28/02/13

Lecture 2: Introduction and pitfalls of Project Management

Intro to Project management:
A project us a time-limited endeavour undertaken to meet specific goals or objectives.

Project management (PM) is the combined art and science of planning, organising and managing resources to get a particular project done on time, within budget and with results satisfying the set goals.

So, a project is simply a plan to get something some on time, within budget and to certain specifications.

Defining features of a project:
1. Has a definite Goal or objective
2. Has a definite start and end time
3. Is unique
4. Needs time
5. Needs planning
6. Needs resourcing and money
7. Involves uncertainties and risk.

Eg:

✓ : yes X : no	Unique definite goal	Clear start Clear end	Uncertain future Need to plan	Needs resourcing, money…
Managing farm	X	X	✓	✓
Buying a farm	✓	✓	✓	✓
Publishing books	X	X	X	✓
Writing a book	✓	✓	✓	✓
Eradicating foxes	✓	??	✓	✓
Hunting foxes	X	X	X	??
Planting trees	✓	✓	✓	✓

Project characteristics:

1. Time frame
2. Risks and uncertainties
3. Irreversibility's – an impact from a project that isn't reversible. Grey area is how much it cost t reverse it – things may be reversible, but high economic and political constraints may may it unfeasible to be reversed.
4. Expected benefits vs. initial outlays
5. Complexity
6. Sequences
7. Newness of project (and its available knowledge and technology)
8. Private vs. Public : Cost vs. benefit
9. Externalities expected
10. Stakeholder consensus
11. Scope: Local vs. national vs. international
12. Ethical aspects (animals, environmental), equity (people)

eg

Time frame	short	medium	long	
Risks, uncert'ties	small	medium	large	extreme
Irreversibilities	none	some	serious	
Benefits / outlays	small	medium	large	
Complexity	simple	medium	complex	
Sequences	one	two / three	many	overlaps
Newness	some	a lot	everything	
Private vs. public benefits & costs	Priv benefits Pub benefits	Priv benefits > Pub costs	Priv costs < Pub benefits	
Externalities (+/-)	environment	social	technology	market
Stakeholder cons	good	marginal	bad	threatening
Geograph. scope	local	national	international	
Ethics / equity	marginal	important	crucial	

Types of projects:

1. Civil engineering – earthworks, bridges
2. IT projects – Hardware, software

3. Urban planning and housing
4. Transport/network projects – train lines
5. Financial – investments, loans
6. Developmental projects in poor countries
7. New school curriculum – UWA overhaul in 2012

Projects can differ in many ways:

In the product or outcome:

- Known vs totally new
- Upmarket vs mass consumption
- With risks vs without risks (for the envnt & public)

In the People and skills:

- Little experience vs. lots of experience
- Small netwroks vs. large networks
- Possessing entrepreneurship, initiative & creativity vs. not possessing it.

Resources and constraints:

Resources and constraints usually are the opposite of each other. Not in P/Mnt.

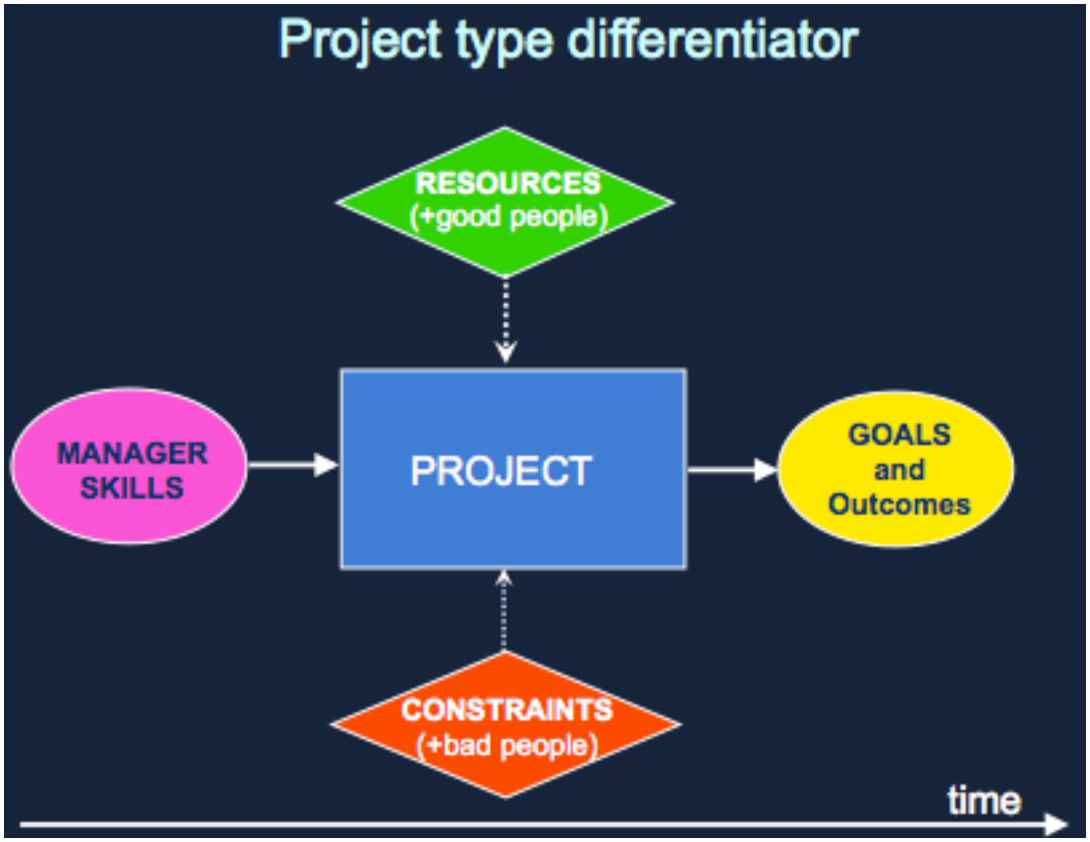
Resources: having X means having 'at least X'

Organise yourself in a way that you can make the full use of the resource.

