

Project Management

2UCC701

August 2021- November 2021

Module 4 : Project Management in corporate context (12)

CO4 : Evaluate and assess the projects and to estimate the project cost using cost benefit evaluation techniques.

- The Management of Project Management
- Portfolio Management
- International Project Management
- Elements of Budgets & Estimates
- Cost Estimation & Budgeting
- Project Cost Accounting Systems
- Cost schedules & forecast
- PERT & CPM

The management of Project Management

Project Management Methodology:

- A framework and process that an organization mandates or recommends for the management of its projects
- Provides a structure so that all projects are managed and performed in a standardized, disciplined, and systematic manner, using practices that increase the likelihood of projects meeting requirements and being completed on time and within budget
- Created or adopted by the organization so as to uniquely fit its business requirements, procedures, and culture, and the size, scope, technology, and complexity of its projects
- An organization is assured that all of its projects will be conducted and managed in a consistent manner.
- Lacking a methodology, most everything associated with the management of a project falls to the discretion of individual project managers who tend to use their own management practices and styles—some good, some not so good. Without a prescribed methodology every project is managed differently, even those managed by the same person.

The management of Project Management

Creating Project Management Methodology:

1. Create from scratch:

- A small group of the organization 's best project managers meet with the purpose of creating a methodology that incorporates methods they all use or recognize as good and believe should be adopted for use in every project

2. Adapt from elsewhere:

- Managers look at methodologies created by other organizations that represent industry standards, and adopt the ones they find most suitable.
- It uses that standard or methodology as a starting point or baseline from which to expand and create a tailored methodology that precisely fits its own projects and business practices
- The tailoring is ideally done by a group of the organization ' s best project managers (not by senior managers or outside consultants); this helps ensure that the methodology will be appropriate for the organization' s projects and resources, and accepted by its project managers.

The management of Project Management

Project Management Methodology mandates:

- The methodology specifies the stages of the project life cycle and the roles and particular management tasks of the project manager and project stakeholders during each stage
- Specifies:
 - who is responsible for initiating projects, proposing projects, and reviewing and selecting projects.
 - the roles and responsibilities of the project review board and the project management office
- Spells out
 - the individuals who must sign off on budgets and schedules, and approve performance results at each project stage.

