



Software Project Management

Introduction



Topics

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

Project Management

- 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

- 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

PMI definition

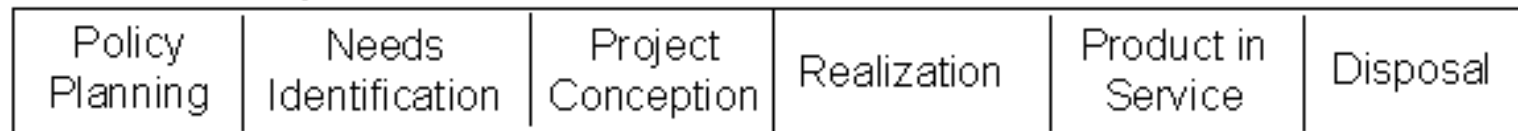
- *Project management* is the application of knowledge, skills, tools, and techniques to project activities to meet project requirements.

Управление на проекти

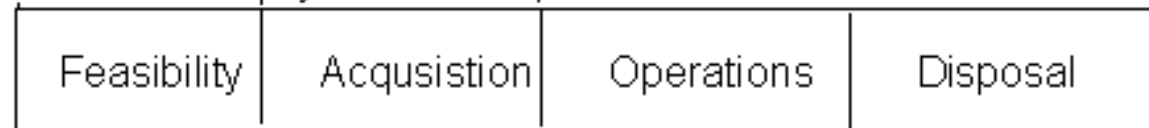
- Управление на проекти - прилагането на знания, умения, инструменти и техники върху проектните дейности, за да бъдат постигнати целите и изискванията към проекта.
 - Проектните дейности се извършват от екипът на проекта, докато мениджърът планира, наблюдава и контролира самото изпълнение на дейностите.
 - Успешното изпълнение на проекта зависи се базира на :
 - Обхват - какви цели ще 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 желан резултат на време и са в рамките на предвидения бюджет. Ако някое от ограниченията се промени, то поне едно от останалите също се променят.

Lifecycle Relationships

Business Life Cycle



Product Life Cycle



Project Life Cycle



The Role and Responsibility of a Project Manager

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



Other Roles

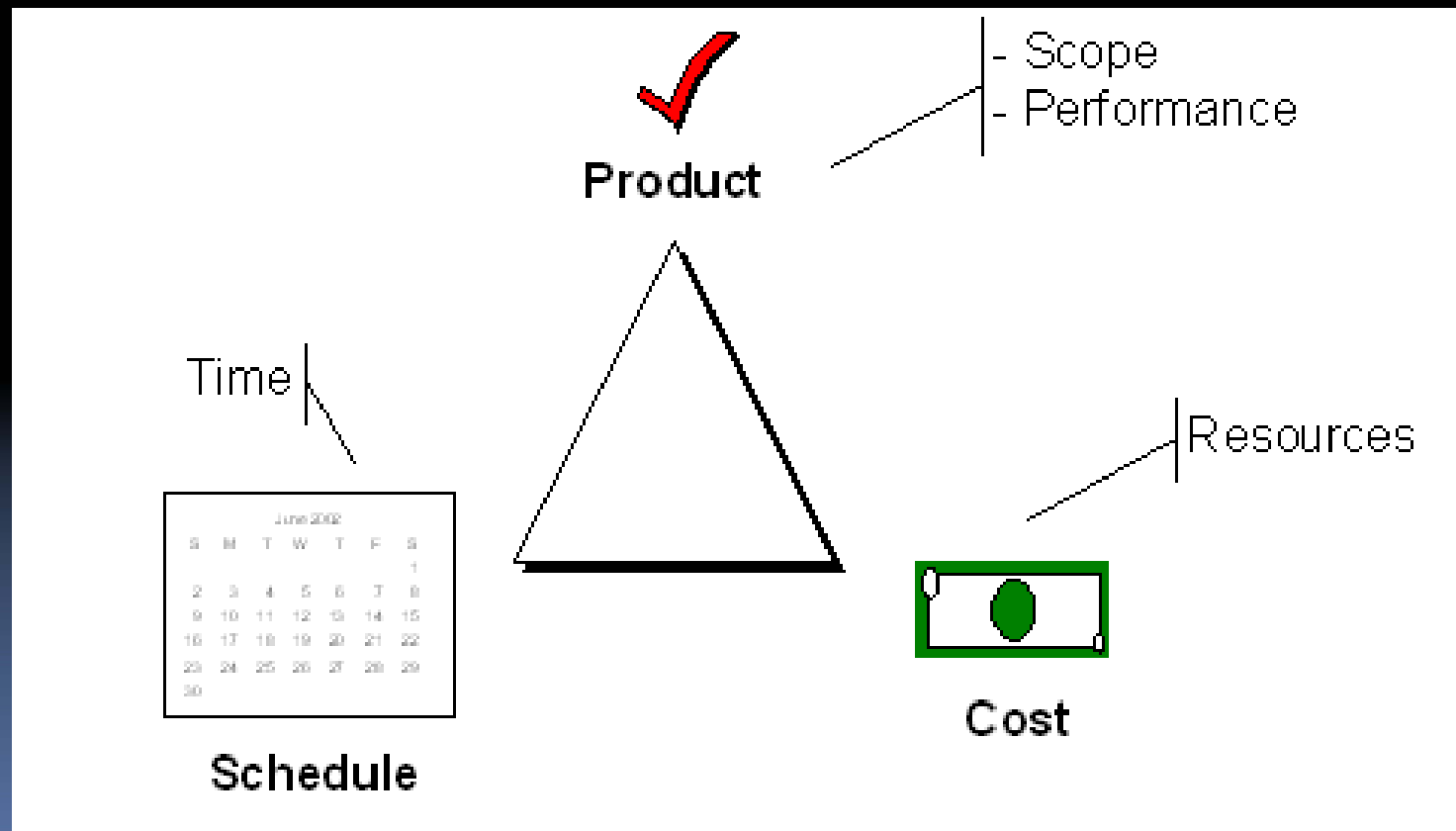
- Executive Steering Committee
- Project Sponsor
- Financial Manager
- Project Team Members
- Business Architect or Analyst
- Quality Team
- Customer

