Areas of Application

- Construction Industry
- Engineering Industry
- Information Systems Development
- Research Programmes
Successful Project Management

- Project
- Management
- Success
Project Definition

- A multiple resource work assignment with well defined aims and objectives with an identifiable beginning and end.
  - Generally a ONCE OFF undertaking
  - TEAM focused
  - PREDICTABLE
Management's Role

- To provide well tested and proven management principles and practice for Planning, Organising, Controlling and Directing the project.

- **PROJECT PLANNING**
  - Before

- **PROJECT CONTROL**
  - During
Criteria for Success

- Completing the right project, on time and within budget

- Right Project → Technical Specification → Quality

- On Time → The Timescale → Window of Opportunity

- Within Budget → Funding → Cost
Good Project Managers deliver a successful project by constantly creating their own good fortune.
To achieve success

- Using a good set of principles and techniques will greatly improve the chances of eventual project success. These principles and techniques must be properly managed.

  - The magnitude of most projects usually requires substantial monetary investment. Clients and senior management are assured that their investment is safe when they know that professional principles are being applied to their project. They will be quietly confident that their project is in safe hands when they see project management methods being put in place. If they didn't see this happening they would have cause for concern.
Project are generally complex undertakings which use a wide range of resources over a period of time. These resources, their interactions and their timespan must be properly managed.

- The resources will include people, plant and materials. The staff and plant must be properly scheduled so that no time is lost and expensive craftsmen and machinery are not being paid or hired to be idle. Materials must be purchased at just the right time to gain the best credit advantage. All of this happens over a period of time and best use must be made of the project's timespan.
INFORMATION SYSTEMS

Projects

- Creating new Information Systems
- Correcting or updating existing Information Systems
Project Management Planning

(Top Level)

- Select the team
- Define the environment
- Prepare the Development Plan
- Prepare the Quality Plan
- Prepare the Configuration Plan
- Evaluate and adopt the Plans
Project Planning

- Defining a strategy for completing the project.

  - When do we plan?

    At the end of every phase we plan the next phase in detail and update our outline plan for the complete project.
spm

Project Organising

- Set dates for Review meetings
- Firm up development teams
- Prepare individual work schedules
- Set up accounting procedures
- Decide forms and documents
Project control uses a repeating strategy of monitoring project progress at set intervals, gathering data relating to the progress, analysing that data to ensure that the project is still on course relative to the original plan and making appropriate decisions to ensure the project stays on course.
Project Management
Planning
(Top Level)

Quality Plan
- ISO 9000
- Standards
- Guidelines
- Control Structures
- Good Practice

Development Plan
- WBS
  Phases
  Activities
  Tasks
- Gantt Charts
- PERT Charts
- Critical Path
- Milestones

Configuration Plan
- Releases
- Delivery Strategy
- Customising
Initiate Project File

- To contain all reports, charts, designs, specifications, lists, forms, and similar documentation that relates to the project.

- Typically these will include the Project Brief, the Feasibility Study and the outputs from each phase of the project.

- This file provides historical data for future projects.
Planning for project success

1 - Prepare a Work Breakdown Structure (WBS)

- List the PHASES, ACTIVITIES and TASKS
- Add TIME ESTIMATES
- Assign DEPENDENCIES
- Allocate RESOURCES

<table>
<thead>
<tr>
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<th>Name</th>
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<td>Assemble project team</td>
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<td>List Phases, Activities and Tasks</td>
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<td>Define dependencies</td>
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Systems Project Phases

IDENTIFICATION
INVESTIGATION
ANALYSIS
DESIGN
DEVELOPMENT
INSTALLATION
MAINTENANCE

Outline plan for the complete project
Detailed plan for the next phase
Planning for project success

- Convert the WBS to a GANTT CHART
  - Also called a bar chart

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<td>Investigate locations</td>
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<td>Investigate loans</td>
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<td>4</td>
<td>Investigate local laws</td>
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<tr>
<td>5</td>
<td>Visit sites</td>
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<td>6</td>
<td>Choose among options</td>
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<td>Apply for health permit</td>
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<td>Apply for loan</td>
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</table>
3 - Prepare NETWORK DIAGRAMS

- Also called PERT Diagrams
  (Project Evaluation and Review Techniques)

- ACTIVITY-ON-ARROW or ACTIVITY-ON-NODE
NETWORK DIAGRAM
(PERT Chart)
Activity-on-Node

- **EARLIEST START TIME** (EST)
- **LATEST START TIME** (LST)
- **EARLIEST FINISH TIME** (EFT)
- **LATEST FINISH TIME** (LFT)

- **FLOAT**
- **CRITICAL ACTIVITIES**
- **CRITICAL PATH**
- **MILESTONES**

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<th>LST</th>
<th>Float</th>
<th>LFT</th>
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Planning for project success

Prepare Resource Histograms

- Levelling staff resources to ensure efficient usage of normal time and overtime.
Planning for project success

- Prepare project budgets
  - Project funding matters
  - Project costings
  - Cash flow projections
Automated Project Planning

- **CASE Tool** - A computer application that automates the manual process of preparing a WBS, Gantt Chart, PERT diagram, Resource Histograms and for budget control.

- Designed to work the way you work.

- Examples of commercially available products are:
  - Project Management Workbench (PMW)
  - MACproject
  - Microsoft Project