IT PROJECT MANAGEMENT

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Introduction to Project Management

▶ The application of knowledge, skills, tools, and techniques to meet the project requirements. (PMBOK)

▶ It is a disciplined approach to defining, planning, strategizing, communicating, and controlling a project

▶ Creates a vision for success, for clients and teams, and gets everyone on the same page of what's needed to stay on track for success

▶ Enables organizations to execute projects effectively and efficiently.

▶ Technique- a defined systematic procedure employed by a human resource to perform an activity to produce a product or result or deliver a service

　▶ May employ one or two tools.

▶ Tools – something tangible such as a template or software program, used in performing an activity to produce a product or result.

▶ Effective Project Management helps individuals, groups, organizations to:

　▶ Meet business objectives

　▶ Satisfy stakeholder expectations

　▶ Deliver the right products at the right time

　▶ Resolve problems and issues

　▶ Respond to risk in a timely manner

Project Management

- Poorly Managed projects may result in:
  - Missed deadlines
  - Cost overruns
  - Poor quality service / product
  - Rework
  - Uncontrolled expansion of project
  - Loss of reputation among clients / potential client
  - Unsatisfied stakeholders
  - Failure to achieve project objective.

Project Management

- Benefits
  - Stakeholder Benefits
  - Better scheduling and budgeting
  - Better cost containment
  - Better communication
  - Better change management processes including configuration management
  - Better quality planning, quality assurance processes, and quality acceptance steps
  - Better risk management

Introduction to Project Management

▶ **Team Member Benefits**

- Less rework

- Better definition of work requirements

- Better understanding of roles and responsibilities

- Improved productivity of work through

▶ **Functional Manager Benefits**

- Better allocation of resources

- Better communication throughout the company

- Improved work instructions

- Improved documentation processes

- Department resource levelling, staff retention and training

- Quality processes for their expertise
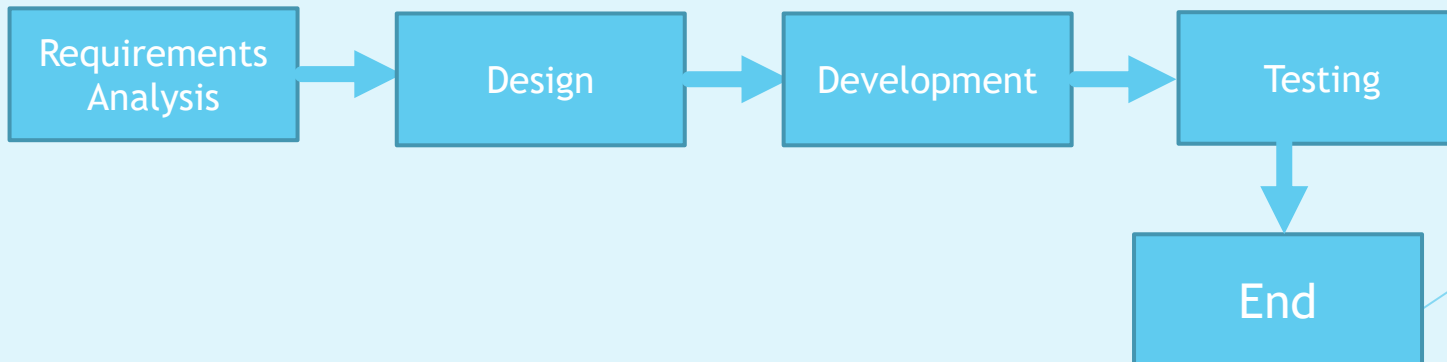
Introduction to Project Management