Organization structures

- 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

Trade-off Triangle

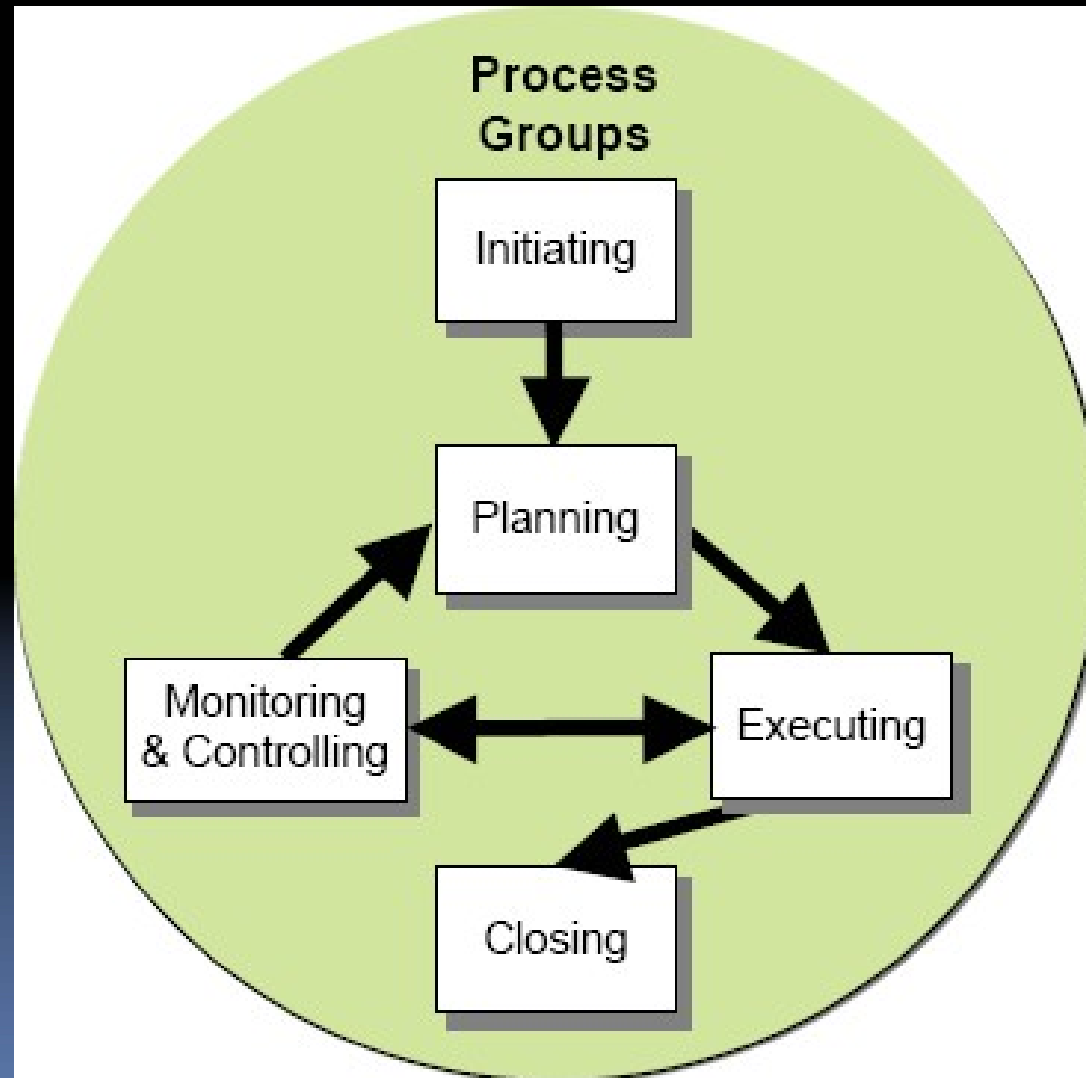
- Know which of these are fixed & variable for every project



