FUNDAMENTALS OF PROJECT MANAGEMENT

Chapter 1

Project Management :The Key to Thriving in The New Project –Driven World

Introduction

- Projects are the New Way to Work
- Project Management is Keeping Pace with Global Change
- Project Management as a Strategic Strength

The Art and Science of Project Leadership

- Agreement among the project team, customers, and management on the goals of the project
- A plan that shows an overall path and clear responsibilities and that can be used to measure progress during the project
- Constant ,effective communication among everyone involved in the project
- A controlled scope
- Management support

Processes are not leadership

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Chapter 2

Project Management :Foundation Principles of Project Management

Projects Require Project Management

- Every project has a beginning and an end
- Every project produces a unique product

Some examples of projects

- Split the atom
- Chunnel between England and France
- Introduce Windows Vista
- Disneyland's Expedition Everest
- Engineering redesign
- An advertising firm produces print and TC adds to promote a new razor
- Manufacturing engineers document their processes to gain ISO certification

Projects are unique and temporary

"Projects, rather than repetitive tasks, are now the basis for most value-added in business"

-Tom Peters

Additional Definitions

- *"A project is a unique venture with a beginning and an end, conducted by people to meet established goals within parameters of cost, schedule and quality."*

Buchanan & Boddy 92

- *"Projects are goal-oriented, involve the coordinated undertaking of interrelated activities, are of finite duration, and are all, to a degree unique."* *Frame 95*

Elements of Projects

- **Complex**, one-time processes
- **Limited** by budget, schedule, and resources
- Developed to resolve a **clear goal** or set of goals
- **Customer-focused**

Definition of Ongoing Operations

- An Insurance company processes thousands of claims every day
- A bank teller serves over 100 customers daily, providing a few dozen specific services
- Power companies operate hydroelectric dams, controlling the water flowing through and the energy produces ,day after day for decades

Ongoing operations produce similar products and have no defined end.

Project vs. Process Work

Project

- Take place outside the process world
- Unique and separate from normal organization work
- Continually evolving

Process

- Ongoing, day-to-day activities
- Use existing systems, properties, and capabilities
- Typically repetitive

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

PMBOK 2000

Process & Project Management (Table 1.1)

Process	Project
1. Repeat process or product	1. New process or product
2. Several objectives	2. One objective
3. Ongoing	3. One shot – limited life
4. People are homogeneous	4. More heterogeneous
5. Systems in place to integrate efforts	5. Systems must be created to integrate efforts
6. Performance, cost, & time known	6. Performance, cost & time less certain
7. Part of the line organization	7. Outside of line organization
8. Bastions of established practice	8. Violates established practice
9. Supports status quo	9. Upsets status quo

General Project Characteristics (1/2)

- **Ad-hoc** endeavors with a clear life cycle
- **Building blocks** in the design and execution of organizational **strategies**
- Responsible for the **newest** and most improved **products**, services, and organizational **processes**
- Provide a philosophy and strategy for the **management of change**

General Project Characteristics (2/2)

- Entail **crossing** functional and organization **boundaries**
- **Traditional management functions** of planning, organizing, motivating, directing, and controlling apply
- Principal outcomes are the **satisfaction of customer** requirements within **technical**, **cost**, and **schedule constraints**
- **Terminated** upon successful completion

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. Economic period marked by low inflation

Project Success Rates

- Software & hardware projects fail at a 65% rate
- Over half of all IT projects become runaways
- Up to 75% of all software projects are cancelled
- Only 2.5% of global businesses achieve 100% project success
- Average success of business-critical application development projects is 35%.