▶ **Senior Manager Benefits**

- Better use of company resources

- More attention to risk management

- Better project cost and schedule estimating

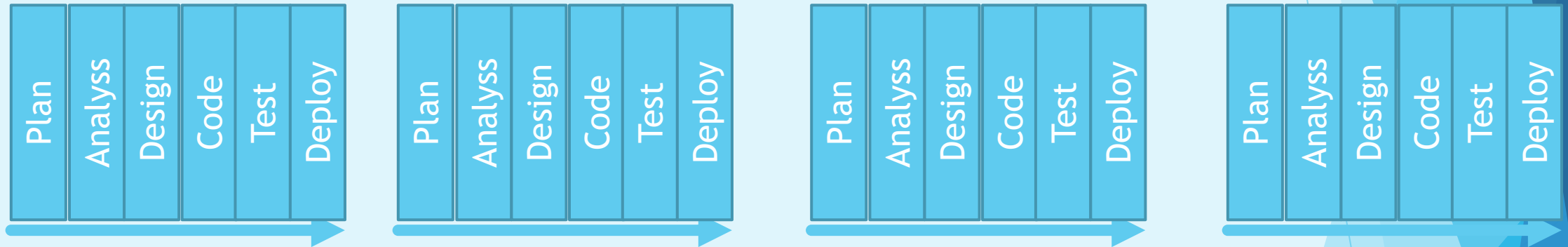- Better project monitoring and control

Project Life Cycle

▶ **Project and Development Life Cycles**

  ▶ A project life cycle is the series of phases that a project passes through from its start to its completion.

   ▶ The phases may be sequential, iterative or overlapping.

   ▶ Life cycles can be predictive or adaptive.

  ▶ Development Life cycle is the phase(s) of a project associated with the development of the product, service or result.

   ▶ Can be predictive, iterative, incremental, adaptive, or a hybrid model.

  ▶ Predictive Life Cycle – the project scope, time, and cost are determined in the early phases.

   ▶ Any changes are carefully managed.

   ▶ Also referred to as waterfall life cycles.

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│ Requirements │ ──▶ │    Design    │ ──▶ │ Development  │ ──▶ │   Testing    │
│   Analysis   │     │              │     │              │     │              │
└──────────────┘     └──────────────┘     └──────────────┘     └──────────────┘
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                                                                │     End      │
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Project Life Cycle

▶ Iterative Life Cycle – project scope generally determined early in the project life cycle, but time and cost estimates are routinely modified as the project team's understanding of the product increases.

  ▶ Develops program through repeated cycles, while increments successively add to the functionality of the product.

Plan	Analyss	Design	Code	Test	Deploy

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Plan	Analyss	Design	Code	Test	Deploy

Plan	Analyss	Design	Code	Test	Deploy

▶ Frequent deliveries after each iteration.

  ▶ With deliveries improved on in the next iteration

▶ Needed when requirements are abstract.

▶ To accommodate changes in scope.

▶ Good for research projects.

Project Life Cycle

- Life Cycles
  - Incremental Life Cycle – the deliverable is produced through a series of iterations that successfully add functionality within a predetermined time frame.
    - The deliverable contains the necessary and sufficient capability to be considered complete only after the final iteration.
    - Develops features incrementally i.e. one by one
      - Features are usable and consumable
  - Adaptive life cycles are agile, iterative or incremental
    - The detailed scope is defined and approved before the start of iteration.
    - Requirements are dynamic.
    - Activities are repeated until correct.
    - Also referred to as agile or change-driven life cycle.
  - Hybrid Life Cycle – a combination of a predictive and an adaptive life cycle.

Project Life Cycle

- ▶ **Project Phase**
  - ▶ A collection of logically related project activities that culminates in the completion of one or more deliverables.
  - ▶ Phases in a life cycle can be described by a variety of attributes which may be measurable and unique to a specific phase.
  - ▶ Attributes
    - ▶ Name
    - ▶ Number
    - ▶ Duration
    - ▶ Resource Requirements
    - ▶ Entrance criteria for a project to move to the next phase
    - ▶ Exit criteria for the completion of a phase

Project Life Cycle

- Project phases may be established based on various factors including
  - Management needs
  - Nature of project
  - Unique characteristics of the organization, industry, or technology
  - Project elements including technology, engineering, business, process, or legal
  - Decision points e.g. funding, go/no-go decision
- Phase Gate
  - Held at the end of a phase.
  - Project's performance are compared to project and business documents including:
    - Project business case
    - Project charter
    - Project Management Plan
    - Benefits management plan
  - A decision (go/no-go decision) is made as a result of this comparison to:
    - Continue to the next phase
    - Continue to the next phase with modification
    - End the project
    - Remain in the phase or
    - Repeat the phase or elements of it.