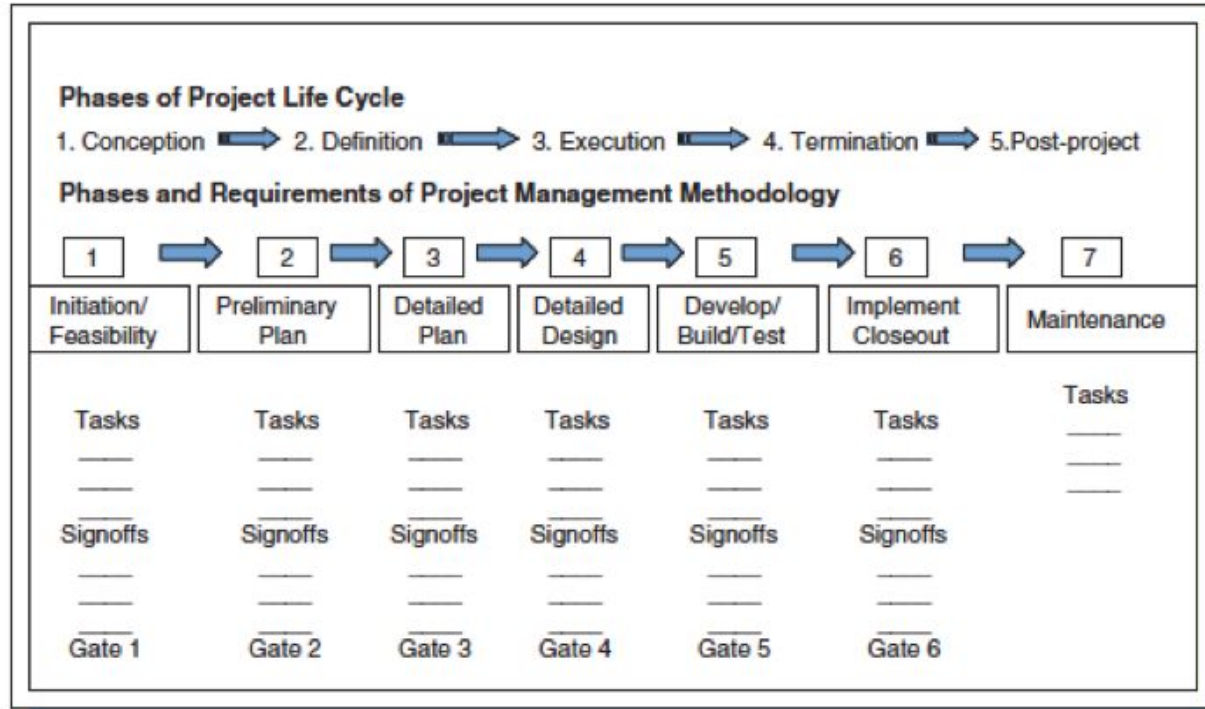
The management of Project Management

Project Management Methodology:

- **Phases & Gates:**
- All projects are conducted in stepwise fashion.
- Defines the phases or stages of the project and what management tasks must happen during each.
- Might specify that projects occur in five stages—initiation, feasibility, definition, development, and launch— and then state what should happen in each.
- At the end of each stage is a “gate” so-called because at that point the project is assessed and a decision made to approve, hold, or cancel it.
- The number of stages and gates varies; the minimum is usually four or five;
- The gates represent decision points including, for example, approve project initiation; approve project definition and systems requirements; approve system validation and certification; and approve launch of system into the market.
- Each gate has specified forms, documents, or scorecards to review the project for a decision.
- Gating process is common in organizations that conduct numerous, concurrent internal projects
- The gating process is one way of culling out weaker, less-promising projects so that scarce resources are available for the stronger, more promising projects.
- For large, individual projects, the process helps reduce risk.

The management of Project Management

Project Management Methodology:



The management of Project Management

Elements of Project Management Methodology:

To provide a framework and set of structured tasks, tools, and techniques to better conceive, define, plan, schedule, budget, track, control, and close out projects following elements are suggested:

- **Phases and stages of the project life cycle:**
 - start by defining the nominal phases or stages through which a project progresses.
 - The methodology can even identify pre- and post-project phases—what happens before and after the project includes the post-project stage of maintenance).
 - The methodology would specify at each phase the details and requirements of the gating process, if one exists.

The management of Project Management

Elements of Project Management Methodology:

- Required tasks and deliverables:

Project initiation/proposal	Procurement/contract management
Stakeholder identification	HR recruiting, training, layoffs
Project selection	Project tracking /review
Proposal development	Data entry
Project planning	Reporting to management
Requirements/specifications	Project auditing
Work definition	Quality control/assurance
Resource needs	Process control
Time and cost estimating	Change control
Scheduling	Project closeout
Budgeting/accounting	Post-project review
Risk analysis	Post-implementation review
	Knowledge management

The management of Project Management

Elements of Project Management Methodology:

- **Required tasks and deliverables:**

Stage 1: Initiation/Feasibility of the methodology might specify the following tasks and deliverables:

- Assemble team and identify stakeholders
- Prepare project initiation form
- Complete preliminary task list
- Perform risk analysis and prepare key-risk list
- Develop requirements list
- Prepare funding request
- Prepare resource plan, timeline, spending plan
- Prepare project proposal

The management of Project Management

Elements of Project Management Methodology:

- **Who is responsible:**
- Specify persons at each stage who have signoff authority and the roles of each stakeholders
- **One-size fits all ?**
- The methodologies are flexible, specify the high level generic processes, allowing modifications based on the scale.
- **Evolving, continually improving methodology:**
- Subject to change and improve based on experience and the change environment

The management of Project Management

Elements of Project Management Methodology:

- **Comprehensive six-stage project management methodology**

Project Approval

Preliminary Plan

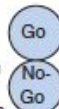
Project initiation form
Preliminary task list
Risk analysis
Issue log
Prelim customer business unit analysis