The Challenge of Managing Projects

- Personnel
- Estimating
- Authority
- Controls

Project Management in Industry –Independent-Project Managers Are Not *(page 22-figure 2.1)*

- 1) Project management
- 2) Business management
- 3)Technical

The Definition of Success

- On time
- On budget
- High quality
  - 1) Scope
  - 2) Performance

  - The Cost –Schedule –Quality Equilibrium
  - Managing Expectations
  - The Ultimate Challenge : No Damage

Project Management Functions

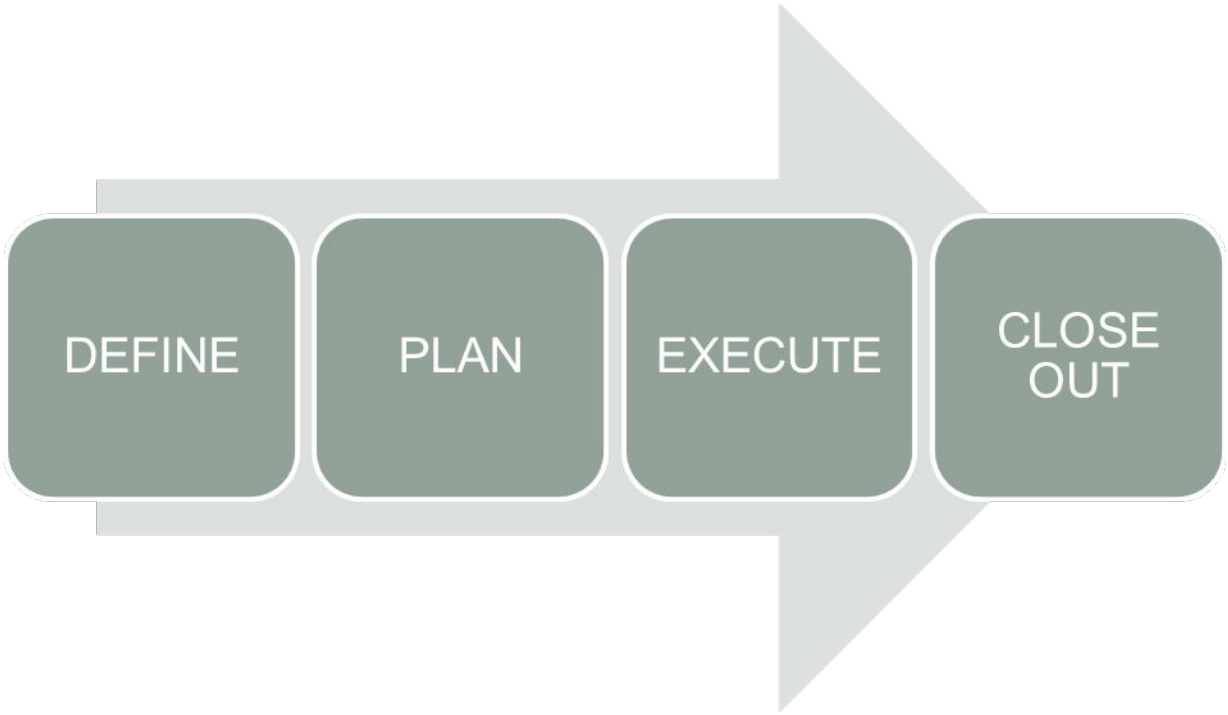
According to the project definition there are two activities involved in this groundwork:

- The project ,manager must determine the purpose, goals, and constraints of the project.
- The project manager must establish basic management controls.
- Project planning puts together the details of how to met the projects goals ,given the constrains.
- Project Control includes activities that keep the project moving *forward(progress measurement, communication, corrective actions)*