- Time – i.e. you have five hours means you have at least 5 hours
- Money, finance, capital
- Land, space, room
- Skills people (trust, loyalty)

Constraints: Having X means having 'at most X'

- Time – i.e. you have five hours means you have at most 5 hours
- Money, finance, capital
- Land, space, room
- Skills people (trust, loyalty)



Aim of a project:

A project is a plan to GET SOMETHING DONE

- In as little time as possible
- With the best quality outcome
- Using resources as best as possible
- While meeting the projects constraints

(≈ a constrained optimisation problem over time)

The Project management triangle:

There are two specific Project types:

1. NRM = Natural Resource Management - With available knowledge and technologies
2. R&D = Research and Development - To develop or apply new knowledge or technologies

Differences:

NRM projects	R&D Projects
1) On the ground 2) Many stakeholders 3) Often political 4) Interdisciplinary 5) Negative irreversibility's 6) Bad stakeholder consensus – everyone has different opinions on completing the project Eg clean up a river	1) High uncertainty 2) New, innovative 3) Requires intelligence (in labs) 4) Specialised 5) Positive irreversibility's – cant unlearn something 6) Good stakeholder consensus Eg develop a new drug

Similarities

Both have:

- Long time frames
- Are complex
- Require high skills from managers
- Tend to be very unique never the same)
- Require carful planning and evaluation

REVISION QUESTIONS

1) The aim of a project is to?
2) 7 defining features of a project are?
3) 12 project characteristics are?
4) Project types differ by?
5) NRM vs. R&D Projects differ by?

Pitfalls in Project management:

The extent of project failure:

The project is considered a failure if it was cancelled or deferred because:

- It wasn't delivering its planned benefits

• Its budget or schedule overran by >30% - not concrete % (just gives you an idea.

= It's a huge waste of resources and money

• but from other points of view you cant say it was a failure

Factors affecting Project failure/success

1) Poor planning
2) Lack of stakeholder support
3) Poor Project management
4) Lack of customer/end-user focus

Thoughtful planning should happen twice:

1) For the feasibility study
    - What is the project all about?
    - Should we do this project?
    - How should we go about this project?
2) In implementing the project

• Project description and overview
• Project management strategy
• Scope statement, objectives, deliverables
• WBS (Work Breakdown Structure)
• Cost estimates and time schedule plan
• Performance measurement baselines
• Definition of project success (performance) criteria
• Major milestones and target dates
• Risk, resource, schedule, cost, quality mgmt plans

EG – hiring other people from overseas - just getting the visa may be a problem that stops the entire project.

Three types of projects

1. Got the money and can start right away
2. Shouldn't start project – will loose money/reputation/political favour
3. Cant start the project now – some constraints is holding it back (eg, budget, technology) sp its put on the back burner.

• his is the most common type

Project management can be divided into two categories:

• The product developmental process

• Role and responsibilities of the project manager

Project development can be ineffective because:
• things haven’t been done
  – not comprehensive enough: they do not already define all of the activities that apply to all new projects
  – not flexible: they are not easily tailored to meet the unique needs of new projects
  – not continuously improved: lessons learned from past projects are not used to improve the current processes
• things need to be done to make the project right.
  – overly complex: they require too much time and skill to comprehend and apply
  – not "owned": there is weak or no buy-in from the project's members
  – not enforced: the guidelines are there, but the project leadership lacks the discipline to enforce them

A good Project manager has good:
• Education and Experience in PM
• Negotiation and Communication Skills
• Planning and Organization Skills
• Effective Problem Solver
• Leadership Ability: shows by example
• Aims for Excellence in All Work

Signs of an unfeasible project:
1. Major political issues are unresolved
2. Key stakeholders won't participate
3. Risks are too high
4. Cost / benefit ratio isn't good enough
5. Internal staff's experience and training is insufficient
6. Requirements are unclear, or keep changing radically during the feasibility study.
7. Risk / reward ratio is poor. High risks usually need a high reward to be worthwhile.
8. Clients can't agree on what the problems or objectives are.
9. No executive wants to be the project's sponsor.

Critical success Factors

Tips for a successful study project:

- Understand the problem before jumping to a solution.
- Always include key stakeholders in the feasibility process.
- Carefully assess internal development capabilities.
- Define requirements (needs) clearly.
- Distinguish the problem from the symptoms surrounding it (= cut through the chase).
- Resolve political issues.

10 critical success factors:

1) Management support
2) Project team knowledge
3) Cooperation across teams
4) Clear goals and objectives
5) Quality of project management (see below)
6) Management of expectations
7) Project champion
8) Vendor selection and support
9) Stakeholder management
10) Project communication

Quality of project management:

- The PM has to be aware of many different project management methodologies (knowledge)
- Must be able to adapt and adjust an existing model to the specific nature of the project scope (no simple transfer)
- Has to have inter-personal skills which can
  - make decisions,
  - motivate personnel to action
  - effectively communicate with all levels of management
- Must be sensitive to cultural and global differences in work ethic and management styles

REVISION QUESTIONS

1) Project failures are rife and cost billions!
2) A project has failed when…
3) Key factors of project failure are…

4) Key factors of project success are…
5) Features defining high quality PM