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# Software Project Management

## Introduction

# Topics

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- Definitions
- Characteristics
- PMI
- Project and Product LC
- Roles
- Process groups
- Project, program, portfolio
- Knowledge areas

# Project Management

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- What's a project?
- PMI definition
  - *A project is a **temporary** endeavor undertaken to create a **unique** product, service or result*
  - Progressively elaborated
  - With repetitive elements

# Проект

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- **Проектът е временно начинание, което се предприема с цел да бъде създаден уникален продукт, услуга или резултат.**
  - Дефиниция на Института за управление на проекти (Project Management Institute)
- **Временен характер – фиксирани начало и край**
  - Краят на един проект се достига, когато бъдат постигнати целите на проекта или стане ясно, че целите на проекта няма или не могат да бъдат удовлетворени.
- **Проектът се създава, за да реши определен проблем и да отговори на определени нужди.**
- **Поетапна разработка**

# What is Project Management

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## PMI definition

- *Project management* is the application of knowledge, skills, tools, and techniques to project activities to meet project requirements.

# Управление на проекти

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- Управление на проекти - прилагането на знания, умения, инструменти и техники върху проектните дейности, за да бъдат постигнати целите и изискванията към проекта.
  - Проектните дейности се извършват от екипът на проекта, докато мениджърът планира, наблюдава и контролира самото изпълнение на дейностите.
  - Успешното изпълнение на проекта се базира на :
    - Обхват - какви цели трябва да се постигнат;
    - Срок - планираното време за изпълнение на проекта;
    - Бюджет - колко ще струва изпълнението на проекта.
- Качеството на проекта е пряко зависимо от балансирането на тези ограничения.
  - Добре управляваните проекти дават желания резултат на време и са в рамките на предвидения бюджет.
  - Ако някое от ограниченията се промени, то поне едно от останалите също се променя.

# Project Life Cycle

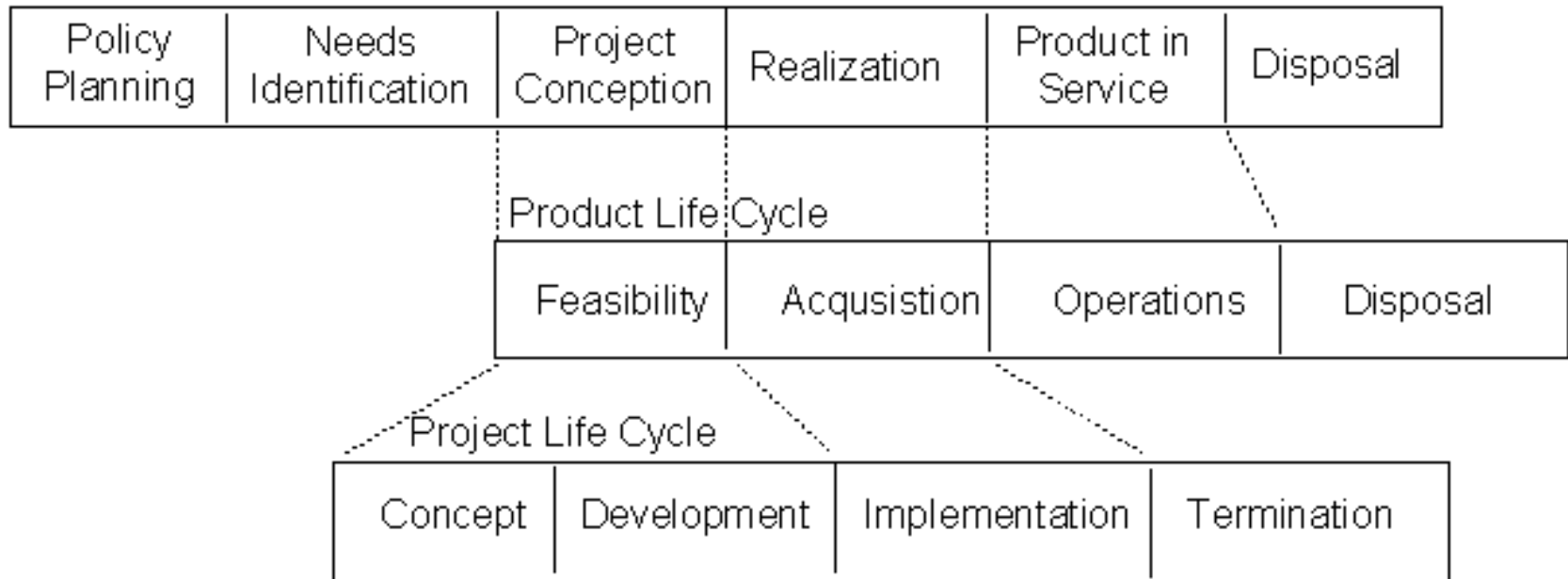
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- Project Life Cycle = *collection of Project phases*
  - *Deliverables*
  - *Milestones*

# Lifecycle Relationships

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Business Life Cycle





# The Role and Responsibility of a Project Manager

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- Project related competencies
  - Financial Management
  - Communication
- A project manager
  - Analogy: conductor, coach, captain

# Other Roles

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- Executive Steering Committee
- Project Sponsor
- Financial Manager
- Project Team Members
- Business Architect or Analyst
- Quality Team
- Customer

# Organization structures

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- 3 basic organization structures
- **Functional:** functional managers report to the CEO
- **Project:** program managers report to the CEO
- **Matrix:** middle ground between functional and project structures; personnel often report to two or more bosses; structure can be weak, balanced, or strong matrix

# Организационни структури

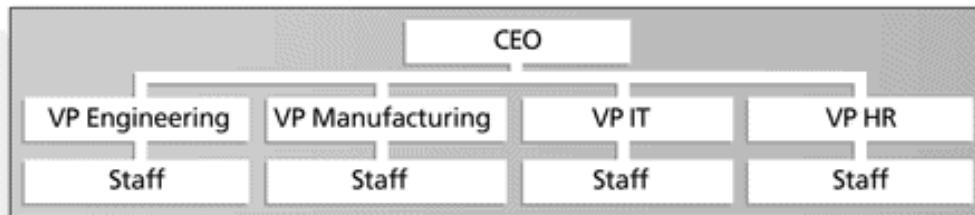
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## 3 основни организационни структури