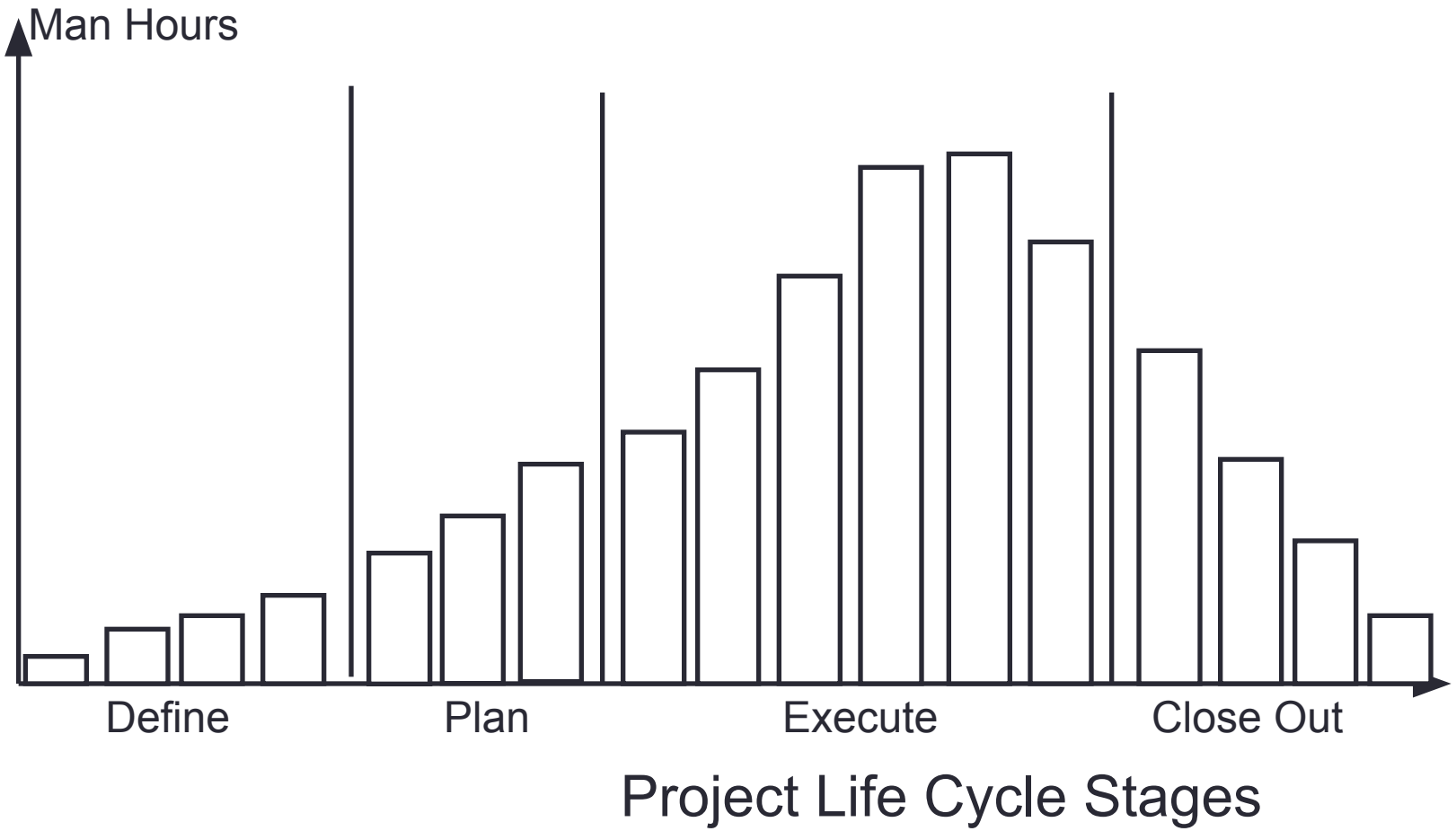
Page 25 –Fig.2.2

Project Life Cycle

- A project life cycle represent the linear progression of a project ,from defining the project through making a plan, executing the work, and closing out the project.



