Introduction Chapter 1

What is a Project?

- Projects are *complex, one-time* processes.
- Projects are *limited* by budget, schedule, and resources.
- Projects are developed to resolve a *clear* goal or set of goals.
- Projects are *customer-focused*.

A project is a **temporary endeavor** undertaken to create a unique product, service, or result.

PMBoK 5th edition

General project characteristics

- Projects are *ad hoc* endeavors with a clear life cycle.
- Projects are *building blocks* in the design and execution of organizational strategies.
- Projects are responsible for the newest and most *improved products, services, and* organizational processes.
- Projects provide a philosophy and strategy for the management of change.
- Project management entails crossing functional and organizational boundaries.

General project characteristics

- Traditional *management functions* of planning, organizing, motivation, directing, and control apply to project management.
- Principal outcomes of a project are the satisfaction of *customer requirements* within the constraints of technical, cost, and schedule objectives.
- Projects are terminated upon successful completion of *performance objectives*.

Process & Project Management

- Repeat process or product
- Several objectives
- Ongoing
- People are homogenous
- Well-established systems
- Greater certainty
- Part line organization
- Established practices
- Supports status quo

- New process or product One objective One-shot-limited life

- More heterogeneous Integrated system efforts Greater uncertainty Outside of line organization Violates established
- practice
- Upsets status quo

PROCESS

PROJECT

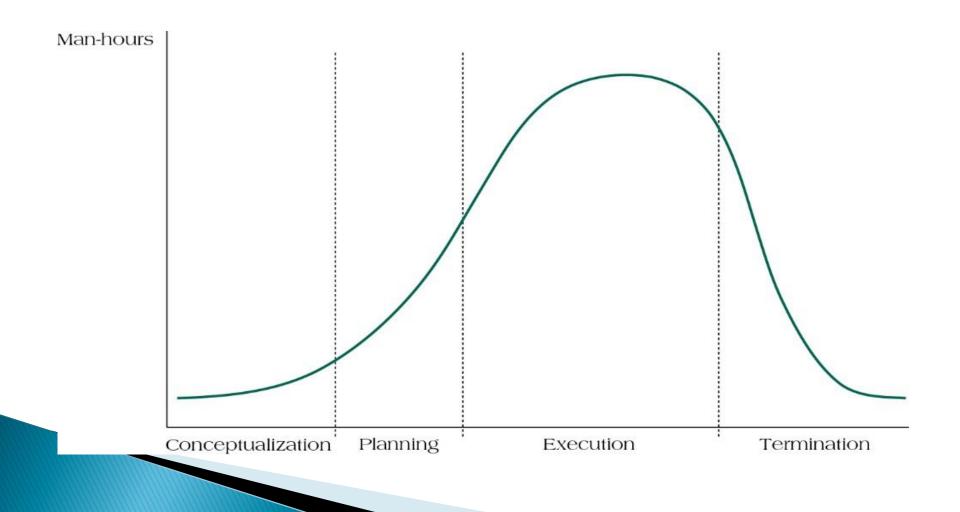
Project Success Rates

- Software & hardware projects *fail at a 65%* rate.
- Over half of all IT projects become runaways.
- Only 30% of technology-based projects and programs are a success.
- Ten major government contracts have over \$16 billion in cost overruns and are a combined 38 years behind schedule.
- Only 2.5% of global businesses achieve 100% project success and over 50% of global business projects fail.
- More than \$8 billion of \$53 billion the Pentagon spent on Iraqi reconstruction projects was lost due to fraud, waste, and abuse.

Why are projects important?

