Project Management, MN-3019, and Rheoli Prosiectau, MN-3055

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are 15 credit, one semester modules available to Swansea degree students and to business exchange students.

The MN-3055 version of the module has the same lectures as the MN-3109 version but the seminar is held in Welsh.

Module lecturers;

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Lectures will be held online and by video

Seminars will be “live” and online

Workshops will be “in person”.

All these will be held in accordance with your personal timetable.

Lecture notes will be available on Canvas a day or so before the lecture each week.

Seminar notes and video will normally be available at the seminar or on Canvas **after** the last seminar of the week, depending on the nature of the work covered in the particular seminar.

Assessment is by an assignment which accounts for 30% of the marks available and by a series of short essays accounting for 70% of the marks available for the module. Further details of the essays will be provided in the first seminar and as the lectures progress. Some information is available in the module handbook.

Any written work submitted as part of any assessment or examination may be submitted in Welsh, and that work submitted in Welsh will be treated no less favourably than written work submitted by you in English as part of any assessment or examination.

Module outline

This module is intended to provide students with an understanding of the project management process and the ability to undertake the management of projects in practice.

It will equip students to recognise the characteristics of projects, the issues associated with managing projects and identifies some of the techniques for doing so.

The learning outcomes are;

an understanding of the nature of projects and the problems associated with managing projects, an appreciation of the tools available for planning and executing projects and the ability to apply these in a appropriate way.

Students should gain skills in Project Management, Decision Making, and the appraisal projects.

On completion of this module students should be able to:-

Demonstrate a critical awareness and recognize the importance of project management and the breadth of the subject area.

Evaluate critically concepts employed in contemporary project management at strategic, systems and operational levels.

Discuss critically the knowledge and skills required for successful project management in organisations.

The main texts are

Project Management in Practice,
Samuel J. Mantel, Jr., Jack R. Meredith, Scott M. Shafer, Margaret M. Sutton; Wiley

or

Project Management: A Managerial Approach: 8th Edition,
Jack R. Meredith, Samuel J. Mantel, Jr. , Wiley

other texts and publications will be referred to from time to time.

You need not have the most recent editions; there is little change between them in content, although you may find that page numbers differ. Use the index to find what you need.

Lecture slides, as they appear on the screen in lectures, will be posted on a weekly basis on canvas at the start of the week in which they will be used. They will be posted as pdf files.

Supporting readings will be posted on Canvas in the same way.

Administrative notices will be placed on Canvas; please therefore check the site on a regular basis.

Why study Project Management?

The Benefits of Project Management

According to BS 6079-1: 2019 (Project management – Principles and guidance for the management of projects) (BS≡British Standard);

“Project management has proved to be an effective and efficient way of directing and managing many types of change in organizations. It enables organizations to accomplish;

a) more efficient use of scarce resources;
b) improved affordability and better value for money;
c) the identification and management of project activities both at the early phases of a project and throughout its lifecycle;
d) the development of staff working on projects, helping to improve individuals’ capability and hence the capability of the organization.”

What is a project?

A simple and traditional view of a **Project** is;

An enterprise that has a definable start and a completion.

(BS 4335: 1987)

BS 6079: 2019 (Project management – Principles and guidance for the management of projects) **defines a project** as

A temporary management environment, usually undertaken in phases, created for the purpose of delivering one or more business outputs or outcomes

NOTE; A project might be standalone within a portfolio or part of a programme.

BS 6079 : 2019 also says that;

Projects are a mechanism which can be used by organizations to change their day-to-day operational ("business as usual") activities, including creating new capability. They are the engines of change in an organization and all organizations undertake projects.

According to ISO 21500 (2012)

A project consists of a unique set of processes consisting of coordinated and controlled activities with start and end dates, performed to achieve project objectives. Achievement of the project objectives requires the provision of deliverables conforming to specific requirements. A project may be subject to multiple constraints,
as described in 3.11 (of ISO 21500)

Although many projects may be similar, each project is unique. Project differences may occur in the following:

- deliverables provided;
- stakeholders influencing;
- resources used;
- constraints;
- the way processes are tailored to provide the deliverables.

Every project has a definite start and end, and is usually divided into phases, as described in 3.10 (of ISO 21500). The project
starts and ends as described in 4.3.1. (of ISO 21500)

Another Definition of a Project

A management environment which is created for the purpose of delivering a business product according to a specified business case.

(as defined by PRINCE; the standard for project management in HM Government departments)

It is a TEMPORARY management environment.