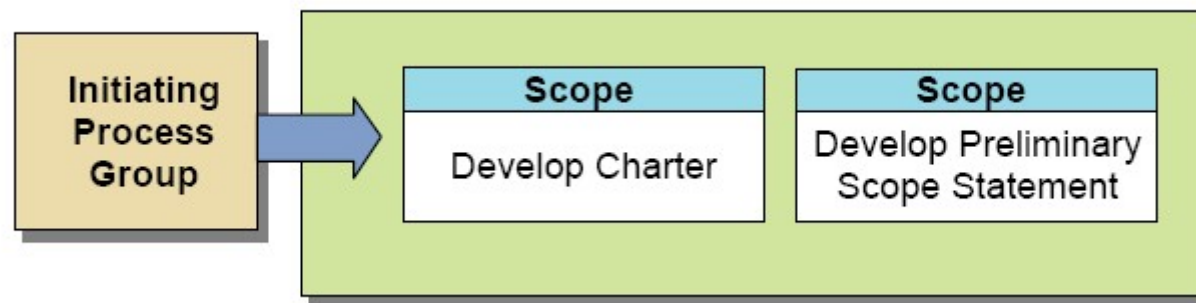
Project Management Process Group

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

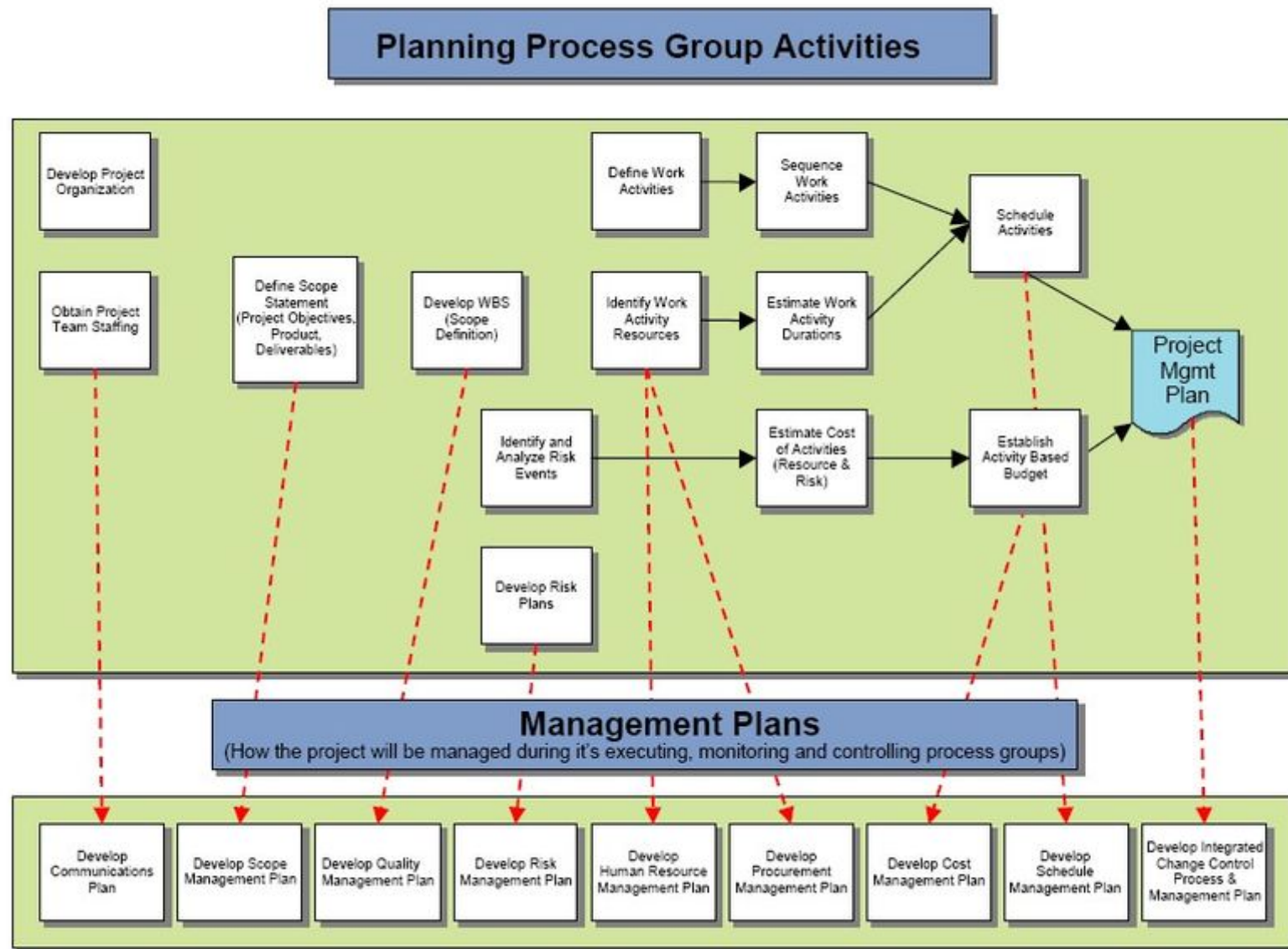
Process Groups



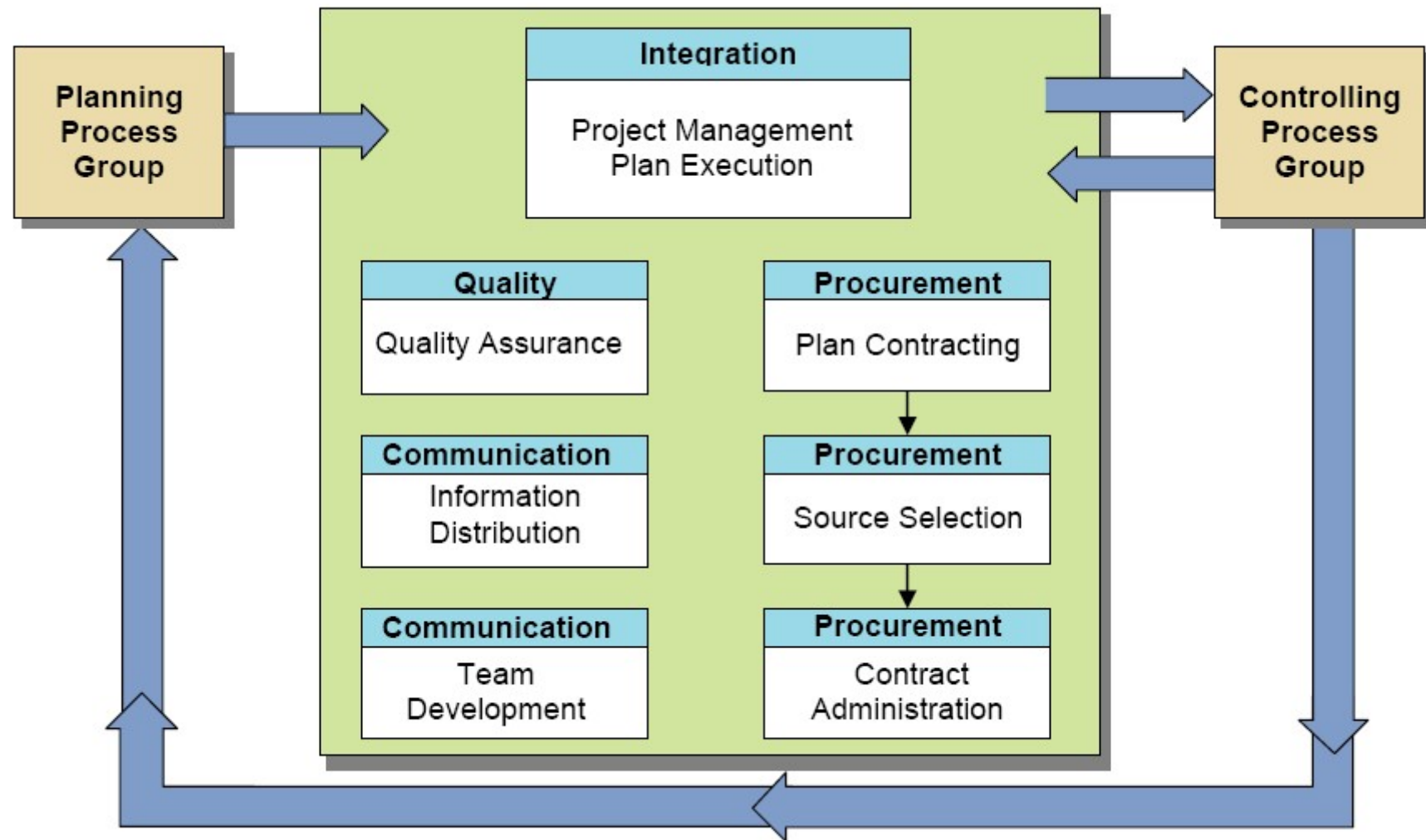
Initiating