Deliverables

Project initiation form
• general business case
• project description
• project timeline
• project spending plan
• assumptions
• dependencies
• potential risks
• project team
• governance team
• requirements for next phase
• ROI
• sign-offs
Resource plan
High-level requirements
Change control process
Communication strategy

Sign-offs

Project sponsor
Project champion
Project manager
Governance team
Customer business unit manager



Customer Requirements

Preliminary Plan

Updated project initiation form
Preliminary task list
Risk analysis
Issue log
Scope management
Prelim customer business unit analysis

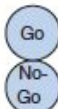
Deliverables

Process definition
Business function requirements
• business model
• work process flows
Define target population
Current and proposed states
Outputs/inputs
Budget cap
Business rules
Policy changes
Metrics
Security
Regulatory
Environmental
Interfacing
Recovery requirements

Phase Review: Governance Team

Sign-offs

Project sponsor
Project champion
Project manager
Governance team



Solution Analysis/Recommendation

Detailed Plan

Updated project initiation form
Preliminary task list
Risk analysis
Issue log
Scope management
Prelim customer business unit analysis

Deliverables

Conceptual design
Solution evaluation
Feasibility/proof of concept
Customer sign-off document
Contingency plan
Fit analysis
• architecture
• functionality
• skills
• training

Phase Review: Governance Team

Sign-offs

Project sponsor
Project champion
Project manager
Governance team
Customer business unit manager



Detailed Design

Working Plan

Updated project initiation form
Detailed task list
Risk analysis
Issue log
Scope management
Final customer business unit analysis
Benefits realization plan
Implementation plan
Conversion plan
Training plan
Resource plan
Procurement plan
Documentation plan
Operations/support plan

Deliverables

Business impact plan
• detailed work flow
• organization impact
• business process
• reengineering
• operations impact
• resource plan
QA/user test plan
Back-out plan
Security

Phase Review: Governance Team

Sign-offs

Project sponsor
Project champion
Project manager
Governance team
Customer business unit manager



Attain the Solution

Working Plan

Updated project initiation form
Detailed task list
Risk analysis
Issue log
Scope management
Final customer business unit analysis
Benefits realization plan
Implementation plan
Conversion plan
Training plan
Resource plan
Procurement plan
Documentation plan
Operations/support plan

Deliverables

QA/user test documentation
Implementation checklist
Change management

Phase Review: Governance Team

Sign-offs

Project sponsor
Project champion
Project manager
Governance team



Solution Implementation

Working Plan

Updated project initiation form
Detailed task list
Risk analysis
Issue log
Scope management
Final customer business unit analysis
Testing plan/QA
Implementation plan
Conversion plan
Training plan
Resource plan
Procurement plan
Documentation plan
Operations/support plan
Benefits realization plan

Deliverables

Closure document
Final communication
Shut-down old systems
Hand-off to operations
Project post-completion review
Schedule benefits review

Phase Review: Governance Team

Sign-offs

Project sponsor
Project champion
Project manager
Governance team



The management of Project Management

Elements of Project Management Methodology:

- **Comprehensive six-stage project management methodology**
- The methodology might also include gates at which a project must be approved before it can move on.
- The methodology would specify persons at each stage who have sign-off authority, and the roles for stakeholders such as the client, sponsor, champion, steering committee, and project manager.