Some examples of Projects : -

Developing a new product or service

Effecting a change in structure, staffing, or style of an organisation

Designing a new transportation vehicle – a car, train, bus, ship or plane

Constructing a building, house, factory, hospital, airport or any facility

Running a campaign for political office

Implementing a new business procedure or process

A pit-stop in an F1 race

A concert or “event”

Studying for a degree

....and many, many, others....

Project Management can be defined as;

planning, monitoring and control of all aspects of a project and the motivation of all those involved in it to achieve the project’s objectives

(BS 6079: 2019 : Project management – Principles and guidance for the management of projects)

Alternative (and very broad) Definition of PM

Project Management is the application of a collection of tools and techniques (such as CPM and Matrix organisation) to direct the use of diverse resources towards the accomplishment of a unique, complex, one-time task, within time, cost and quality constraints. Each task requires a particular mix of these tools and techniques structured to fit the task environment and life-cycle of the task.

(Olsen, R.P. "Can Project Management be defined ?" *Project Management Quarterly, 2 (1), 1971, pp.12-14).*

The Project Manager is;

A person appointed to lead a project team and to be accountable and responsible for a project’s agreed deliverables

(PD ISO/TR 21506:2018 Project, programme and portfolio management - Vocabulary)

According to BS 6079 : 2019

The **project manager** should be accountable to the project sponsor for the day-to-day leadership and management of the project involving the project team across all necessary functions.

Depending on the size of the project, the project manager might be supported by a project management office.

The project manager should:

a) manage, lead and motivate the project team;

b) mobilize the project team, with the agreement of appropriate resource owners;

c) prepare the project's management plans;

d) prepare the project's plan;

e) define the accountabilities, work scope, and targets for each team within the project;

f) approve the start of specific work items;

g) monitor and manage project progress;

h) monitor and manage risks;

i) manage the resolution of project issues;

j) manage the scope of the project and control changes;

k) forecast likely benefits;

l) deliver the project deliverables on time, to budget, at agreed quality;

m) engage stakeholders; and

n) manage the closure of the project.

It is the **project manager**, who leads and manages project activities and is accountable for project completion.

(BS ISO 21500:2012 Guidance on project Management)

PROJECT MONITORING (BS 6079: 2000)

The comparison of current project status with what was planned to be done, to identify and explain any deviations.

PROJECT CONTROL (BS 4335: 1987)

An extension of project monitoring in which some action is applied to a project and the implementation is later measured to check its effectiveness, possibly to supplement it by further action. What was planned to be done may also be revised.

Core information for monitoring and controlling the project should include;

- Actual costs reported against planned cost
- Time and cost at completion
- Quality

Basic Objectives of Project Management

To get things done.

- On Time.
- Within Budget.
- According to Specifications (ie quality).

So a project needs to be : -

specific,

measurable,

attainable,

relevant and

time-bound

(SMART)

There can also be two additional criteria;