- **Функционална**
- **Проектна**
- **Хибридна**

# Functional, Project, Matrix

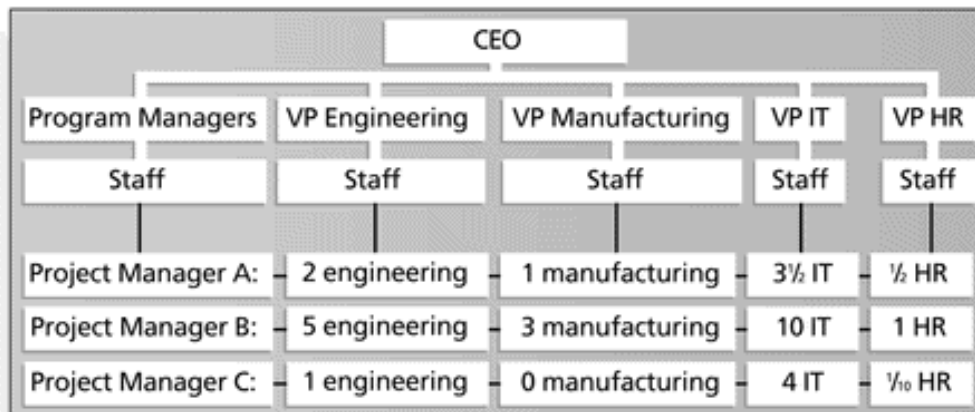
Functional



Project

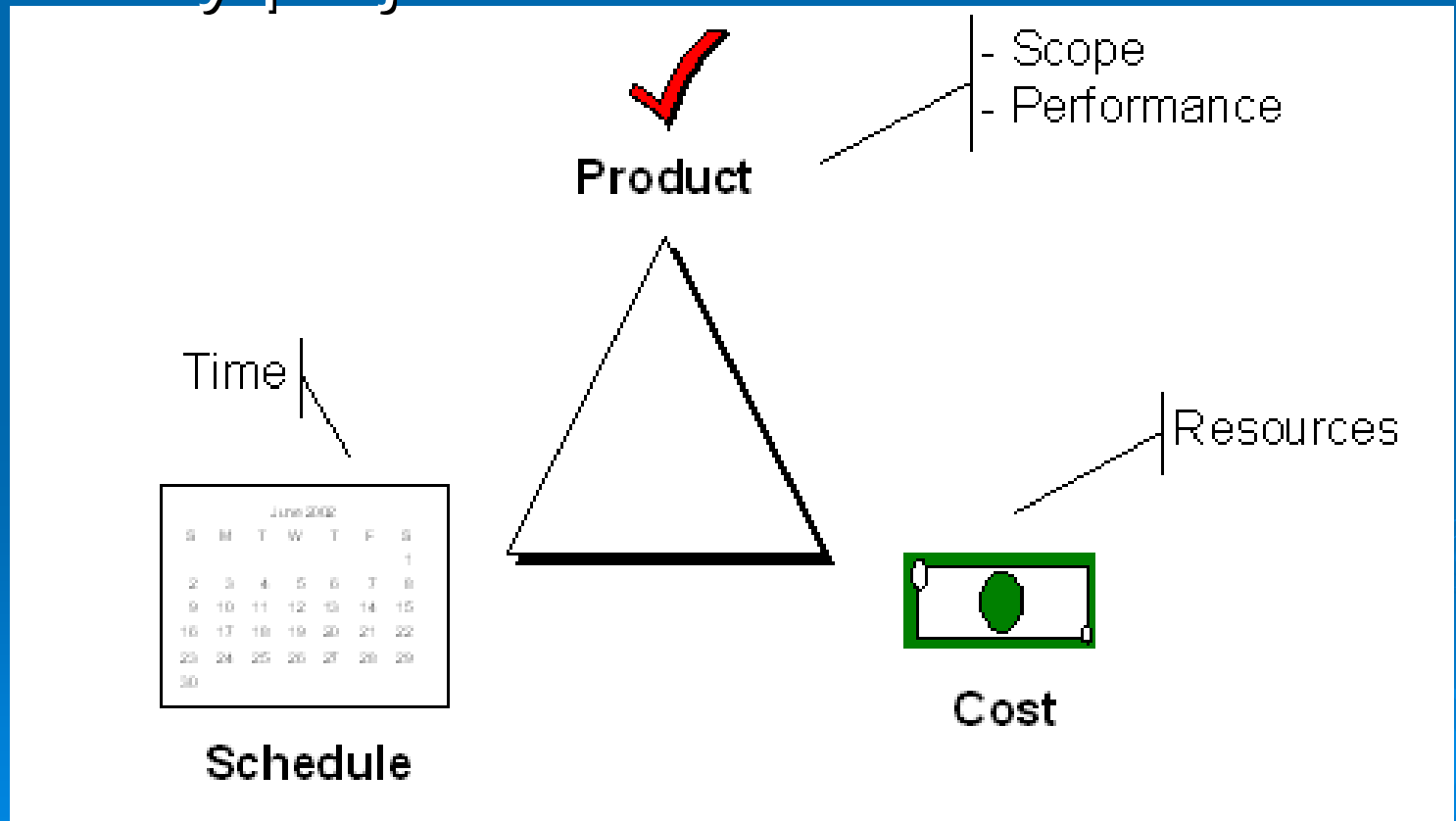


Matrix



# Trade-off Triangle

- Know which of these are fixed & variable for every project



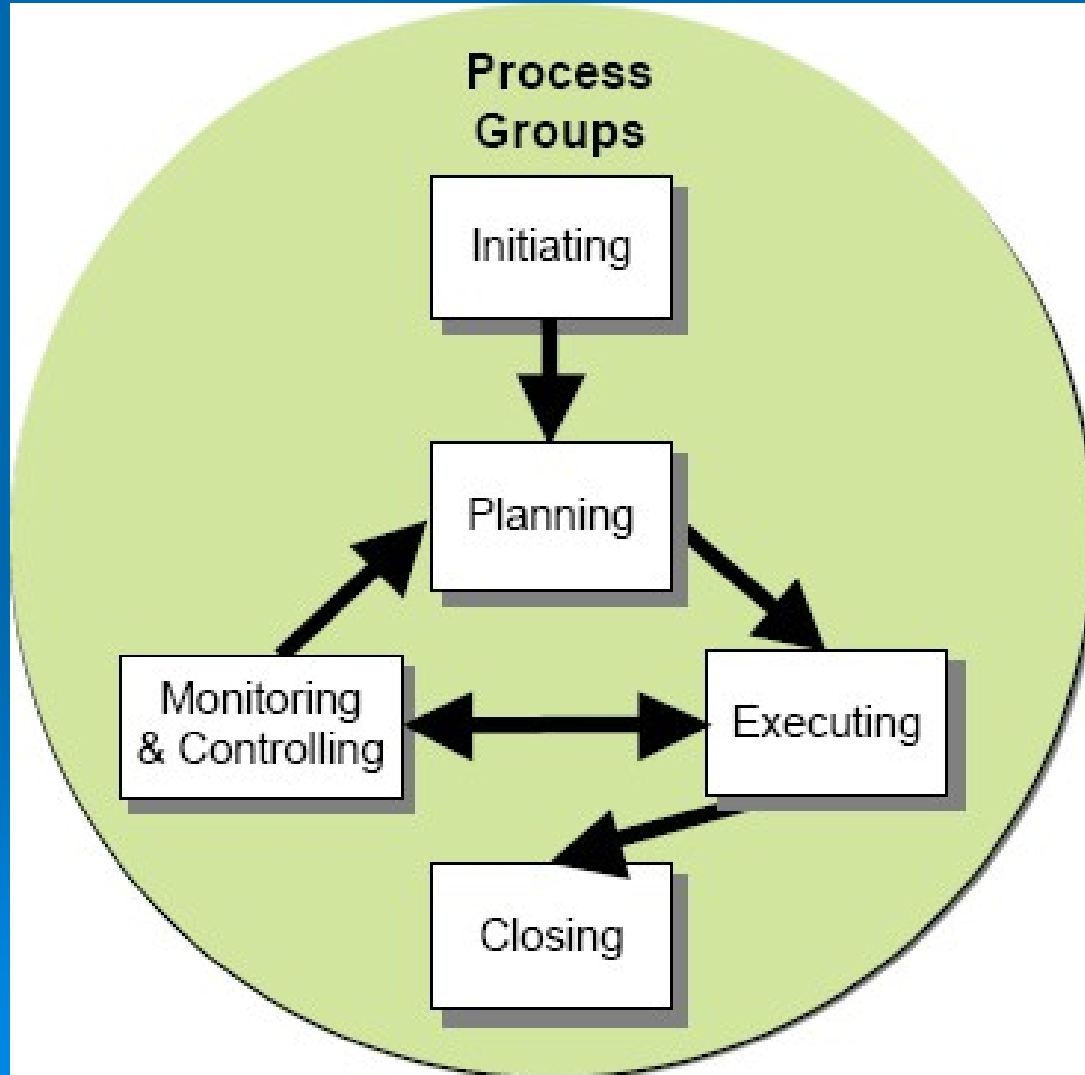
# Project Management Process Group

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- Project management is accomplished through the use of the processes such as:
  - Initiating
  - Planning
  - Executing
  - Monitoring and Controlling
  - Closing