Portfolio Management

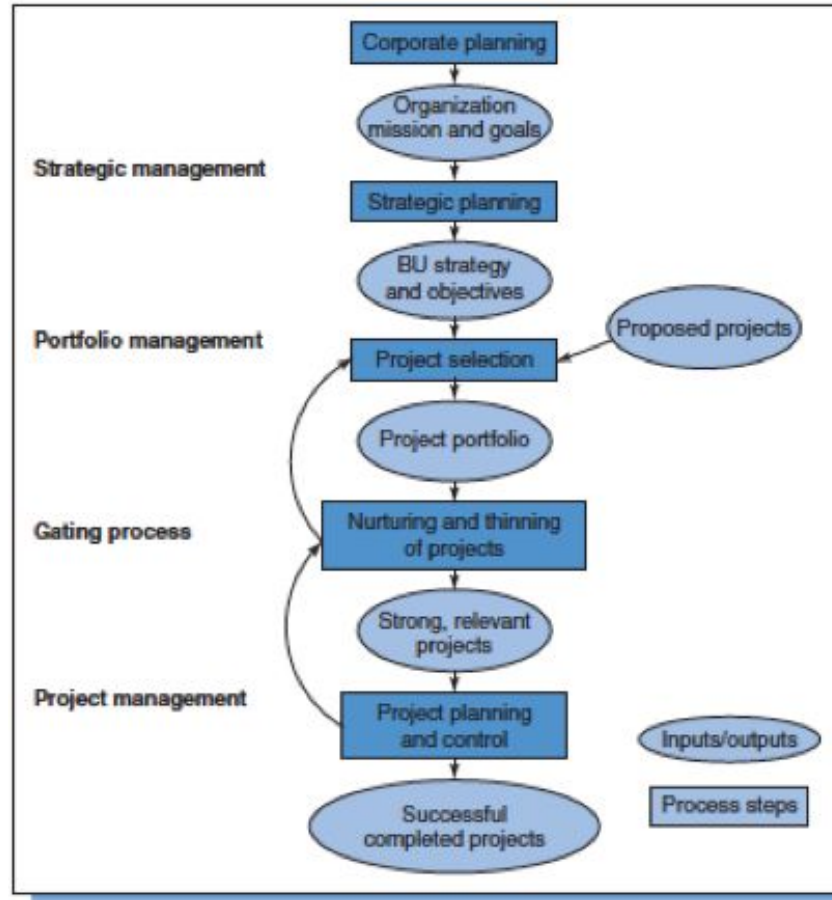
A project portfolio is a group of projects or programs in an organization or business unit that aim at strategic objectives, share resources, and must compete for funding

- **Project portfolio management refers to a formal process wherein:**
 - Project proposals are assessed for costs, risks, benefits, and contributions to objectives.
 - Decisions are made conscientiously to authorize certain projects, retain some on hold and dispose of those with limited potential.
 - Available limited resources are allocated effectively so as to insure that approved, priority projects get adequate funding and support.
 - Projects as a whole are “ balanced ” in terms of high versus low risk, large versus small size, long-term versus short-term focus, etc.—whatever balance the company deems best.
 - Projects are continually tracked, compared, and managed collectively; decisions about each project are based upon benefits and required resources compared to other projects.

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Portfolio Management

- **Framework for project selection & portfolio management**
 - Successful projects depend upon two things:
 - Doing the right projects and
 - Doing those projects right.
 - **Strategic management: focus the organization.**
 - Top management articulates the vision and mission of the organization, defines organization objectives and strategic initiatives, decides on the total budget, and allocates resources to business units.
 - Common themes for strategic initiatives are to be the low-cost leader or technology
 - **Portfolio management: select the right projects .**
 - Business unit managers develop goals, strategies, and initiatives that are consistent with corporate objectives and initiatives.
 - These become specific criteria for selecting projects from proposal that are generated internally, requested by customers, or resulting from ad hoc problems or obligations.
 - **Gating methodology nurture or get rid of projects:**
 - Managers assess each project as it moves through gates.
 - They compare project performance to gating criteria and make decisions: important but struggling projects are allocated more resources; poorly performing or mediocre projects are put on hold or canceled.
 - **Project management: manage the projects right.**
 - Projects are managed using sound principles and practices of project management.



Management of projects

Portfolio Management

- **Framework for project selection & portfolio management**

- When an organization has excess capacity it readily takes on all the projects it can get.
- But when it does not—when it has insufficient resources (talented people, finances, technological capacity) to support every proposed project that comes along—then logically it pursues only those that contribute the most to its objectives and initiatives.
- Organizations in which most projects are generated internally rely on the portfolio management process to evaluate proposals and approve projects; those where projects are generated externally rely on the process to determine to which RFPs they should respond.
- Since projects differ with regard to resource requirements, risk, cost, and strategic value, choosing the right projects for the portfolio can be a complex problem.
- Projects are in fact investments, and many of the methods used in project portfolio management derive from general principles of investment management.
- a project portfolio might reduce risk by spreading projects across more than one business sector