- 1. Shortened product life cycles
- 2. Narrow product launch windows
- 3. Increasingly complex and technical products
- 4. Emergence of global markets
- 5. An economic period marked by low inflation

PROJECT LIFE CYCLES



Project Life Cycles

A *project life cycle* refers to the stages in a project's development and are divided into four distinct phases:

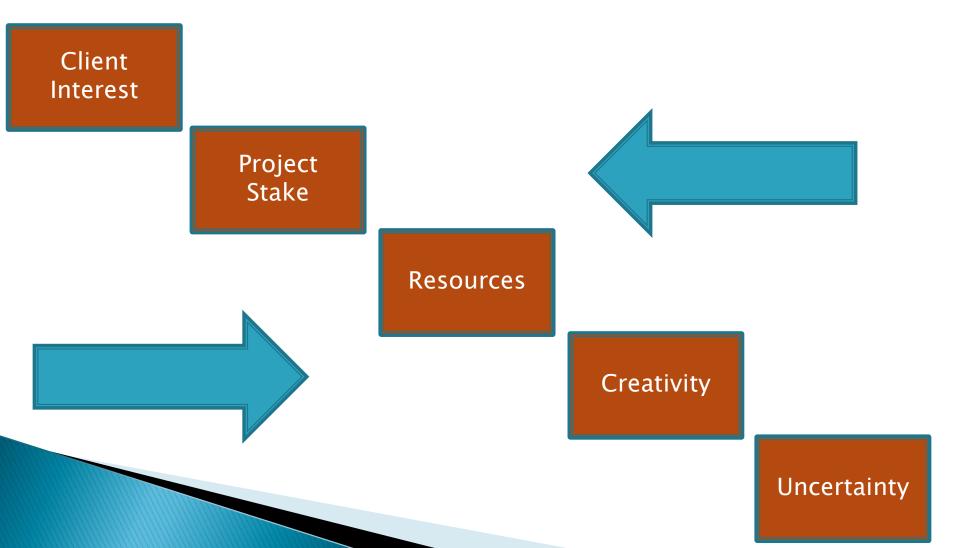
• *Conceptualization* – development of the initial goal and technical specifications of the project. Key *stakeholders* are identified and signed on at this phase.

Planning – all detailed specifications, schedules, schematics, and plans are developed.

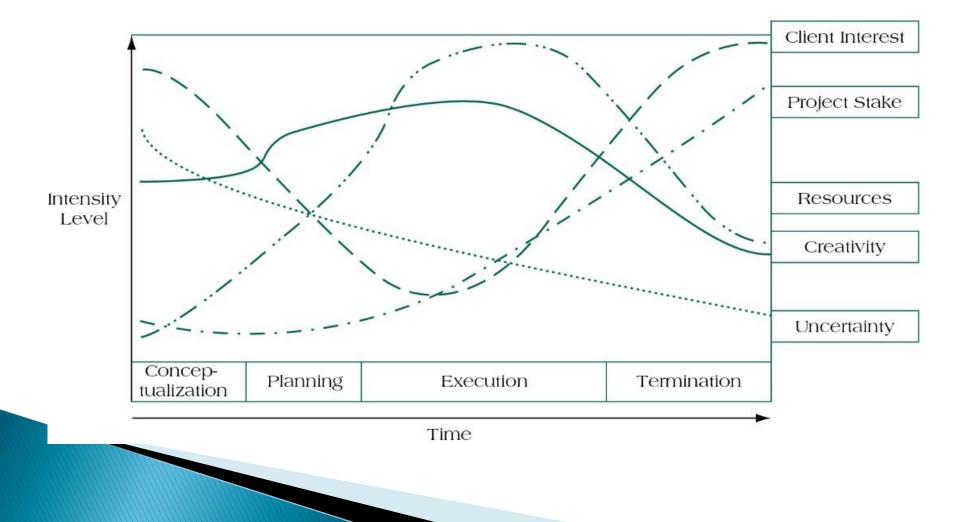
• *Execution* – the actual "work" of the project is performed.

 Termination – project is transferred to the customer, resources reassigned, project is closed out.