# Process Groups

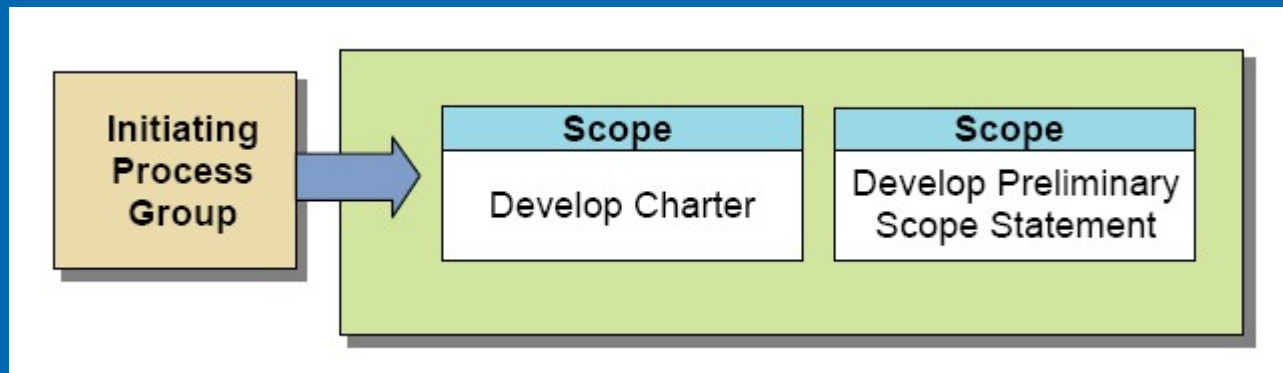
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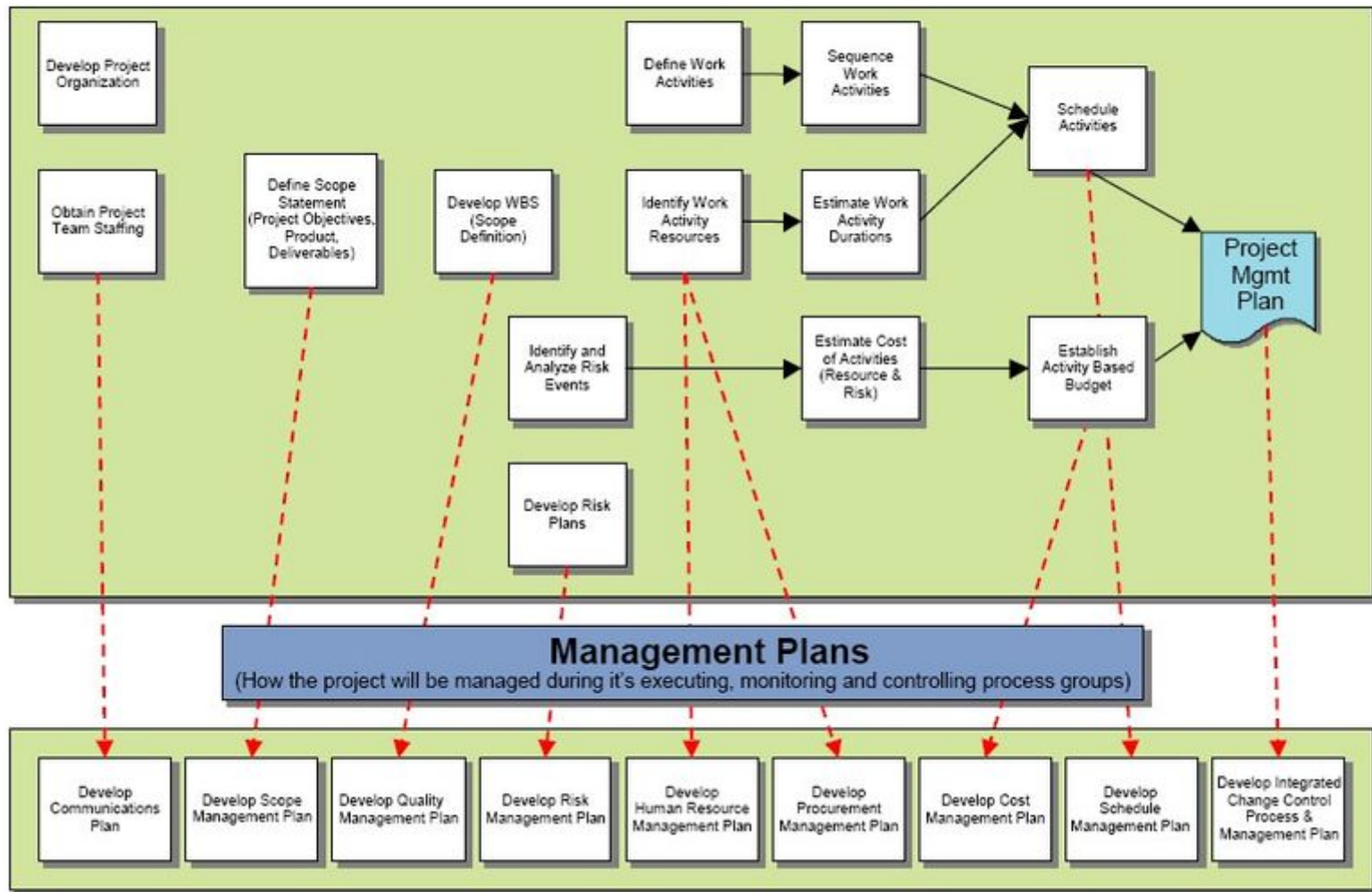
# Initiating

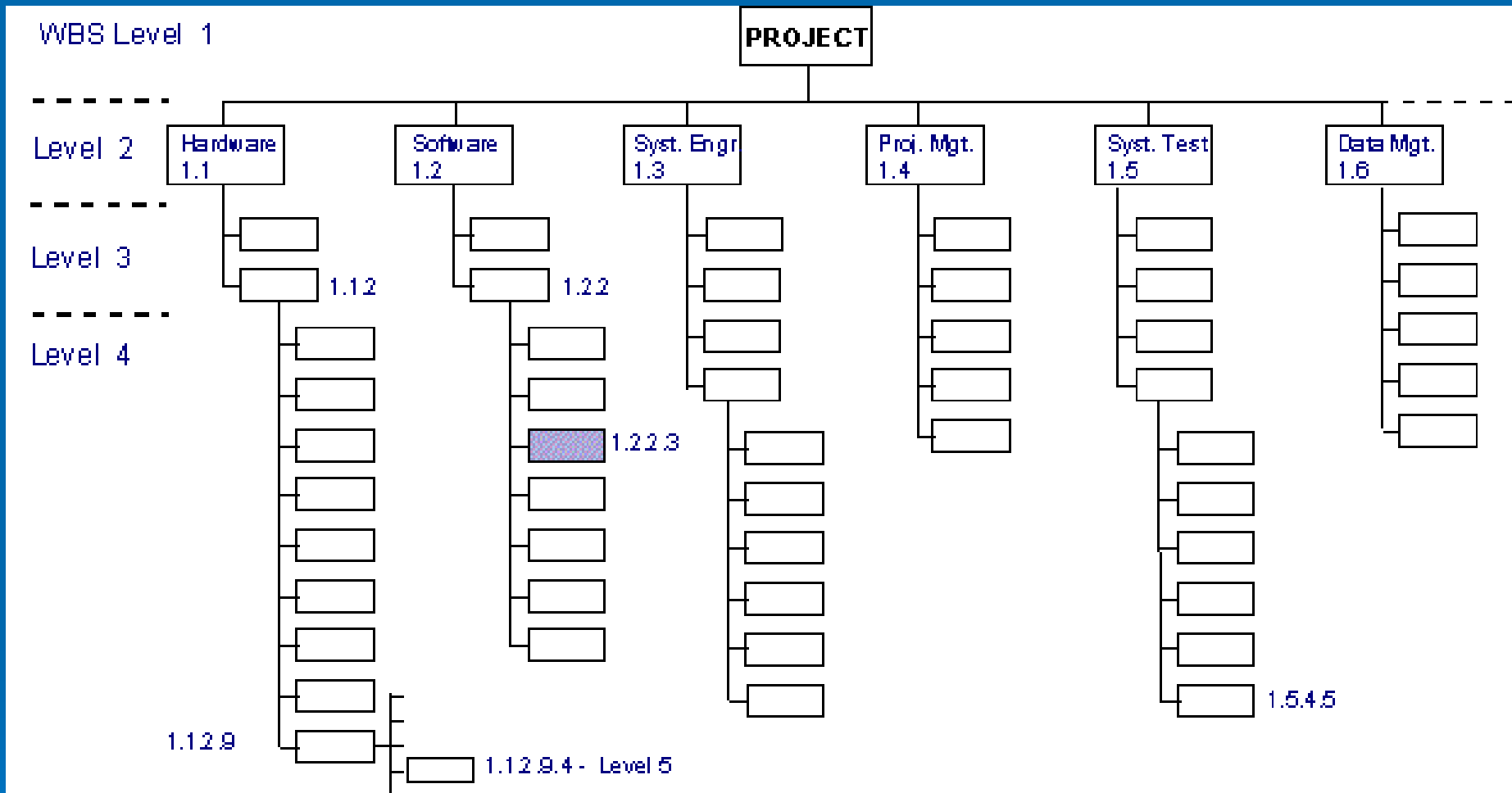
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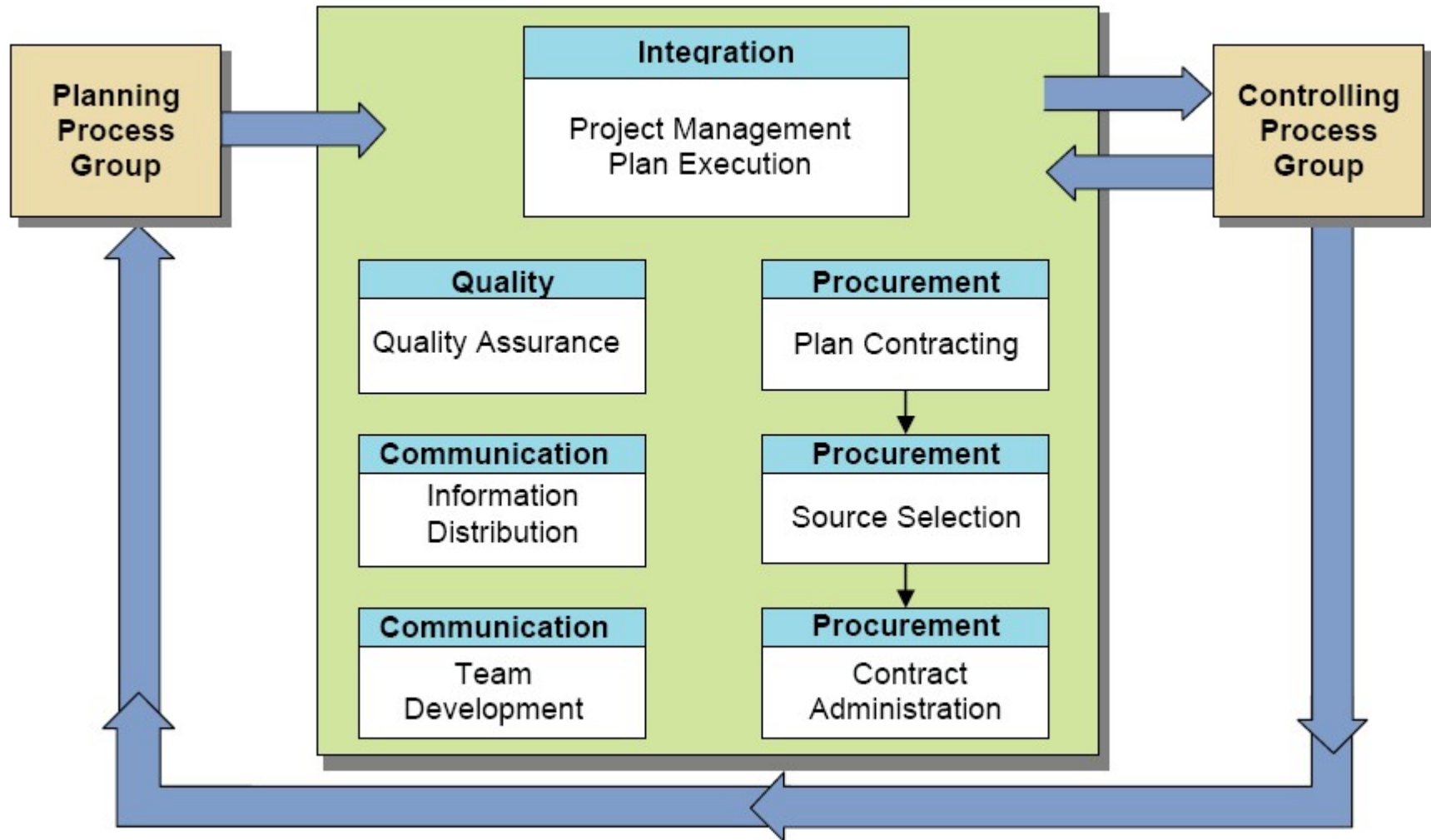
# Planning