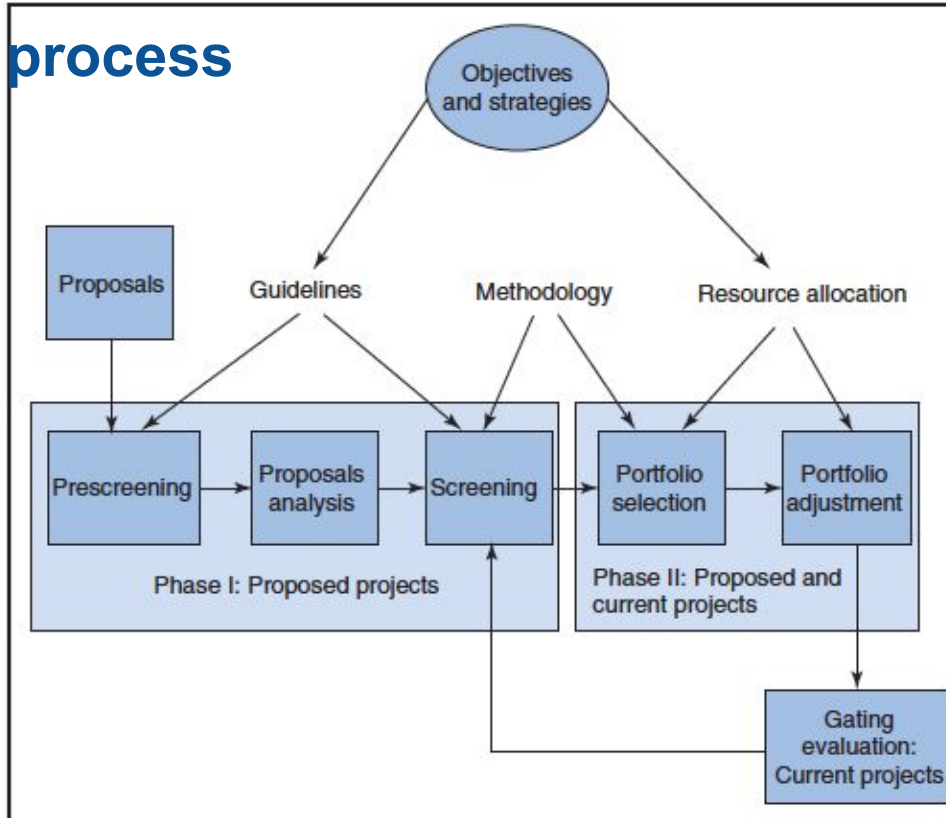
Portfolio Management

- **Selection process**

- Prescribed means for assessing and comparing projects
- A set of measurable criteria that reflects its strategic goals and initiatives, as well as a process for evaluating projects in terms of those criteria.
- The selection process and its relation to other aspects of portfolio management are shown in the two phases

Portfolio Management

- Selection process



Portfolio Management

- **Selection process**

Phase I:

Prescreen stage: to eliminate early on project proposals that clearly deficient, to pass this stage must justify in terms of either **survival** (projects are necessary for the health and continued viability of the organization or preventing organization from failing) or **growth** (may offer organization opportunity to prosperity or expansion). The project must pass feasibility study, document expected benefits. Projects with insufficient information or lacking justification are eliminated. Passed projects are analysed quantitatively and qualitatively and score models.

Portfolio Management

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Portfolio Management

The concerns of project portfolio management include:

- Evaluating proposals for projects
- Assessing the risk involved with projects
- Deciding how to share resources between projects
- Taking account of dependencies between projects
- Removing duplication between projects
- Checking for gaps

Portfolio Management

There are three elements to PPM:

1. Project portfolio definition
 - Create a central record of all projects within an organization
 - Must decide whether to have ALL projects in the repository or, say, only ICT projects
 - Note difference between new product development (NPD) projects and renewal projects e.g. for process improvement
2. Project portfolio management
 - Actual costing and performance of projects can be recorded and assessed
3. Project portfolio optimization
 - Information gathered above can be used achieve better balance of projects e.g. some that are risky but potentially very valuable balanced by less risky but less valuable projects