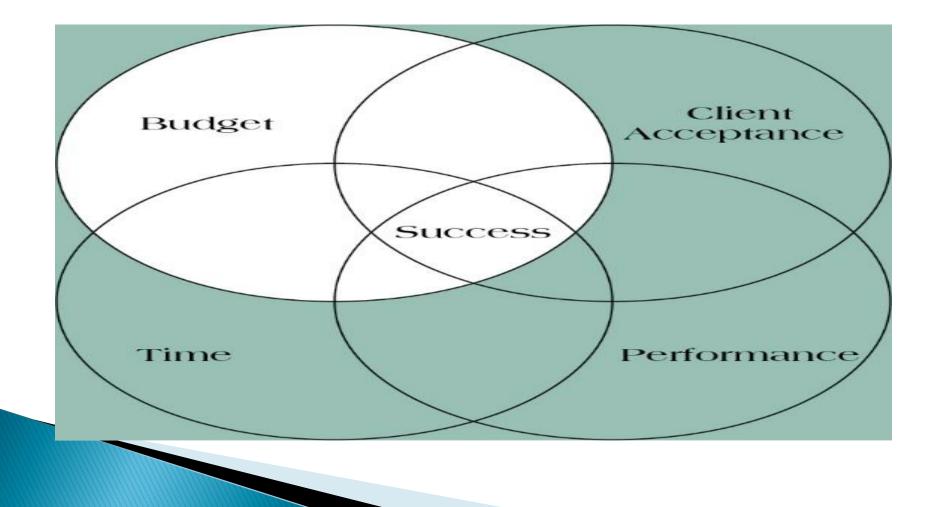
Change during project life cycle



Project life cycle and their effects

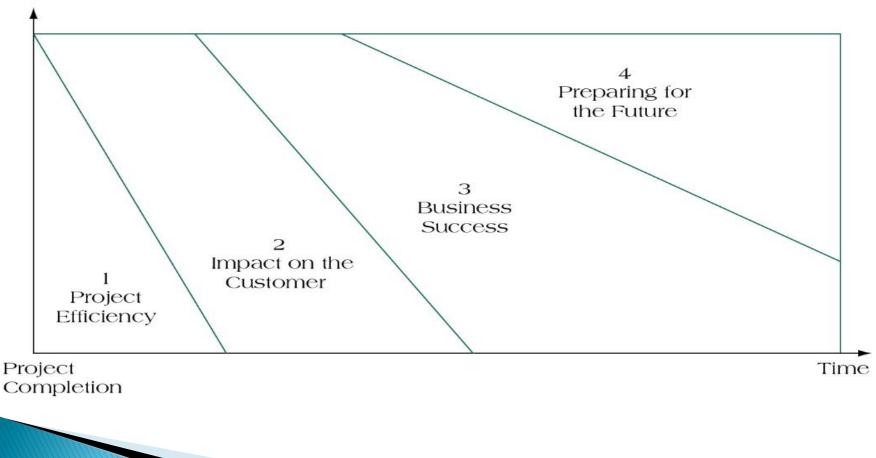


Quadruple constraint of project success



Four dimension of project success





Understanding success criteria

Iron Triangle	Information System	Benefits (Organization)	Benefits (Stakeholders)
Cost	Maintainability	Improved efficiency	Satisfied users
Quality	Reliability	Improved effectiveness	Social and environmental impact
Time	Validity	Increased profits	Personal development
	Information quality	Strategic goals	Professional learning, contractors' profits
	Use	Organization learning	Capital suppliers, content
		Reduced waste	Project team, economic impact to surrounding community