## Planning Process Group Activities

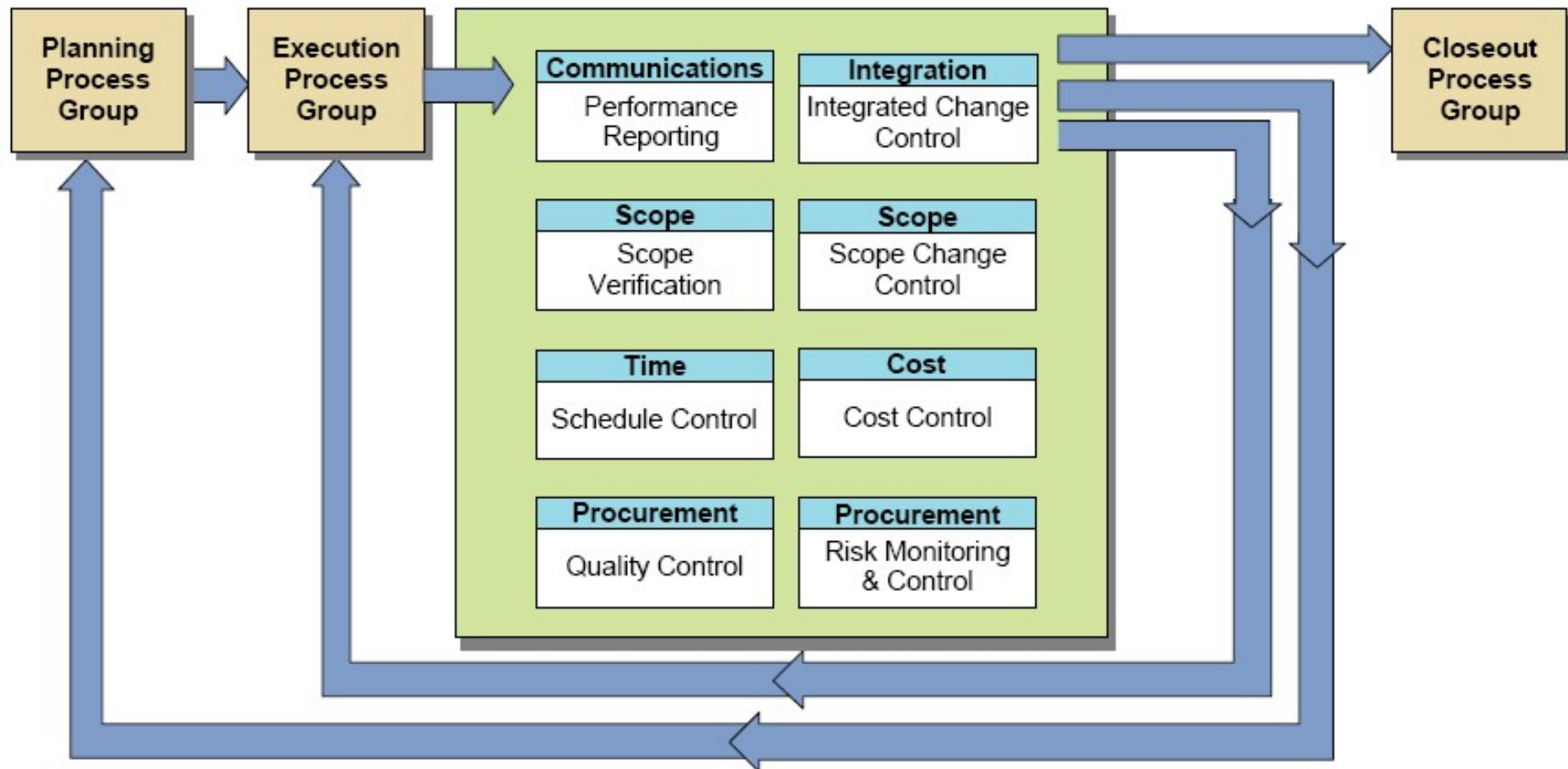




# Executing

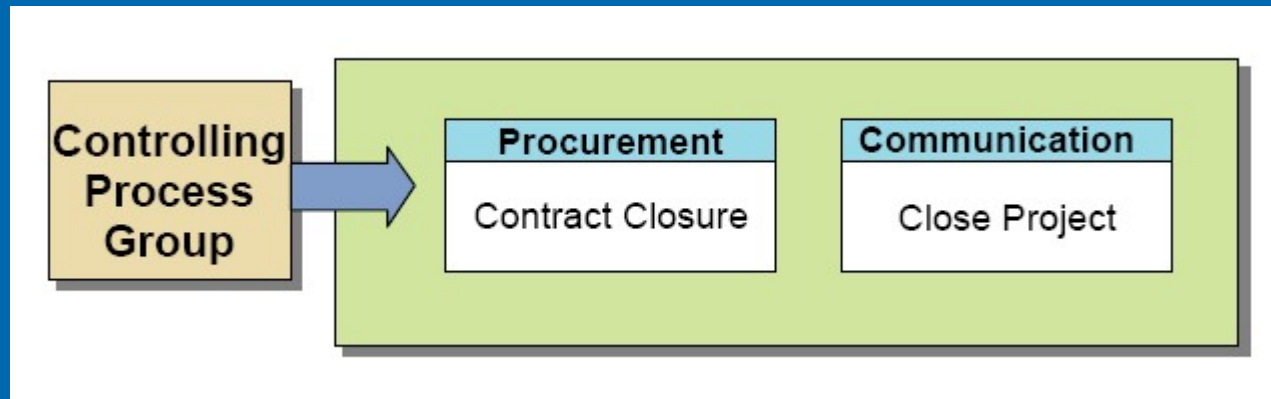


# Monitoring & control



