the Board and the Project Manager whose task it is to ensure the plan meets its objectives. The Project Sponsor provides an equally important link with ISSC as ISD’s controlling committee, and the Executive Team, who have ultimate authority.

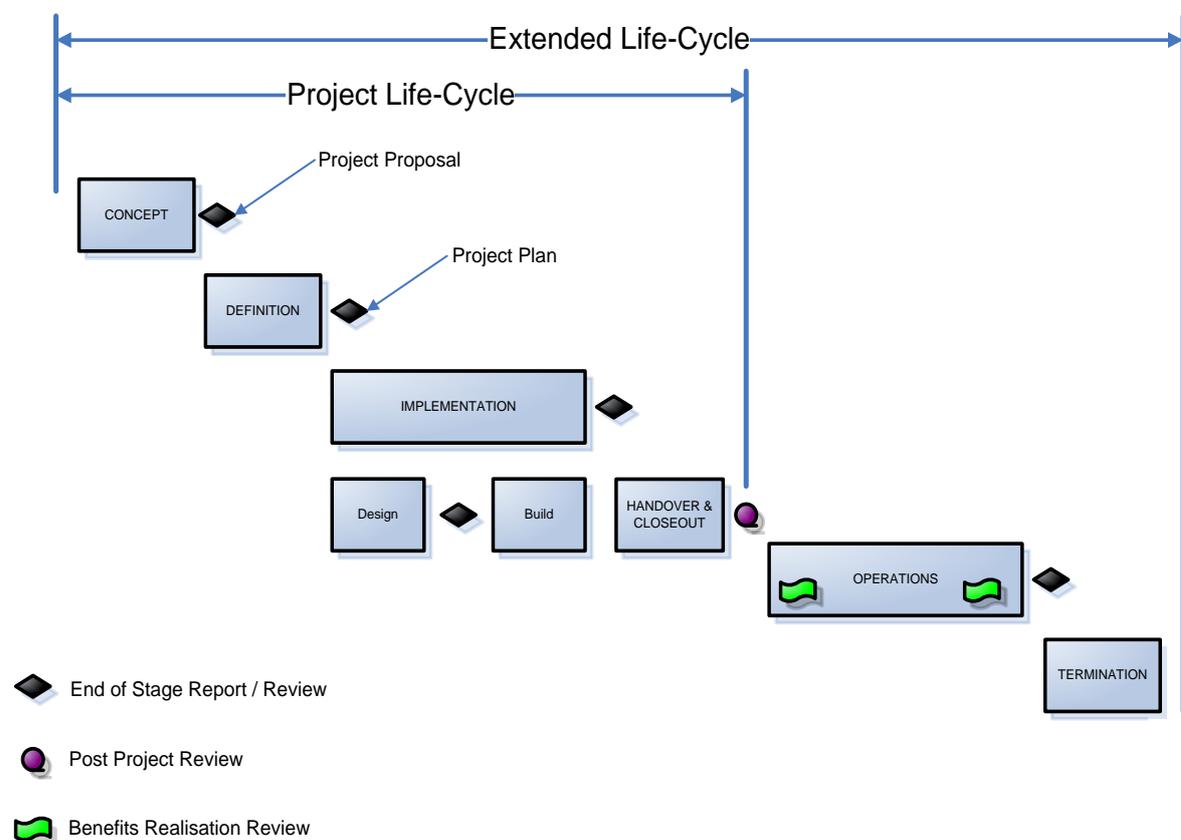
1.4 The Project Lifecycle

Projects follow a defined life-cycle from concept to closure, and there is help available for the management of each of these stages. There are a number of stages common to each project; these can be referred to collectively as the “project life-

cycle". Some projects have additional stages which are then classed as the "extended life-cycle". The key benefits to following such a lifecycle are:

- Ensures next phase of work is understood
- Better estimating as your planning horizon is shortened into small stages. You have a more realistic understanding at each stage of the time needed to complete tasks.
- Phased approach allows success to be celebrated and reinforces stakeholder commitment.
- Ensures important information is captured through the project such as Lessons Learned that can be applied to future projects.
- By setting "go / no-go" decision points within your project schedule you are able to assess levels of success, effectiveness, value for money and benefits realisation for each key stage.

Figure 2: The Project Lifecycle



The lifecycle is made of stages that sequentially follow-on from one another as seen in Figure 2. Throughout the lifecycle, highlight reports are used to update key stakeholders on progress of the project. Other documents such as the project proposal, stage reviews and project plans are also used at key points in the project. The key stages are defined below.

Concept: The organisational strategy may trigger the need for a new project. The concept phase is to understand this change or strategy and the problem / opportunity. This phase will investigate the feasibility of resolving the problem or taking advantage of the opportunity. Stakeholders will start to be identified and an analysis undertaken to understand them and the power or influence they may have

on the project. A preferred solution will be agreed with a possible option appraisal undertaken. A project proposal will then be constructed summarising the business case and findings where approval should be sought from the governing body before proceeding to the next stage. If funding is required then this should be sourced and approved in principle. Approval is normally either sought from ISSC or from ISDMT.

The initial stage is to define the concept for a proposed piece of work, setting out what you want to do. Anyone is able to do this, passing it to their manager for consideration. There is a key decision point at this stage; if we want to do this piece of work, does it count as Business as Usual (BAU), or a project?

Key Documents & Tools: Project Proposal (including Business Case), outline cost analysis, end of stage review

Definition: Within this phase the requirements of the project are defined and a project plan produced. Approval of the plan should be sought and funds should be obtained if appropriate.

Key Documents & Tools: project plan (including a communications plan, outline project schedule, risk analysis, stakeholder analysis), end of stage review

Implementation: As each stage is started, a design and build phase is experienced. At the start of each stage, more details of the requirements and tasks involved should be investigated and planned for to provide a more accurate timescale for completing the stage. A review should be undertaken after each stage to ensure all requirements have been met and to gain approval to move to the next stage. Typical areas covered in a stage include procurement, installation, software development, and component testing.

Key Documents & Tools: Detailed stage plans, end of stage review

Handover & Closeout: Once the core implementation stage has been completed a full testing cycle is undertaken in the Handover and closeout stage. This will usually involve handing over the product/service to the customer and seeking their approval for the finished product / service. The handover phase could include moving the product/service from project and into operational service. This will involve arranging support mechanisms and passing the product / service to the business as usual team with appropriate documentation and training. When this has happened, the resource secured for the project can be released, project documentation can be archived and appropriate contracts passed to the business as usual team supporting the product/service.

Key Documents & Tools: Post project review, lessons learned, monitoring reports for benefits realisation, training material, system / service documentation, DR/BC plans.

Operations: This is where the project team perform the operational duties that would normally be reserved for the business as usual team, and support the product / service after it has been delivered to the customer. This may allow for continuation of service, monitoring for effectiveness and allowing for adjustment to the product service to meet changing needs. This usually occurs when the product / service is highly innovative and the University has little or no experience and may encounter resistance which will prevent the benefits being realised. The operations phase allows the project team to support and maintain the product / service, provide marketing as well as the general maintenance.

Key Documents & Tools: Marketing material, end of stage review, benefits realisation monitoring reports.

Termination: The main purpose of this stage is to shut down the operation when the benefits of the project are no longer being realised. Tasks may include disposing of the old product / service e.g. removing previous student information system after a new one has been implemented. A final review should be undertaken and a lessons learned document created.

Key Documents & Tools: post project review, lessons learned.