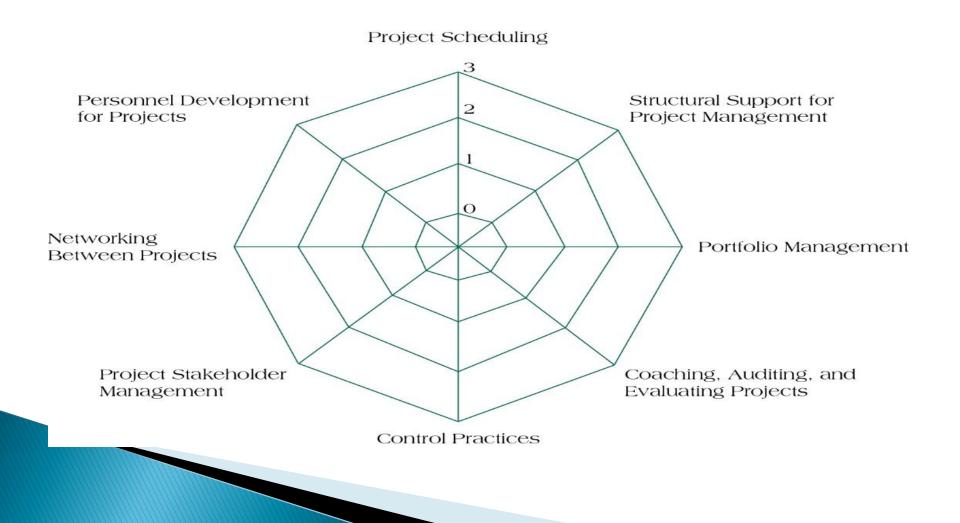
Six criteria for it project success



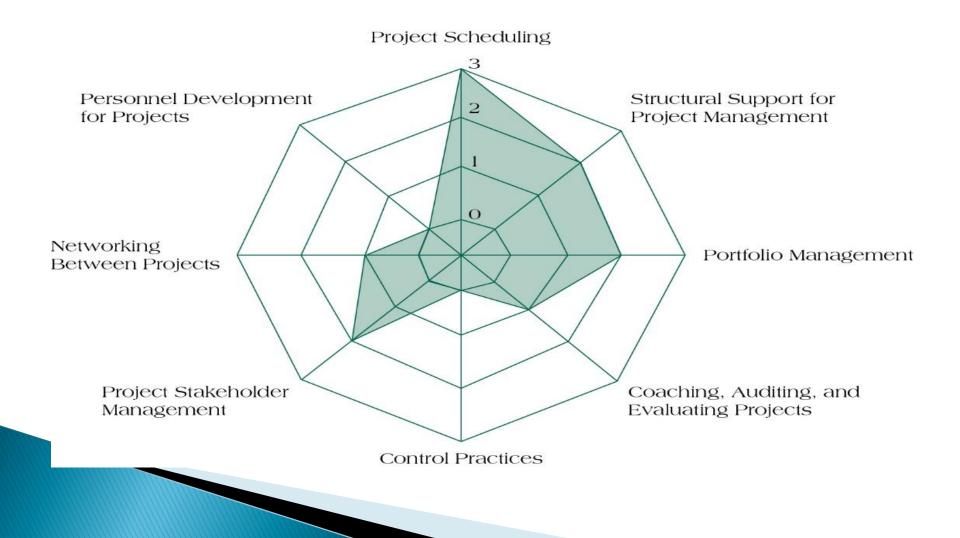
Project management maturity

- Project management maturity (PMM) models are used to allow organizations to benchmark the best practices of successful project management firms.
- Benchmarking is the practice of systematically managing the process improvements of project delivery by a single organization of a period of time.

Spider web diagram



Spider web with embedded organizational evaluation



Project Management Maturity Generic Model



Institutionalized, seeks continuous improvement

Moderate Maturity

Defined practices, training programs, organizational support

Low Maturity

Ad hoc process, no common language, little support

Developing Project Management Maturity

Project Management Maturity (PMM) Models

- Center for Business Practices
- Kerzner's Project Management Maturity Model
- ESI International's Project Framework
- SEI's Capability Maturity Model Integration

Center for Business Practices PMM

- Level 1: Initial Phase
- Level 2: Structure, Process, and Standards
- Level 3: Institutionalized Project Management
- Level 4: Managed
- Level 5: Optimizing

KERZNER'S PMM MODEL

- Level 1: Common Language
- Level 2: Common Processes
- Level 3: Singular Methodology
- Level 4: Benchmarking
- Level 5: Continuous Improvement

