



IAEA

International Atomic Energy Agency

Project Planning and Management Fundamentals

**Peter Booth
UK National Nuclear Laboratory**

Lecture Structure

- Planning a project
- Life cycle of a project
- Decision making – BPM, BPEO, BAT, BATNEEC, MADA etc.
- Stakeholder engagement

Key early messages

- Invest time and effort in the planning stages of a project.
- Data and information will already exist. Collate it, quality assure it, database it and be able to visualise it.
- Understand your objectives.
- Don't make the situation worse.
- Apply the waste management hierarchy.
- Identify your stakeholders and engage with them.

How to view a project

- A project is like a journey
 - If you don't know your destination you have a problem.
 - There may be various routes to take to get to your destination.
 - There may be various ways of travelling along those routes.
 - You will collate and assess information in order to make your decision.
 - You may have constraints, i.e. time, cost.
 - You need to make the decision itself.
 - You may need to share the decision you have made with others.
 - Once you have chosen your route you may need a backup plan.

 - All of these considerations go into the planning of a project.

 - A good example is how you planned your journey to Chicago.

Objective Setting

- You need to understand the problem in hand and consider your options to manage and resolve it.
- You need to understand the entire life cycle of environmental remediation, and its implications.
- Decision making for environmental remediation is often if not always based on potential risk to human health and the environment.
- Always consider the question do you need to do anything.
- Do you have a properly developed regulatory framework to work to?
- The quality of the decision you make will be linked to the available data and information you have.
- If you don't understand your objectives how will you arrive at the most sustainable solution?

Project Planning

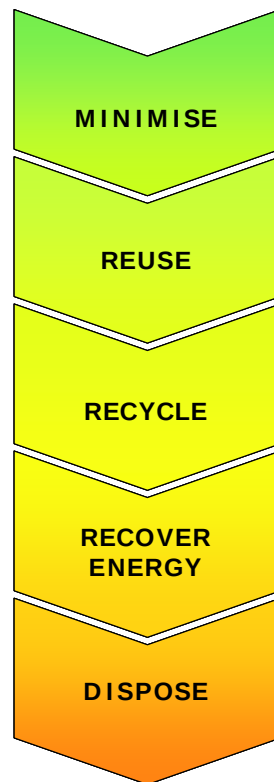
- Generally you can assume the following phases
 - Start up
 - Planning of the remediation approach
 - Implementation
 - End of project

- The following require consideration
 - The projects length in time
 - The uncertainties
 - The constraints
 - The management of science and technology
 - Maintaining the memory

Project Planning - Types of tasks

- Technical
 - Site related. Site characterisation, monitoring.
 - Engineering
 - R&D
- Management Related
 - Stakeholder engagement
 - Resources
 - Funds
 - Timescales
 - Linkages between tasks
 - Regulatory liaison
 - Quality
 - Data collation, assessment, management and visualisation
 - Risk identification
 - Peer Review

Application of the Waste Management Hierarchy



Application of the waste hierarchy in developing solutions for waste management can result in significant cost savings

Life Cycle of an Environmental Remediation Project

- Waste Management Hierarchy
 - Always consider the implications of any actions?
 - Don't create the problem in the first place.
 - Material is not always a waste but may be a commodity.
 - Don't allow cross contamination of material and therefore increased volumes of wastes.
- Understand the entire project lifecycle
- Document each activity and do not look at them in isolation. A project should be integrated.
- Determine potential waste products from each activity.
- Understand the regulatory environment.
- Understand what your stakeholders concerns and aspirations may be.

Decision making

- Successful environmental management and remediation revolves around making sustainable decisions.
- Although a wide range of factors are considered, decisions on the management or remediation approach are usually based on the potential risk to human health and/or the environment.
 - Source – pathway – receptor
- Ultimately we need to make decisions based on;
 - Costs
 - Benefits
 - Technology
 - Detriment
 - Legislative targets
 - Risk targets (which may be the same as the legislative targets)
 - Stakeholder views
 - etc.