Project Life Cycles

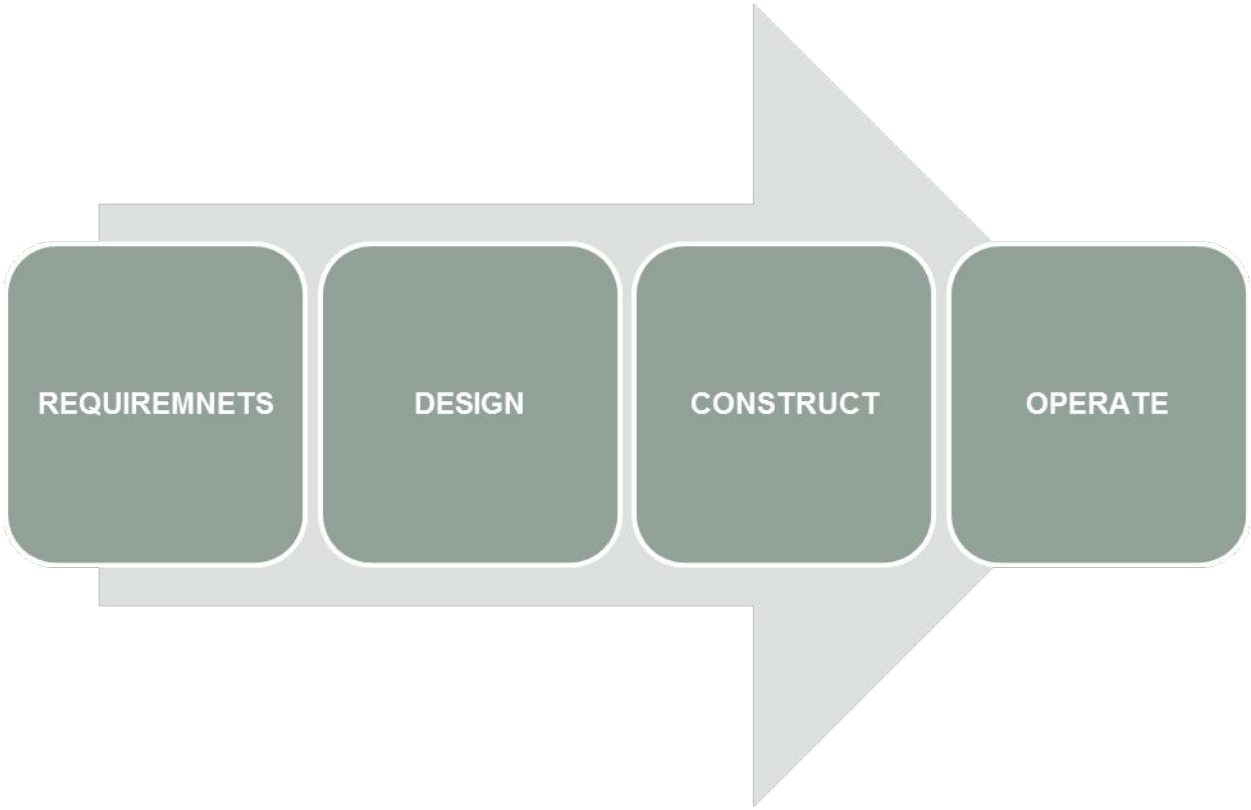


Project Life Cycles

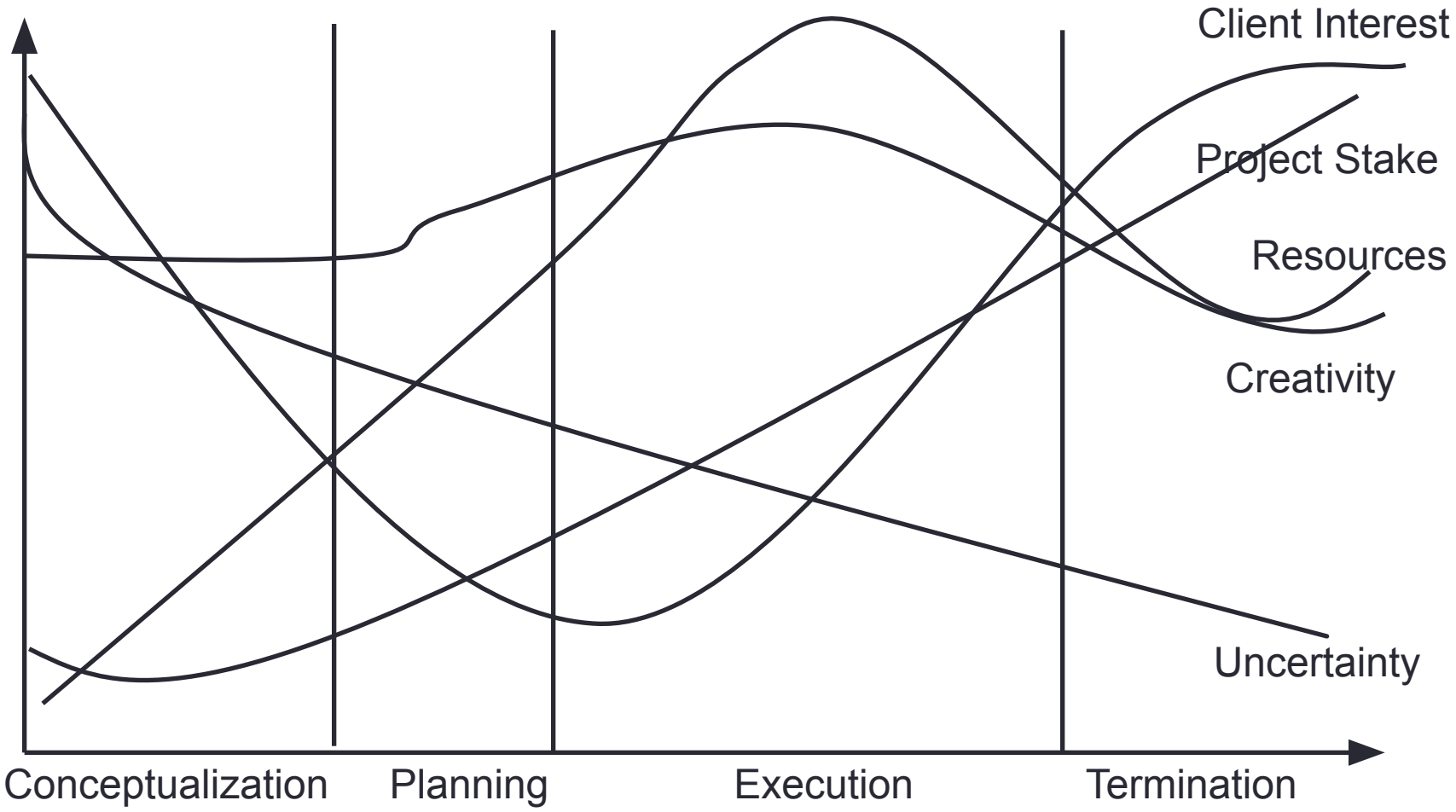
- **Define (Conceptualization)** - the development of the initial goal and technical specifications.
- **Planning** – all detailed specifications, schedules, schematics, and plans are developed
- **Execution** – the actual “work” of the project is performed
- **Close –Out (Termination)**– project is transferred to the customer, resources reassigned, project is closed out.