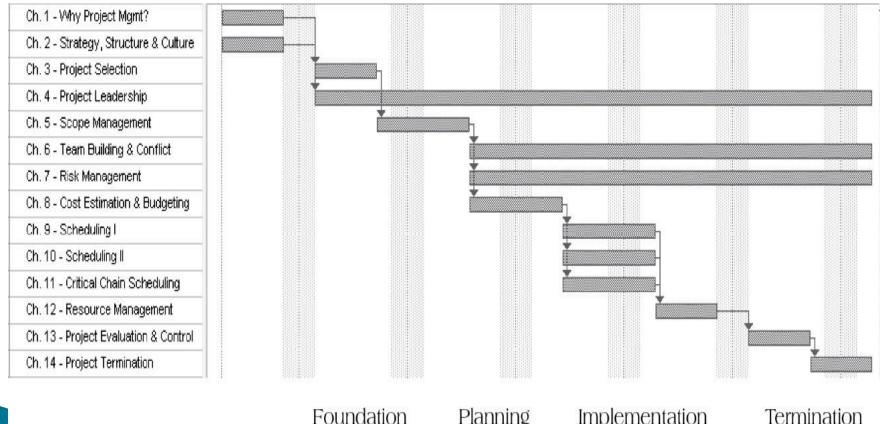
ESI INTERNATIONAL' S PROJECT FRAMEWORK

- Level 1: Ad Hoc
- Level 2: Consistent
- Level 3: Integrated
- Level 4: Comprehensive
- Level 5: Optimizing

SEI'S CAPABILITY MATURITY MODEL INTEGRATION

- Level 1: Initial
- Level 2: Managed
- Level 3: Defined
- Level 4: Quantitative Management
- Level 5: Optimizing

Project Elements and Text Organization



Foundation

Planning

Implementation

Project Manager Responsibilities

- 1. Selecting a team
- 2. Developing project objectives and a plan for execution
- 3. Performing risk management activities
- 4. Cost estimating and budgeting
- 5. Scheduling
- 6. Managing resources

OVERVIEW OF THE PROJECT MANAGEMENT INSTITUTE'S PMBOK KNOWLEDGE AREAS

4. Integration Management

- 4.1 Develop Project Charter
- 4.2 Develop Project Management Plan
- 4.3 Direct & Manage Project Work
- 4.4 Monitor & Control Project Work
- 4.5 Perform Integrated Change
 - Control
- 4.6 Close Project or Phase

7. Cost Management

- 7.1 Plan Cost Management
- 7.2 Estimate Costs
- 7.3 Determine Budget
- 7.4 Control Costs

10. Communications Management

- 10.1 Plan Communications Management
- 10.2 Manage Communications
- 10.3 Control Communications

5. Scope Management

5.1 Plan Scope Management

Project Management

- 5.2 Collect Requirements
- 5.3 Define Scope
- 5.4 Create WBS
- 5.5 Validate Scope
- 5.6 Control Scope

8. Quality Management

- 8.1 Plan Quality Management
- 8.2 Perform Quality Assurance
- 8.3 Control Quality

11. Risk Management

- 11.1 Plan Risk Management
- 11.2 Identify Risks
- 11.3 Perform Qualitative Risk Analysis
- 11.4 Perform Quantitative Risk Analysis
- 11.5 Plan Risk Responses
- 11.6 Control Risks

13. Stakeholder Management

- 13.1 Identify Stakeholders
- 13.2 Plan Stakeholder Management
- 13.3 Manage Stakeholder
 - Engagement
- 13.4 Control Stakeholder Engagement

6. Time Management

- 6.1 Plan Schedule Management
- 6.2 Define Activities
- 6.3 Sequence Activities
- 6.4 Estimate Activity Resources
- 6.5 Estimate Activity Durations
- 6.6 Develop Schedule
- 6.7 Control Schedule

9. Human Resource Management

- 9.1 Plan HR Management
- 9.2 Acquire Project Team
- 9.3 Develop Project Team
- 9.4 Manage Project Team

12. Procurement Management

- 12.1 Plan Procurement Management
- 12.2 Conduct Procurements
- 12.3 Control Procurements
- 12.4 Close Procurements