Decision making

- There are a wide range of decision making processes and methodologies like MADA, BPEO, BPM, BAT etc.
 - Multi Attribute Decision Analysis (MADA)
 - Best Practicable Environmental Option (BPEO).
 - Best Practicable Means (BPM)
 - Best Available Technique (BAT)
- Irrespective of the name given to these processes all revolve around the formulation of options and then their assessment against a chosen set of criteria or attributes.
- Their difference perhaps lies in the primary focus.
 - For BPEO the focus is on environment
 - For BMP the focus is on practicability
 - For BAT the focus is on the best technique
- There is not necessarily one approach better than another.

Decision making

- A wide range of options need to be formulated. Some of these may be unlikely to be implemented but they offer a comparison against those options more likely to be favourable.
- Scoring can be undertaken in a number of ways
 - Expert panels.
 - Through stakeholder engagement fora.
- The process needs to be transparent and well documented.
- Attributes can be weighted to reflect their importance over other attributes or they can remain un-weighted.
- Sensitivity analysis can also be applied to show how preference over one attribute to another may affect the outcome of the process. This is useful when presenting results to stakeholders.

Stakeholder Engagement

- Definitions
 - Someone (or a group) who has a stake in something (an event, a concern, etc.) - figuratively means to have something to gain or lose, or to have an interest in a turn of events
 - Any actor-institution, group or individual with an interest in or a role to play in the societal decision making process
 - A person or organization that has a vested interest in a project - either positive or negative
- Working Definition - Stakeholders are individuals or groups that are either directly affected by the activities of your organisation, are interested in the activities of your organisation or that can influence the activities of your organisation

Decision making

- In most countries stakeholder engagement is now imperative.
 - Who are your likely stakeholders?
 - Understand what your stakeholders concerns and aspirations may be.
 - Engagement previously revolved primarily around the announce and defend approach. This no longer works.
 - Engagement should be a two-way process.
 - It should be transparent and based on trust.
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- Benefits – trust and support.
 - Consequences of not engaging?

Stakeholder Categories

POLITICAL & ECONOMIC (Government, customers, RWM agency, suppliers, local community)

- Overall cost, supply chain making a fair profit, incentives, impact on economics of local community, power

ENVIRONMENTAL (Environmental regulators, local community, NGOs, wider society)

- Local environmental issues e.g. transport, noise, dust, water uses, non-RW, health of public and non-human biota