# Closing

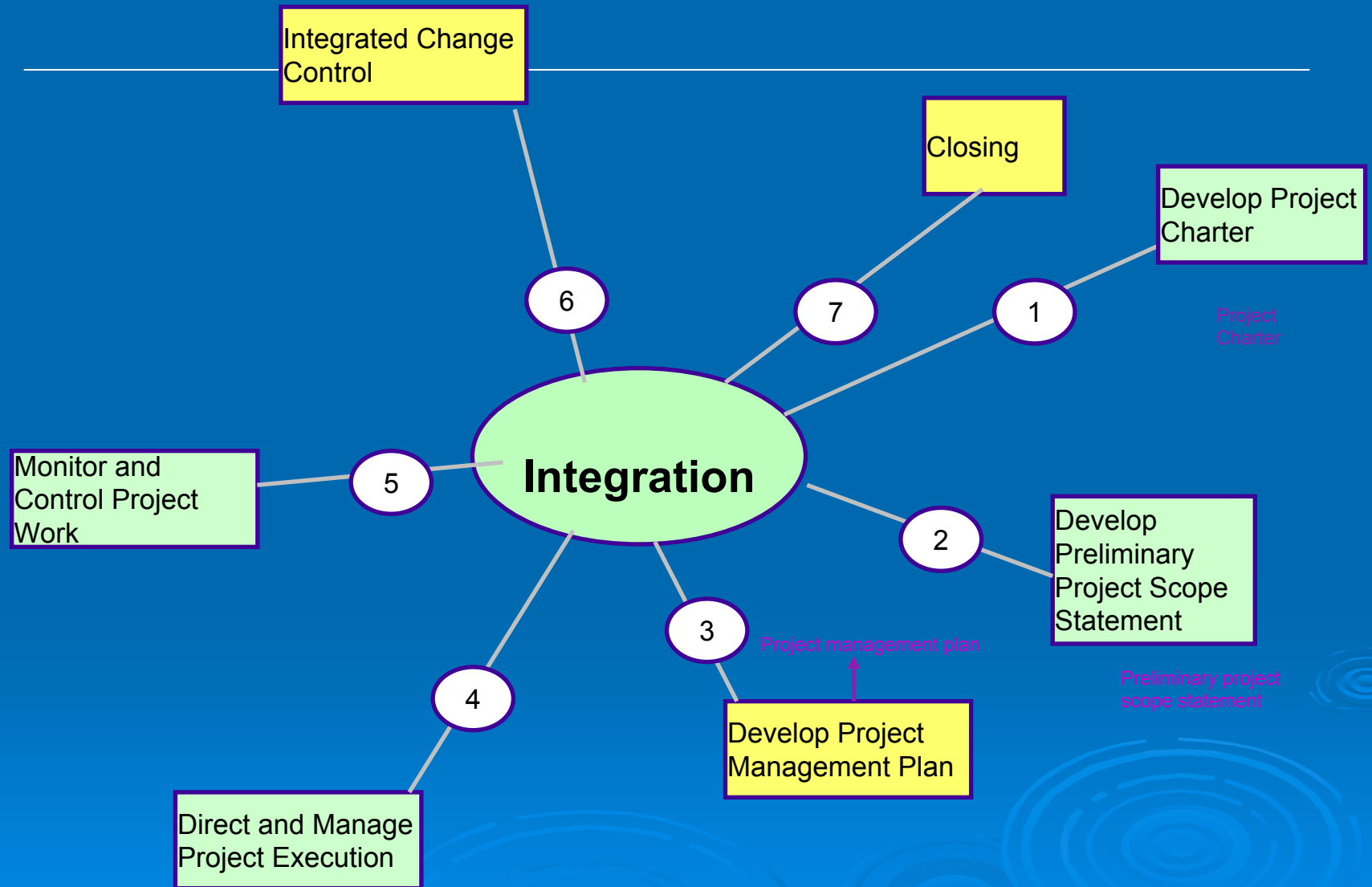
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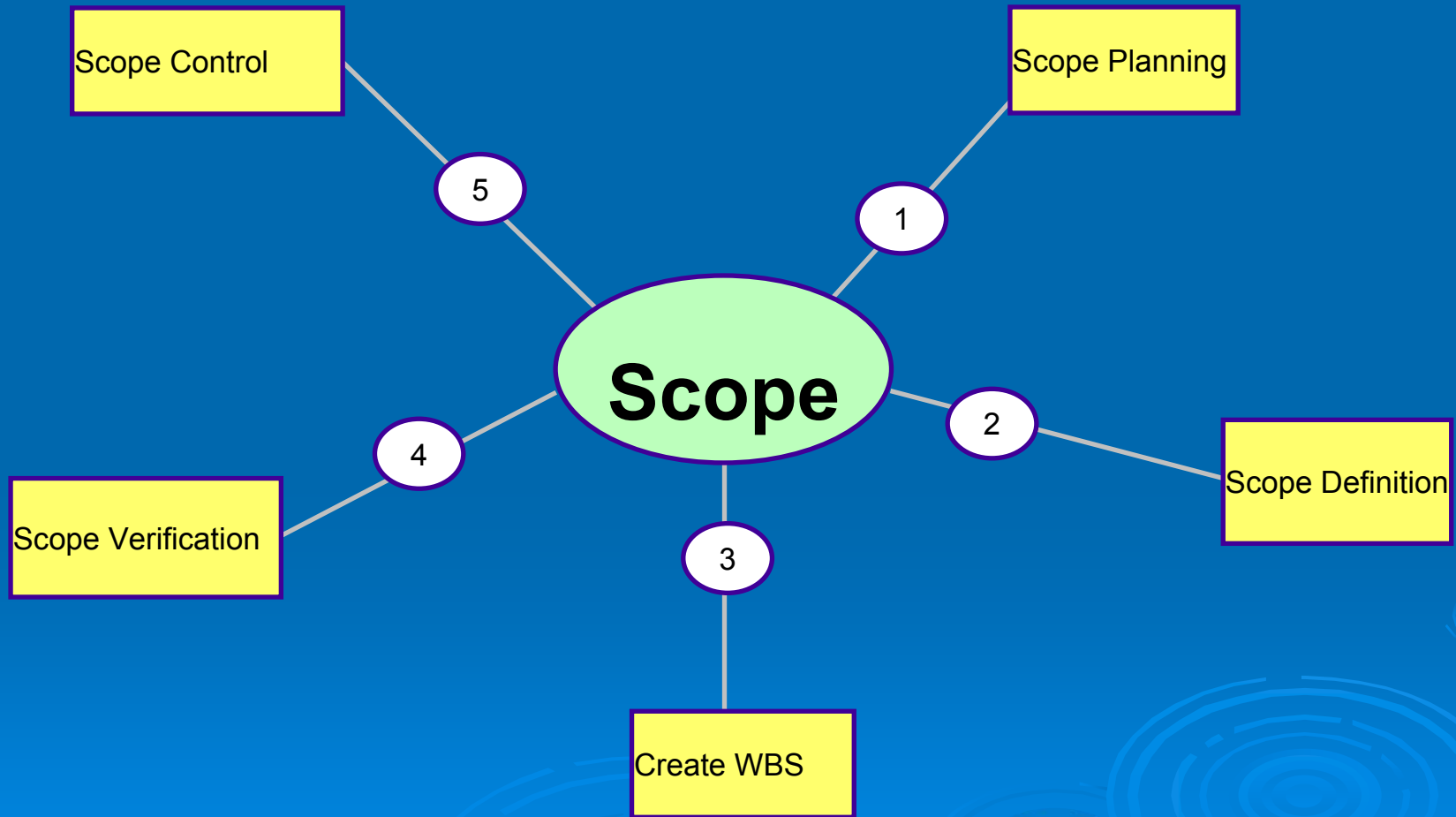
# PMI's 9 Knowledge Areas