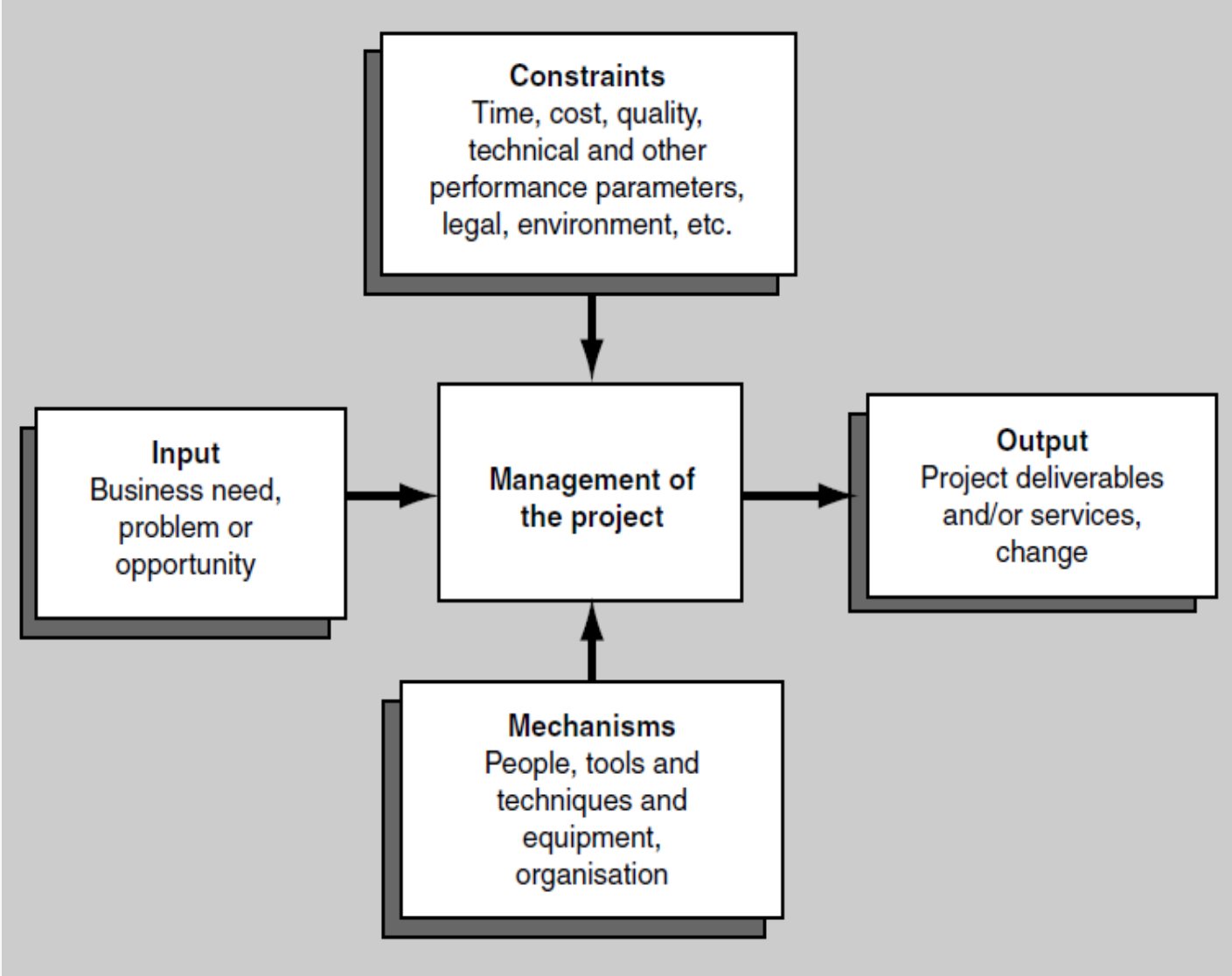
evaluate and

re-evaluate,

(**SMARTER**)

The Project Management Process

(taken from the Association of Project Management Body of Knowledge)



CHARACTERISTICS OF PROJECTS

Projects are:-

1. Goal Orientated.
2. Involve co-ordination of inter-related activities.
3. Have a finite duration, with a beginning and an end.
4. Are to a greater or lesser extent unique.

Projects:

a) create or enable specific benefits, outcomes and/or outputs;

b) have a finite duration with planned start and end dates;

c) invariably have effects both inside and outside of the organization;

d) are supported by an organization that is temporary and can sometimes change through the project life cycle;

e) are undertaken in manageable steps (phases) to take account of risk and uncertainty;

f) are seldom carried out in isolation, and can often interact with other projects and organizational entities; and

g) are achieved within agreed assumptions, constraints and performance limits.

(BS 6079: 2019)

A PROJECT NEED NOT BE LARGE

- they range in size from very small to the very large. Size is relative to the organisation; a project which is large to one organisation may be thought of as small by another.

- size is not always a good indication of the importance of a project.