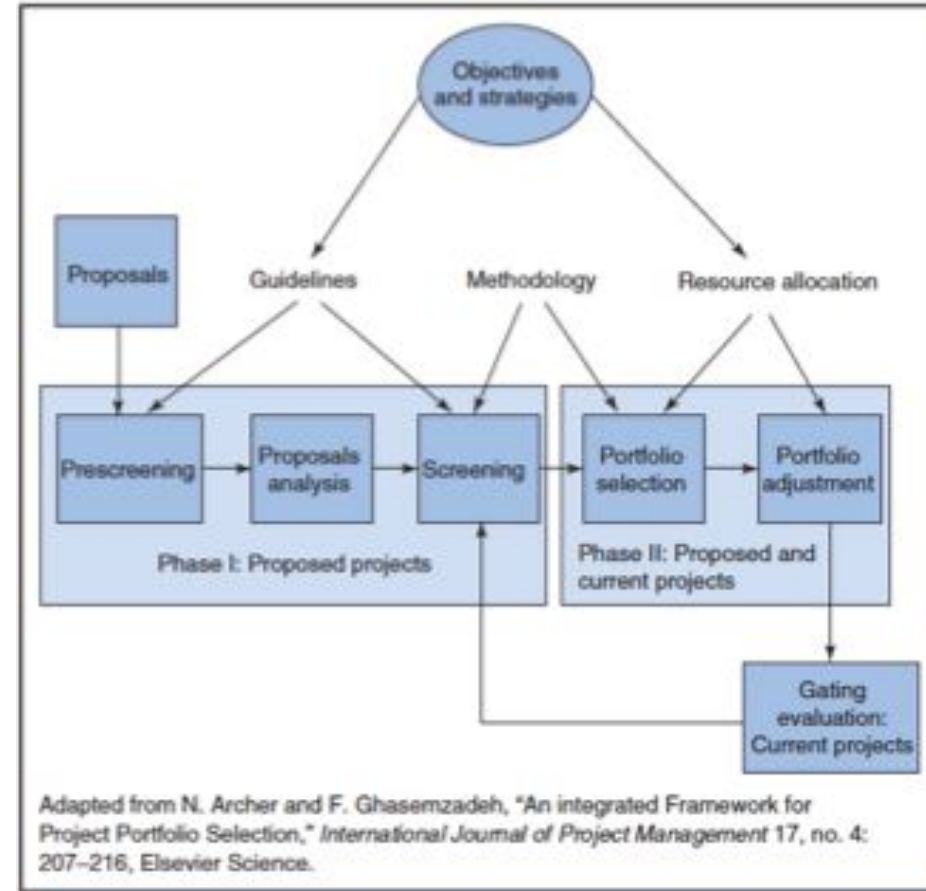
Portfolio Management

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- Projects are in fact investments, and many of the methods used in project portfolio management derive from general principles of investment management.
- a project portfolio might reduce risk by spreading projects across more than one business sector

Selection Process

- Phase I: each project is independently evaluated and screened:
 - prescreening stage to eliminate early on project proposals that are clearly deficient.
 - project to pass this stage it must be justified in terms of either survival or growth.
 - project justification (survival or growth) in a feasibility study, a project champion and sponsor who supports the project, and documented expected benefits.
 - analysis using some combination of quantitative and qualitative models and scoring methods.
 - The analysis might rate or value the proposal using diverse criteria such as “ link to strategic objectives, ” “ financial value ” (rate of return, cost/benefit), or “ compliance to constraints ” (e.g., financial, human resources, or technology/ architecture).
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- Phase II, all projects are considered together and only a subset is approved.



International Project Management

- International projects are having advantage of sizable benefits & opportunities but with risks of uncertainty and

Problem Managing International projects

Unknowns of international projects:

1. Local Institutions & Culture
 - a. Language
 - b. Norms, social costumes, attitudes, traditions
 - c. Laws, rules, rights sanctions
2. Local stakeholders: labours, managers, consultants, supervisors
 - a. Skills, experience, motivation
 - b. Reputation, honesty, integrity
 - c. Connections, knowledge, resources
3. Local Natural Environment
 - a. Site environment
 - b. Regional Environment
4. Local Technology
 - a. Infrastructure, roads, buildings, communication
 - b. Available tools and systems