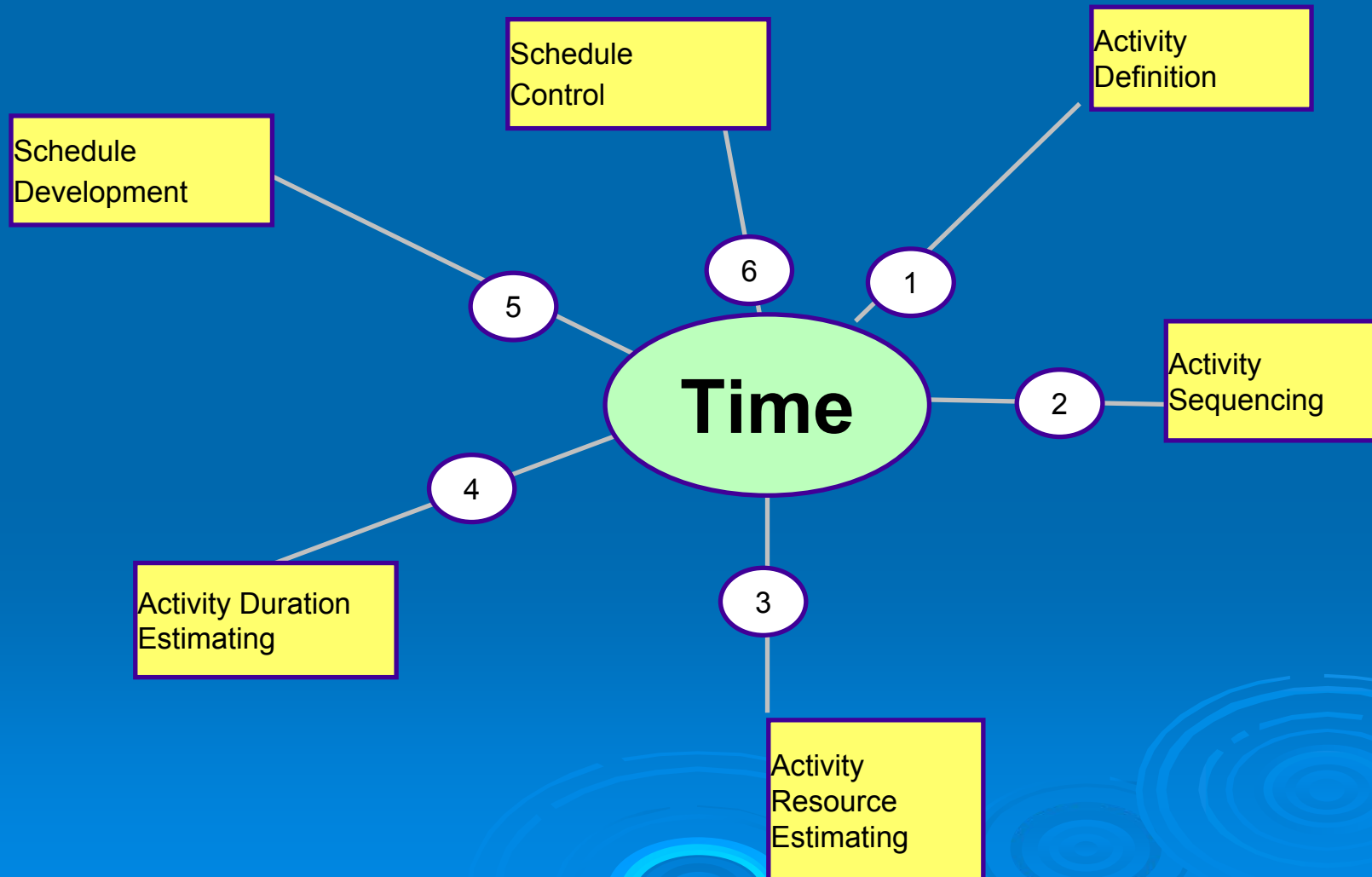
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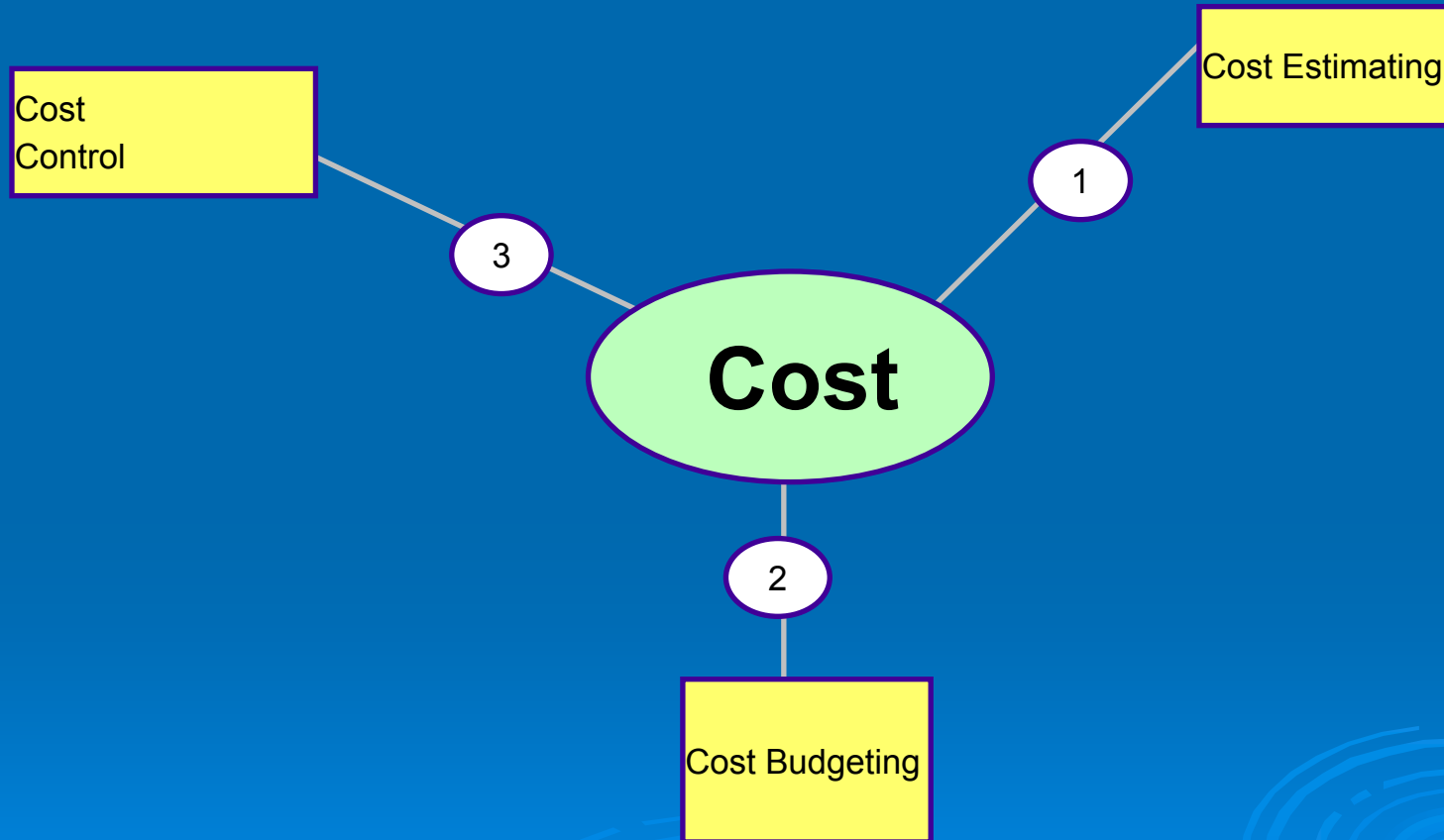
- Project *integration* management
- Scope management
- Time management
- Cost management
- Quality management
- Human resource management
- Communications management
- Risk management
- Procurement management