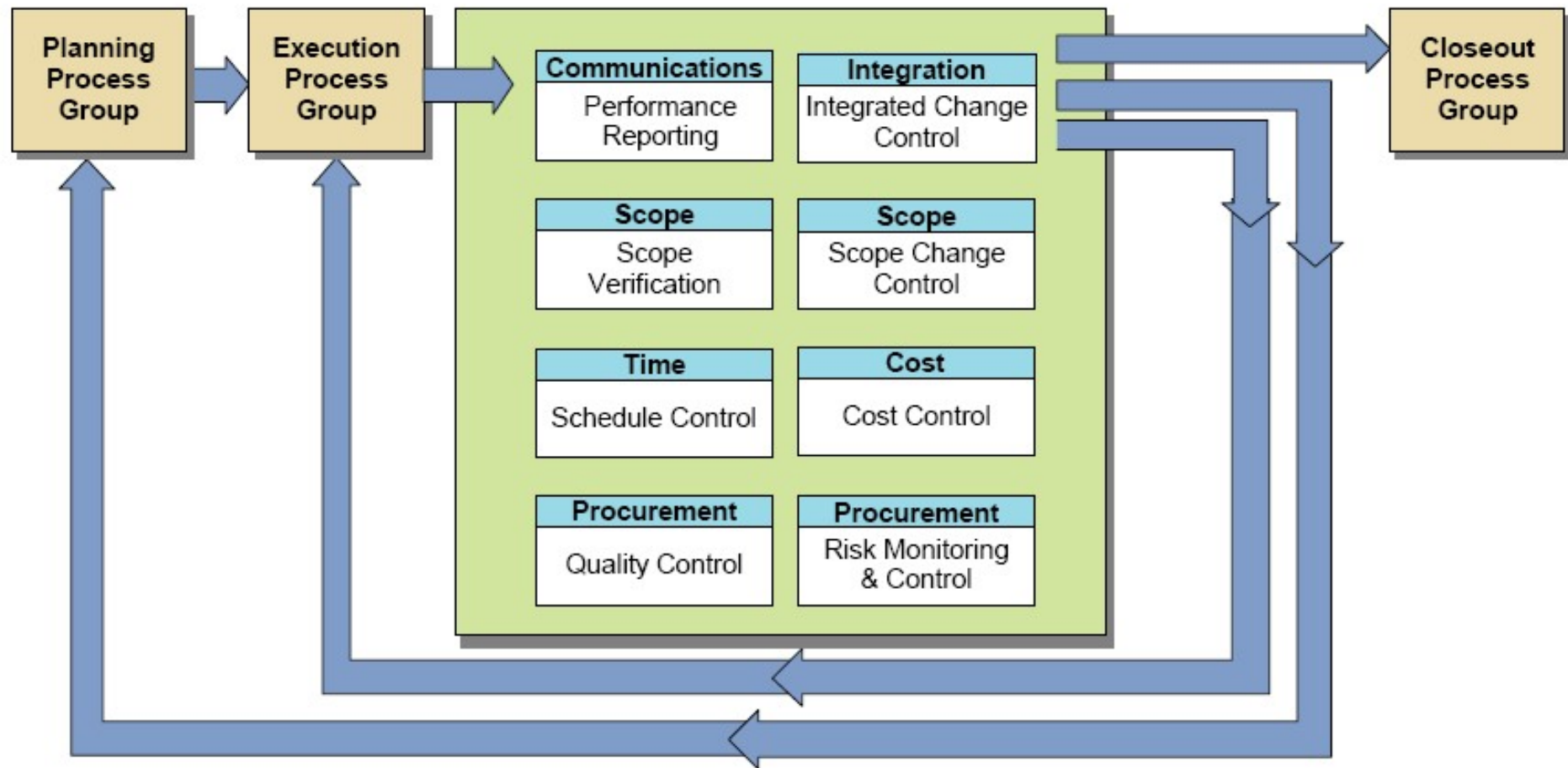
Planning



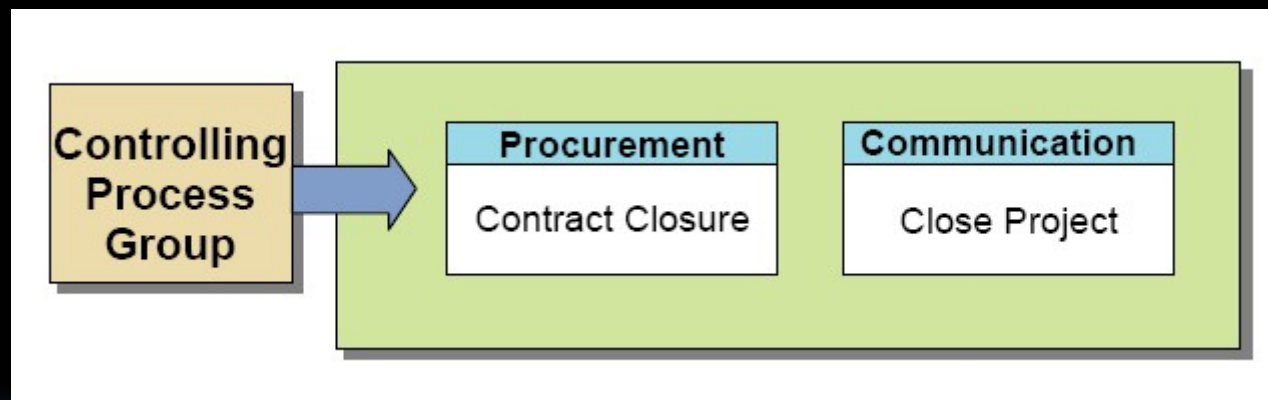
Executing



Monitoring & control