International Project Management

- **Problems Managing International Projects:**
 - Language
 - Formalities
 - Gift Giving
 - Attitude about age
 - Social behaviour
 - Food & Drink
 - Attitude about time
 - Holidays, weekends, vacations, working hours
 - Labour time
 - Layoffs
 - Laws, Contracts, rights
 - Litigations, payment , meeting contract terms
 - Politics

International Project Management

- **Problems Managing International Projects:**
- **Local Contractors:**
 - Selection local contractors is beyond usual criteria of skill, experience, resource & financial stability.
 - Should communicate with local workers and understand the local culture etc.
 - Can reduce the cost of labour (no need to take workers from your own country as no relocation needed)
 - Might increase training cost (to bring the new workers to the level)
- **Customers & Supporters:**
 - After contracting the customer build appropriate relationship of understanding
 - Regardless of the professional track record of the project manager and his company, local stakeholders (business associates, subcontractors, vendors, and potential customers) are apt to withhold agreement, collaboration, or support until they feel that they know the project manager personally.
 - Gaining personal familiarity and building trust with business colleagues and associates is fundamental to the business process.
- **Managers and Laborers**
 - the project manager must also gain buy-in from local managers and workers.
 - This is done not by the project manager telling them how important the project is to his company or home office (which locals do not care about), but by pointing out the project ' s benefits to the local population
 - The more the project manager can show that the project improves employment, services, availability of products, or infrastructure for the locality or region, the more that local stakeholders will commit to the project.

International Project Management

- **Problems Managing International Projects:**
- **Geo-national issues::**
 - Exchange risk & currency: Economic swings can alter exchange rates and relative currency values, and significantly affect project costs, revenues, and profits.
- **Offset:**
 - The purpose of the offset is to reduce the net amount of payments going outside the country.
 - **Direct offset**: often subject to requirements concerning spending in the host country called an “offset” or counter trade, contractor to spend a percentage of project cost on local labor, locally supplied materials or products, local airlines and transportation services, and local subcontractors
 - **Indirect Offset**: requires the contractor to contribute to non-project endeavors such as business enterprises or improvements to roads, communications, or other national infrastructure..
- **Export Import restrictions:**
 - Mostly regulated by the government organization
 - Must comply with the rules & regulations
- **Time zone:**
 - If working in different time zones, overlap the working hours to run the activities smoothly

Elements of Budgets & Estimates

- **Components of Project expenses**
 - **Direct labour expenses:** charges of the labour of the project , based on the number of hours of the activity and the rates of the resources
 - **Direct Non labour expenses:** charges applied directly to the tasks. Raw material, equipments used **specifically for the project** , installation & operations. Sometimes calculated for individual work package or some percent say 5% of the direct labour expenses
 - **Overhead expenses (indirect expenses) & General & Administration expenses :** not specific to the tasks but related to doing business such whatever necessary to house & support the labour, building rents, utilities, electricity, clerical assistance, insurance , equipment etc.
 - **Profit & total billing:** amount left after all expenses are covered (usually don't appear in lower level budgets)
 - **Contingency Amount:** Buffer amount kept reserved incase of any unforeseen events occurs

Various approaches to share the overhead expenses, General & Administration expenses across various projects

Cost Estimation & Budgeting

Cost estimation techniques:



Project Cost Accounting Systems

8.7 Project cost accounting system

PERT & CPM

Activity Definition

- **Work Breakdown Structure (WBS):** “A work breakdown structure defines all the things a project needs to accomplish, organized into multiple levels, and displayed graphically
- **Steps to create WBS**
 1. Define the project goals and objectives. Begin with the project charter—the scope, objectives and who is participating in the project—determine what it is and describe it.
 2. The next level down is the project phases: break the larger project statement of intent into a series of phases that will take it from conception to completion.
 3. What are your deliverables? List them all and note what is necessary for those deliverables to be deemed successfully delivered (sub-deliverables, work packages, resources, participants, etc.).
 4. Take your deliverables from above and break them down into every single task and subtask that is necessary to deliver them. Make a list of all those tasks.
 5. With the tasks now laid out, assign them to the team. Give each team member the tools, resources and authority they need to get the job done.