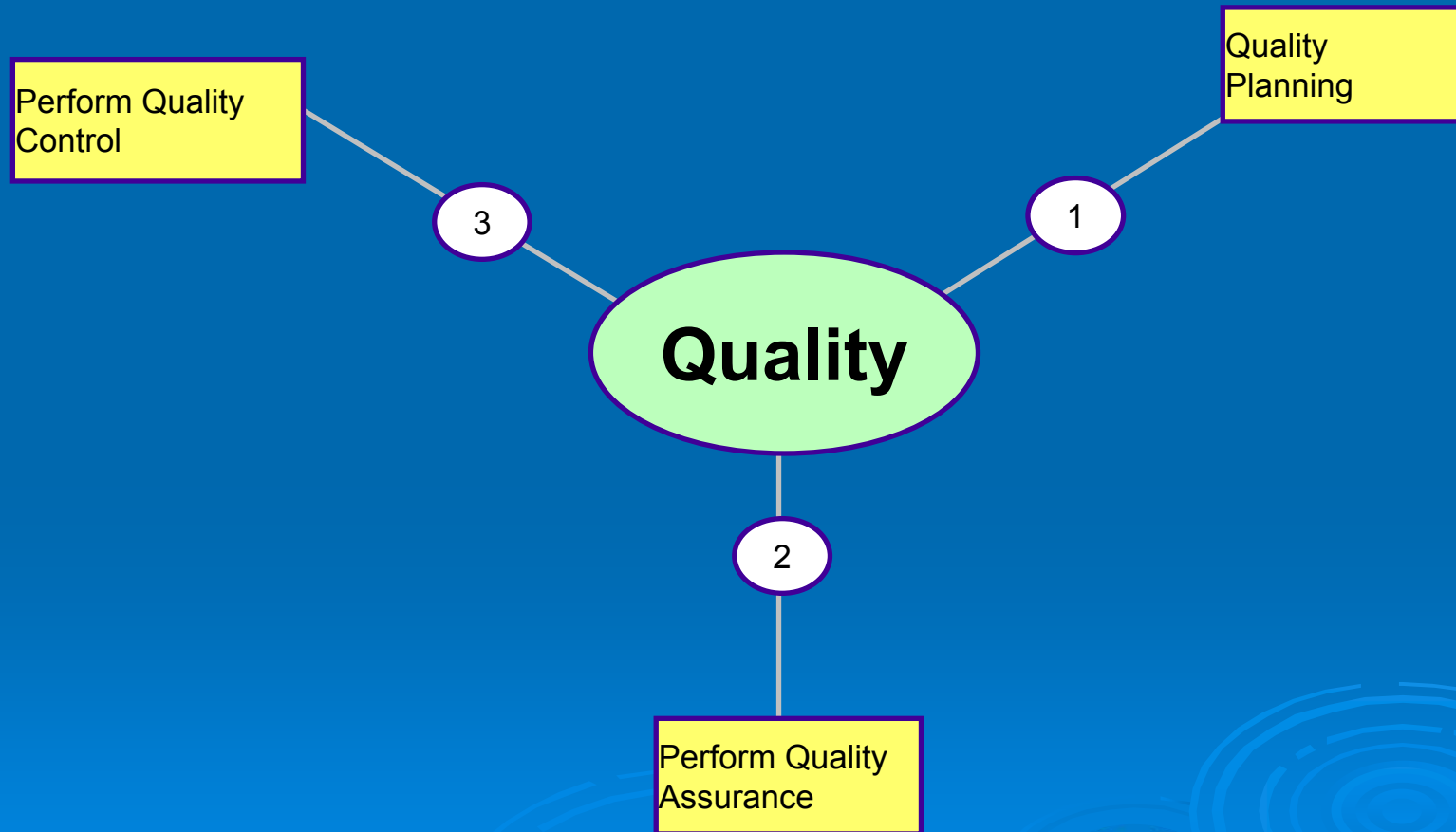


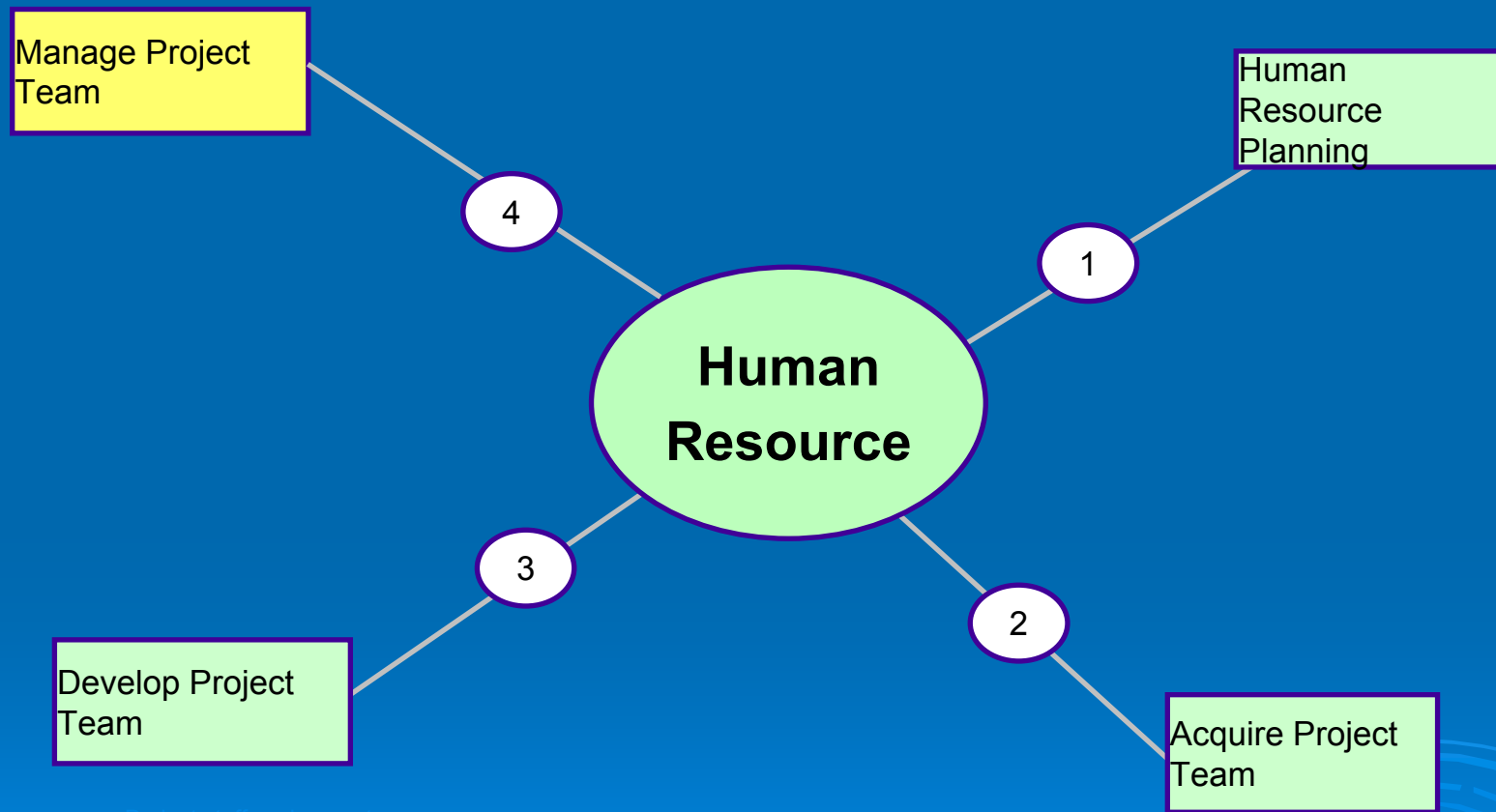




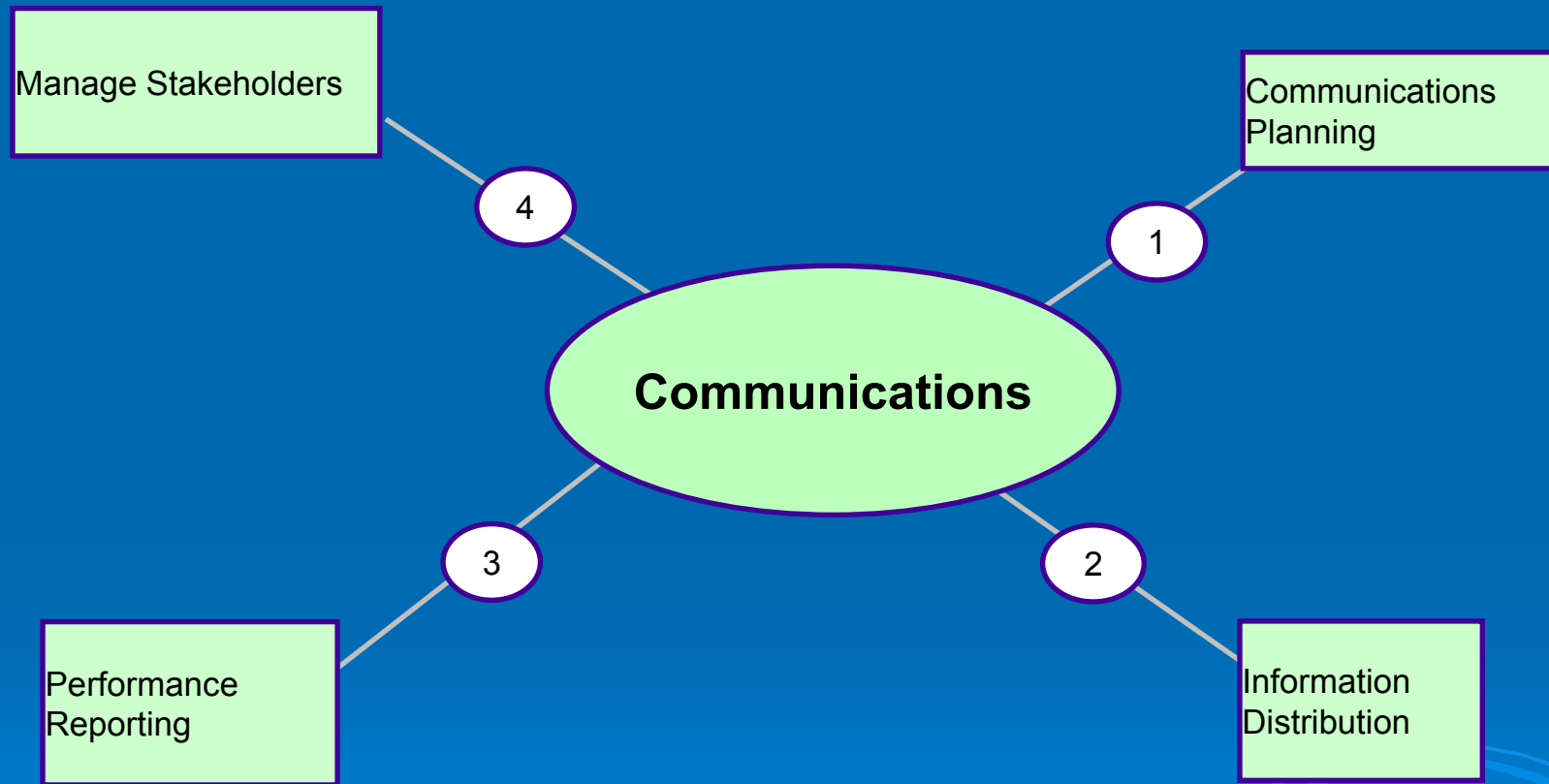




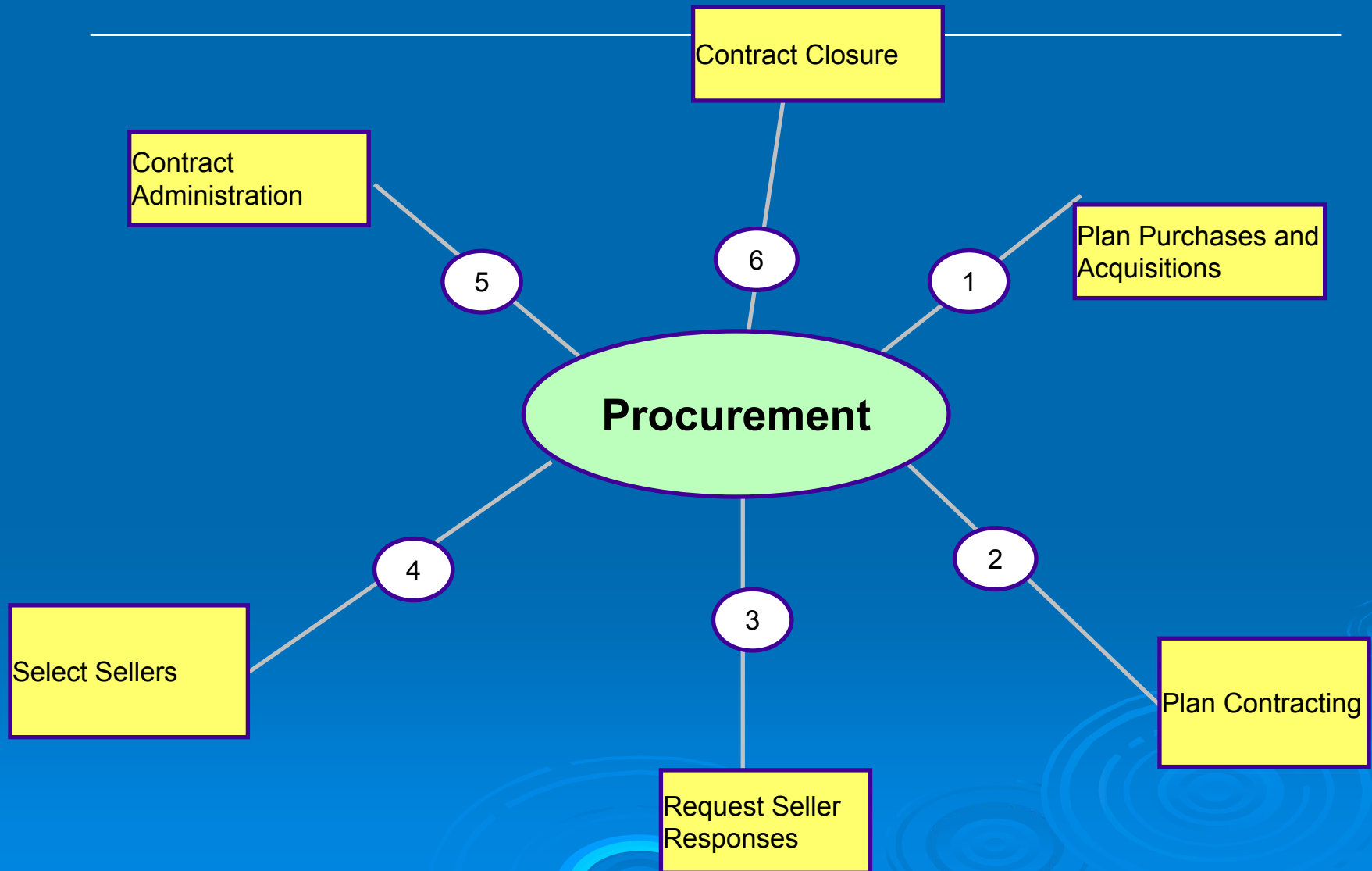




Project staff assignments  
Staffing management plan  
Resource availability









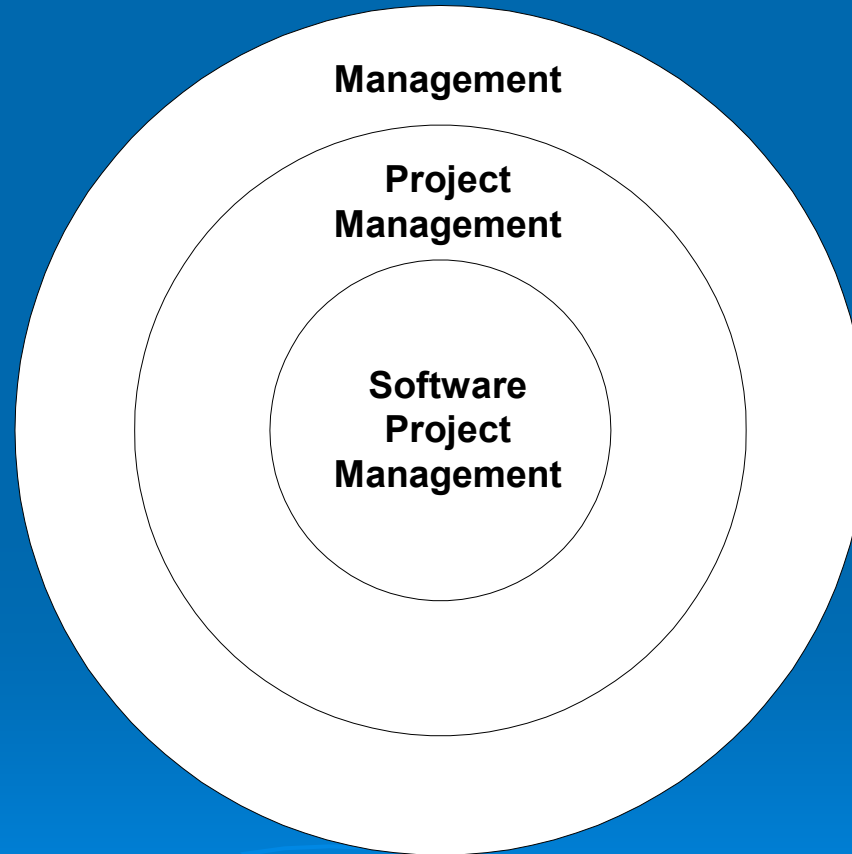
# Project vs. Program Management

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- What's a 'program'?
  - Mostly differences of scale
  - Often a number of related projects
  - Longer than projects
  - Definitions vary
  - Ex: Program Manager for MS Word
- Portfolio Management

# Software Project Management

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# Литература

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- The Project Management Body of Knowledge – 4 ed.
- Software engineering. 8 ed.  
Ian Sommerville
- Software Engineering: A Practitioner's Approach  
R.S. Pressman
- Софтуерни технологии  
Нели Манева, Аврам Ескенази

# Case Studies

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- Upgrade: Windows XP → Vista
  - Boston Universal Group (BUG)
  - 200 служители
  - 50 лаптопа
  - 160 работни станции
  - РМ – Анита Рейнс
- Разработката на Win Word
  - Разглеждане по екипи
  - Дискутиране – 15.10.2012 – 9 -11 часа