Product Development Life Cycle

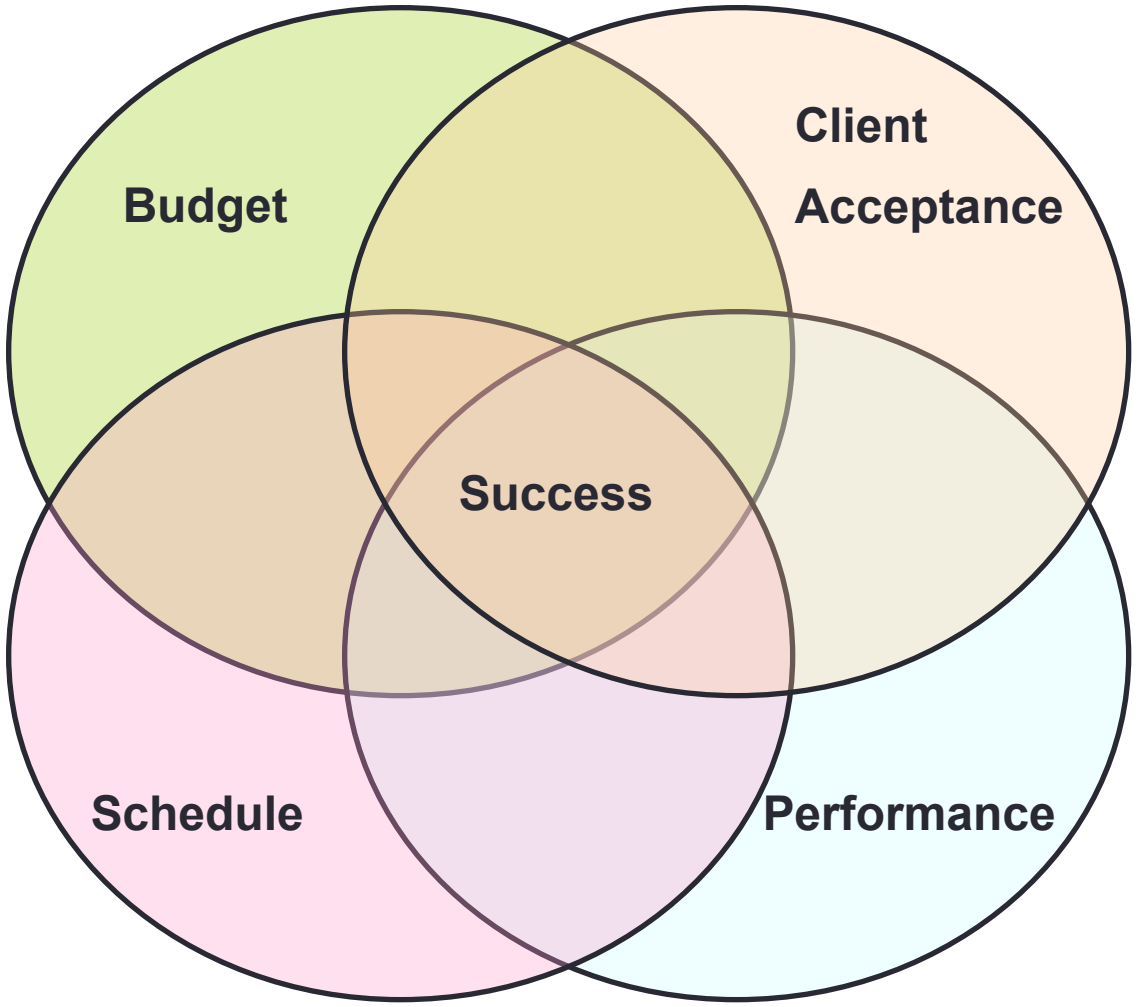
- The four steps necessary to create a new product are known as the product development life cycle.
- *Requirements ,Design, Construct, and Operate*