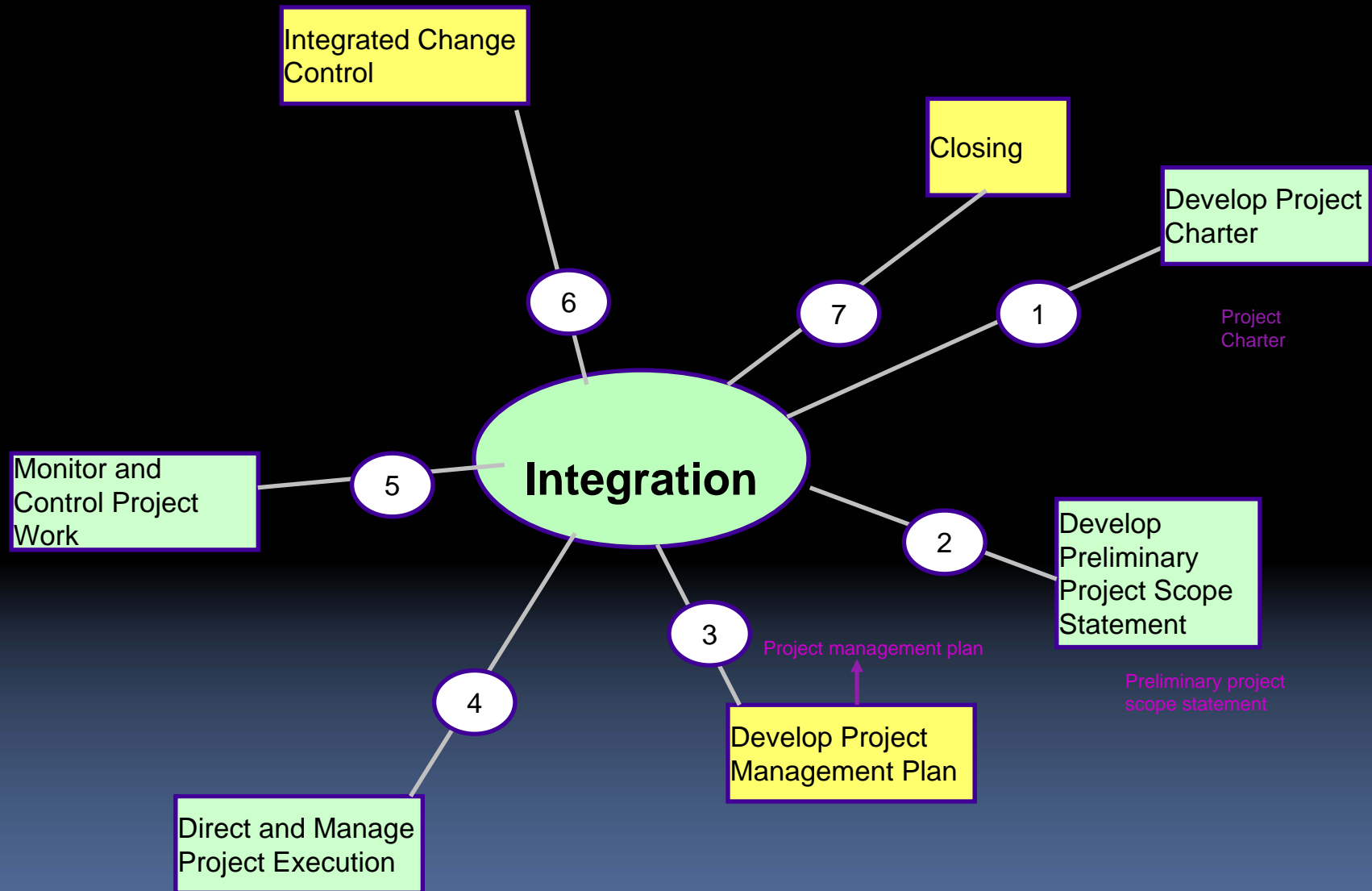


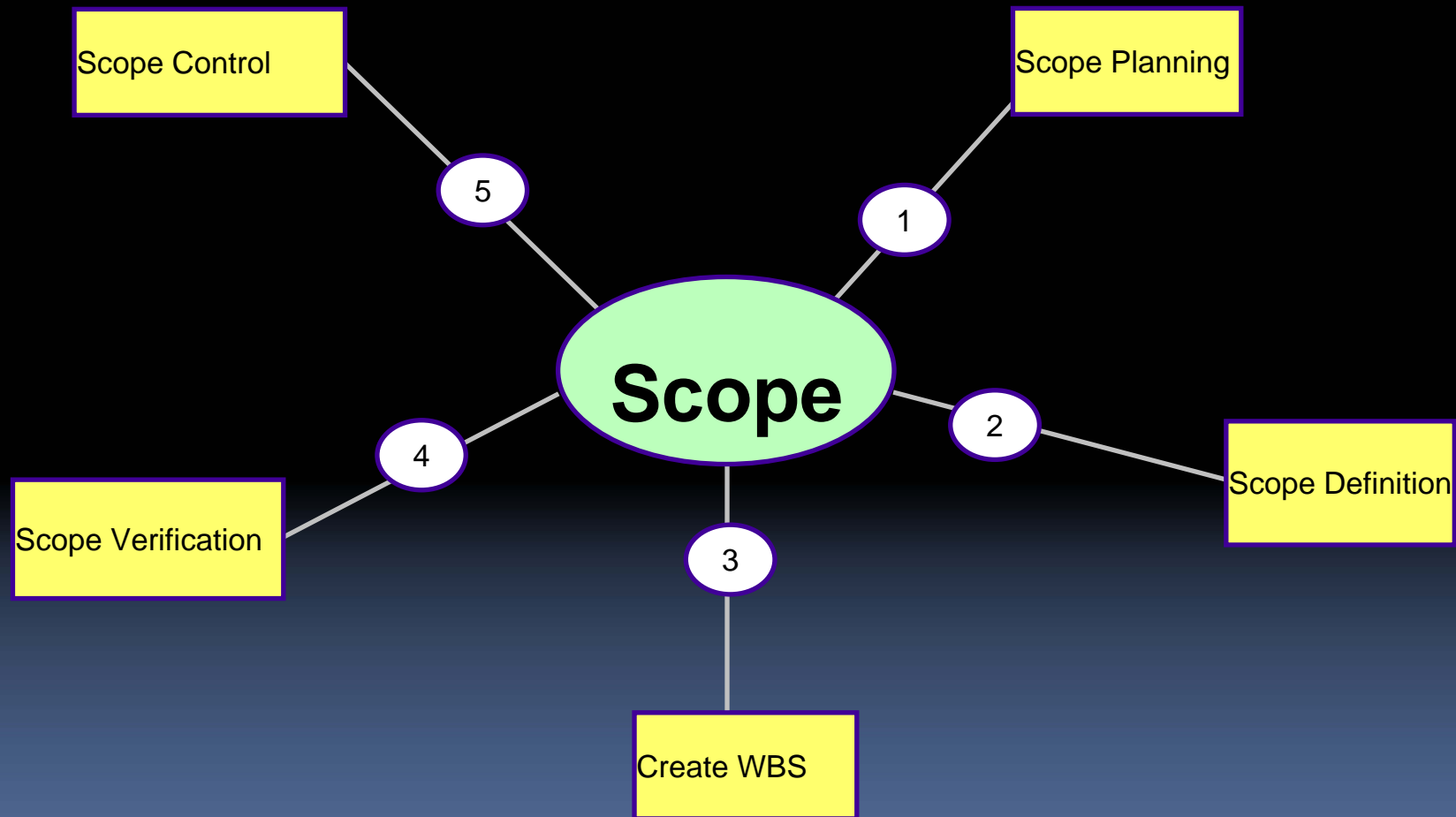
Closing

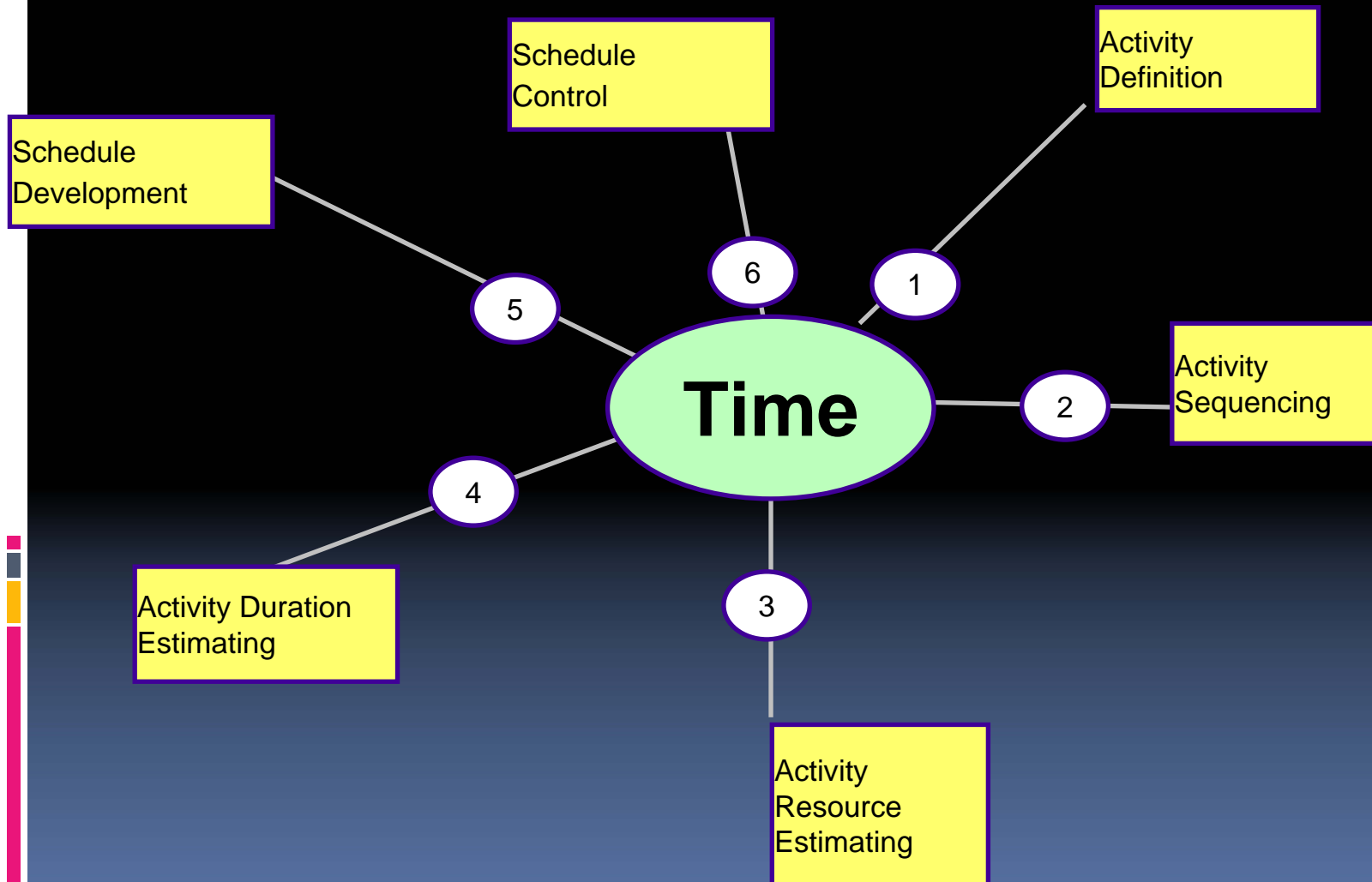