PROJECT PATTERN

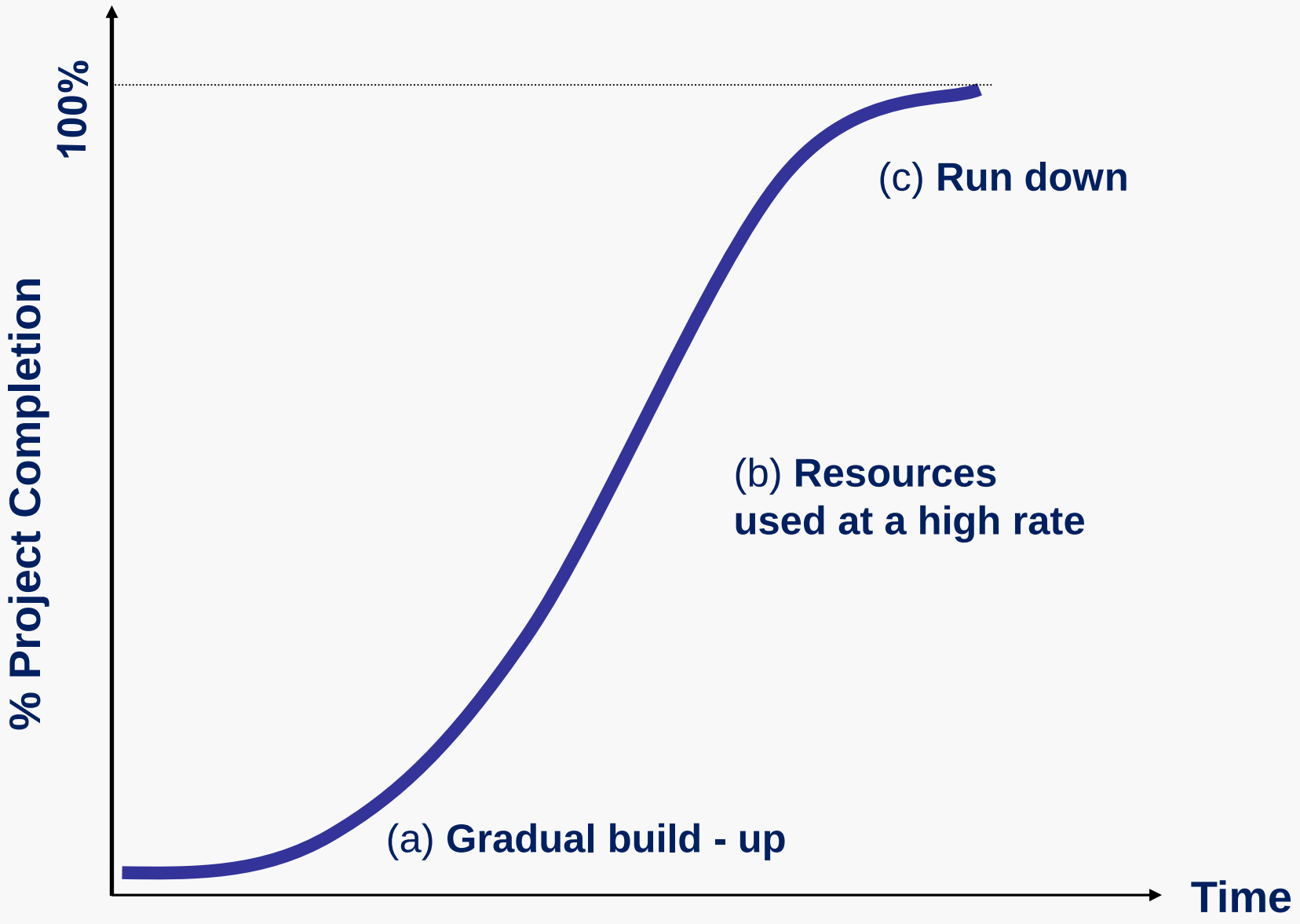
Most projects have a common pattern.

a) Gradual build-up in the use of resources of personnel, materials equipment, energy, etc.

b) A relatively long period when resources are used at a high rate.

c) Run down, when resources are released.

The Classical “S” shaped Project Management Curve



Project life cycle

Projects are usually organized into phases that are determined by the particular needs of specific projects.

The phases follow a logical sequence, with a start and an end.

Project phases are collectively known as the project life cycle.

PROJECT PHASES

Every project has a definite start and end, and are usually divided into phases. These can differ precisely from project to project but typically include;

a) Feasibility or design study, and project definition.

b) Design, specification and procurement.

c) Execution phase; Construction, manufacture, fabrication, assembly etc.

d) Installation, testing and commissioning, and handover to an operator/user. (“Closing” the project.)

PROJECT CATEGORIES

Projects can be categorised, by feature industry or value - or by time scale:- for example:-

a) Long term (over 10 years)
   1. Industrial development of a country.
   2. Electrification programme (eg railway electrification).
   3. Development/production of aircraft, ships or defence equipment.

b) Medium term (3-10 years)
   1. Construction of a large building, a dam, or an oil rig.
   2. Development of an extensive computer system.
   3. Privatisation of a large nationalised industry.
   4. A smaller part of a long term project.

c) Short term (6 months - 3 years)

1. Building a road.
2. Moving an office location.
3. Organising a conference.
4. Part of a longer term project.

d) Special Small scale.

1. Emergencies - evacuation of a building, restoration of vital services.
2. Complex key operation; e.g. Changing or repair of a machine in a production line, resurfacing a runway of a busy airport, a pit stop in an F1 race.
3. Data Transmission.
4. Rearranging the shelves in Marks and Spencer.

EXAMPLES OF PROJECT ENVIRONMENTS

a) Strategic long term planning.
b) Research and development.
c) Capital plant manufacture.
d) Administrative or procedural projects.
e) Major engineering on dispersed sites.
f) Planning and controlling change-overs: eg traffic diversions.
g) One-off building construction.
h) Repetitive building construction.

i) New product introduction.
j) Planned maintenance, major overhauls.
k) Production planning.
l) Key operation of short duration, e.g. aircraft turnaround.
m) Emergency planning.
n) Plant commissioning.
o) Plant operation.