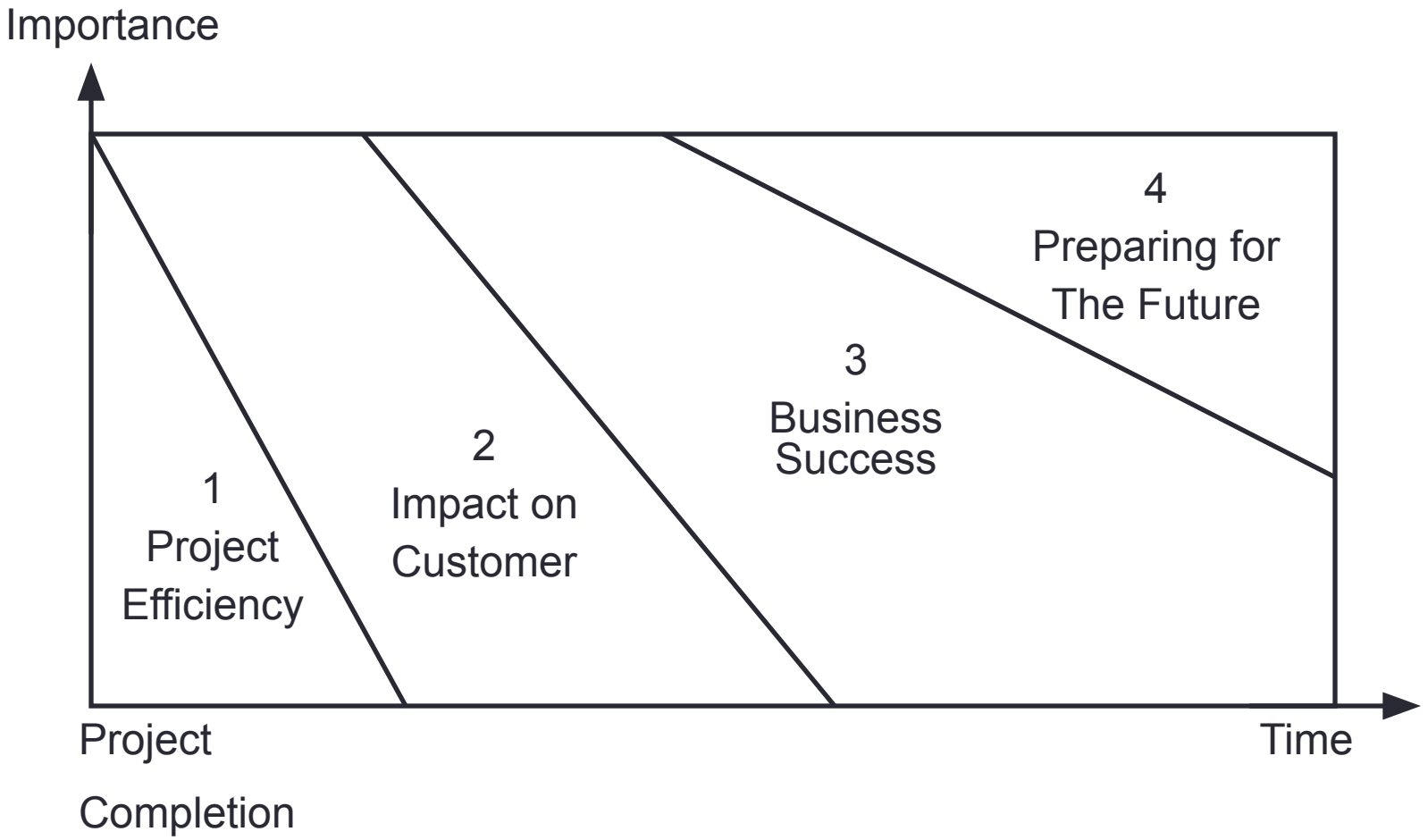
Project Life Cycles and Their Effects



Quadruple Constraint of Project Success



Four Dimensions of Project Success



Product Life Cycle vs. Project Life Cycle

- The product life cycle describes the work required to create the product. The project life cycle focuses on managing the work.
- A product development life cycle may contain many projects, each of which must go through the full project life cycle.

Forms of Organizational Structure

- Functional organizations – group people performing similar activities into ***departments*** ***(page 31 .Fig.2.7)***
- Project organizations – group people into ***project teams*** on temporary assignments
- Matrix organizations – create a dual hierarchy in which ***functions and projects*** have equal prominence

Six Criteria for IT Project Success

- System quality
- Information quality
- Use
- User satisfaction
- Individual Impact
- Organizational impact

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