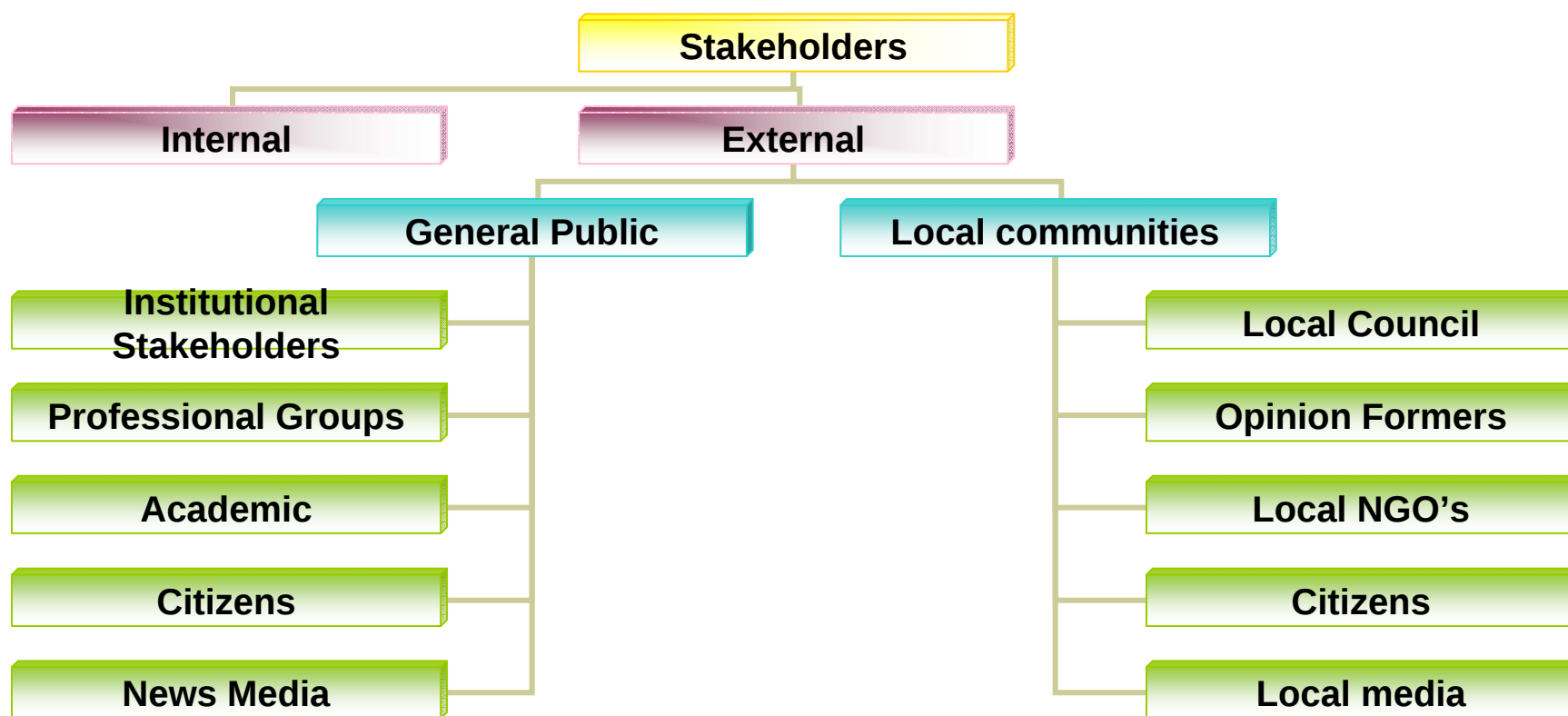
SOCIAL (Workforce, regulators, local community, local suppliers, wider society)

- Health and safety, jobs, impact on local suppliers, impact on local/regional community

TECHNICAL (Nuclear regulator, managers, subcontractors, universities, R&D institutions)

- Nuclear safety, radioprotection, education, investments, work planning

Target Groups



Stakeholders and their motivation

- Examples include;
- Funding entities – spend funds reasonably
- Regulators – ensure legal requirements are met
- Neighbouring countries – prevent impacts on them
- Local authorities – ensure benefits for the local community
- Local communities – accrue benefits while minimising derogatory impacts
- Elected officials - satisfy the public they represent
- General public – health, sustainable development
- Universities – plan and deliver education
- R&D organisations – innovate and secure long term projects (funding)
- Tourist industry – establish and promote attractions
- Media – gather and disseminate information to “sell papers”

Stakeholder Engagement – Examples of Approaches

- Site characterisation activities at LLWR in the UK
 - Protected species
 - Liaison with environmental groups but no formal processes.
- Re-use of contaminated concrete material on a nuclear licensed site
 - Decision making process
 - Workshops with local stakeholder groups and regulators
- Planning for further storage and disposal at LLWR in the UK
 - Decision making workshops
 - Stakeholders concerns.

Summary

- Investing time and money at the start of a project to plan it effectively will always save money and reduce problems during the projects entire life cycle.
- Understand the entire life cycle of the project before you start.
- Understand your overall project objectives and then set out how you will achieve these.
- There are a wide range of decision making processes.
- Clearly think out your stakeholder engagement strategies, bearing in mind it is a two-way process.