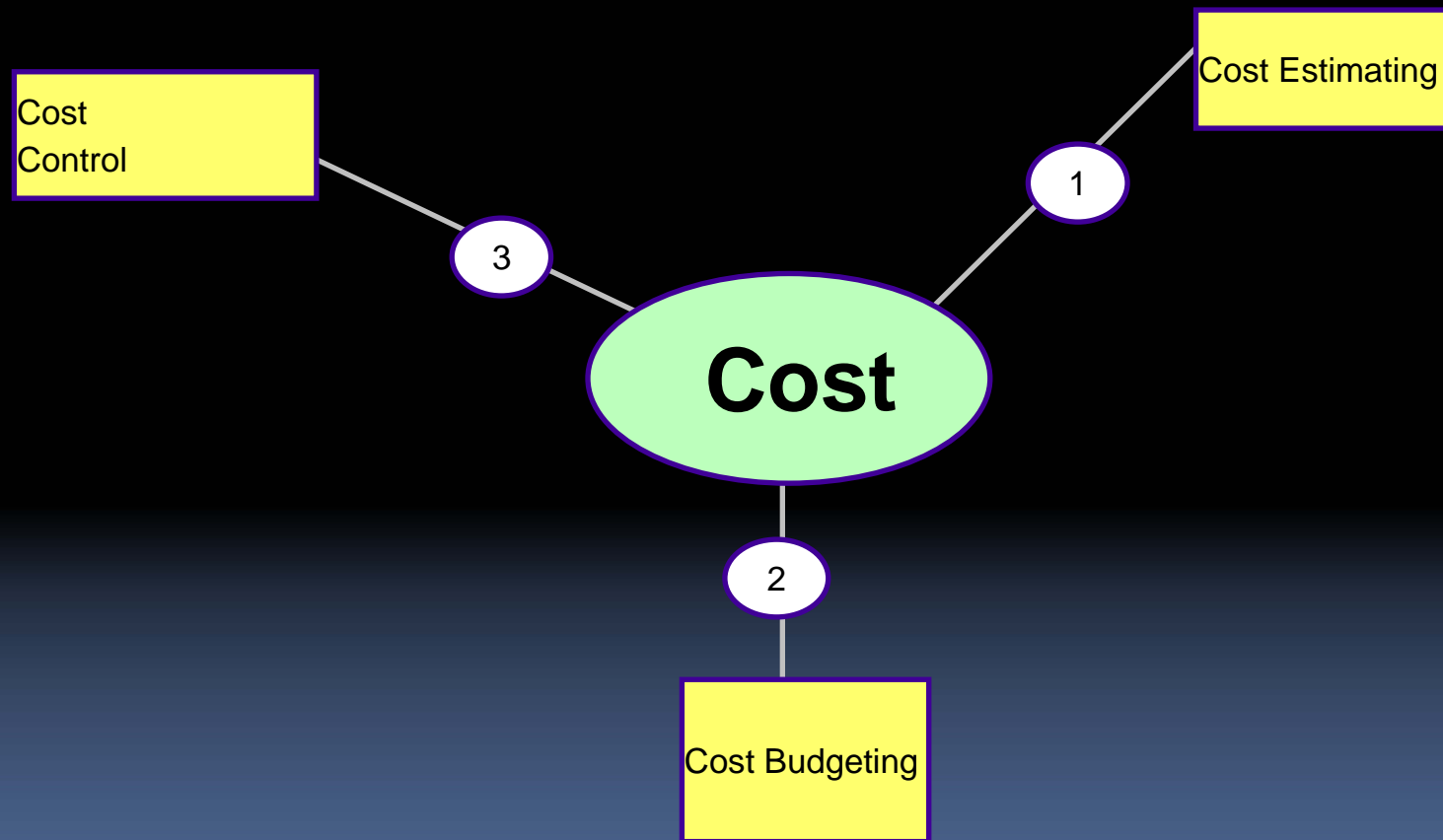
PMI's 9 Knowledge Areas

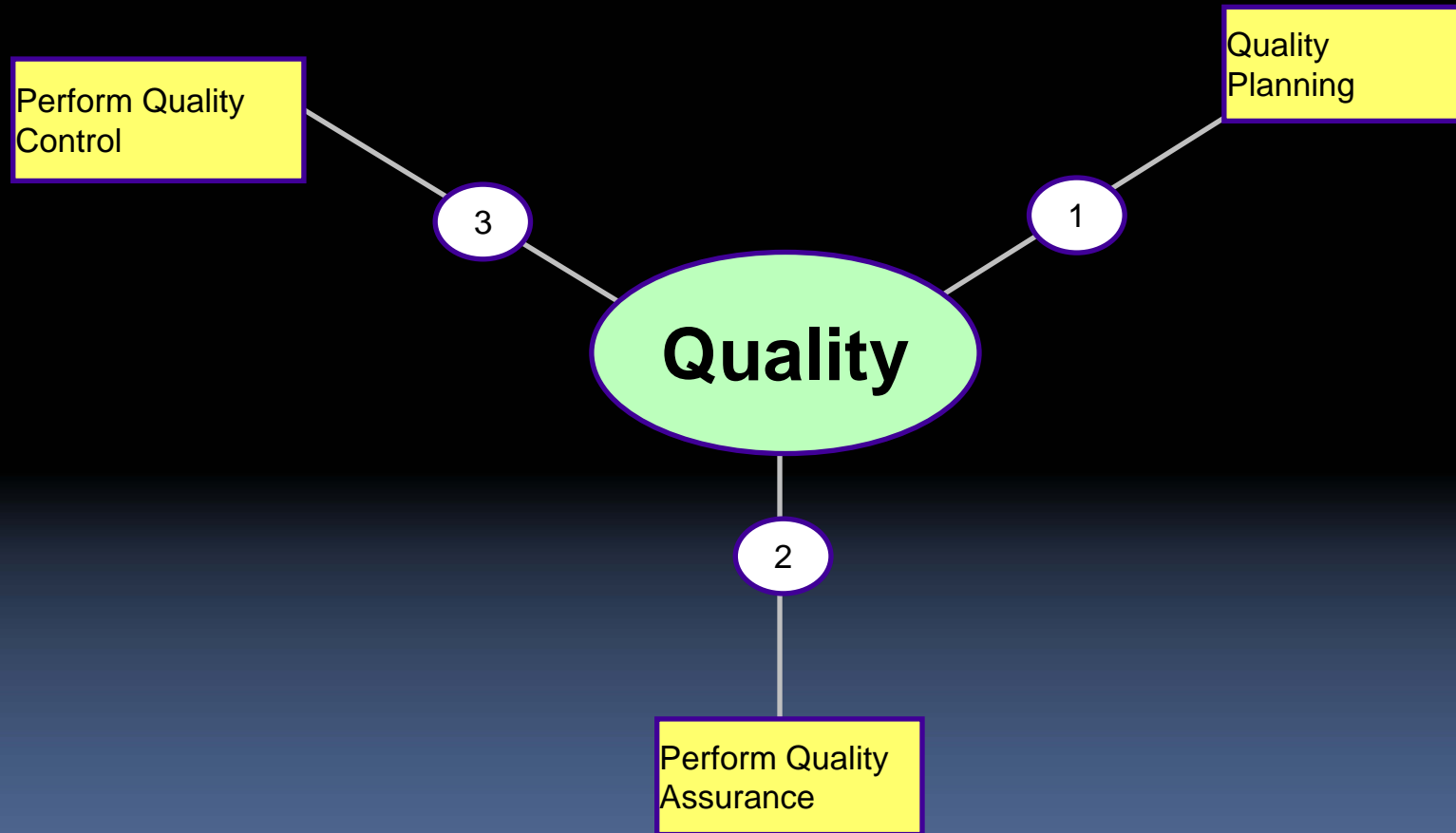
- Project *integration* management
- Scope
- Time
- Cost
- Quality
- Human resource
- Communications
- Risk
- Procurement

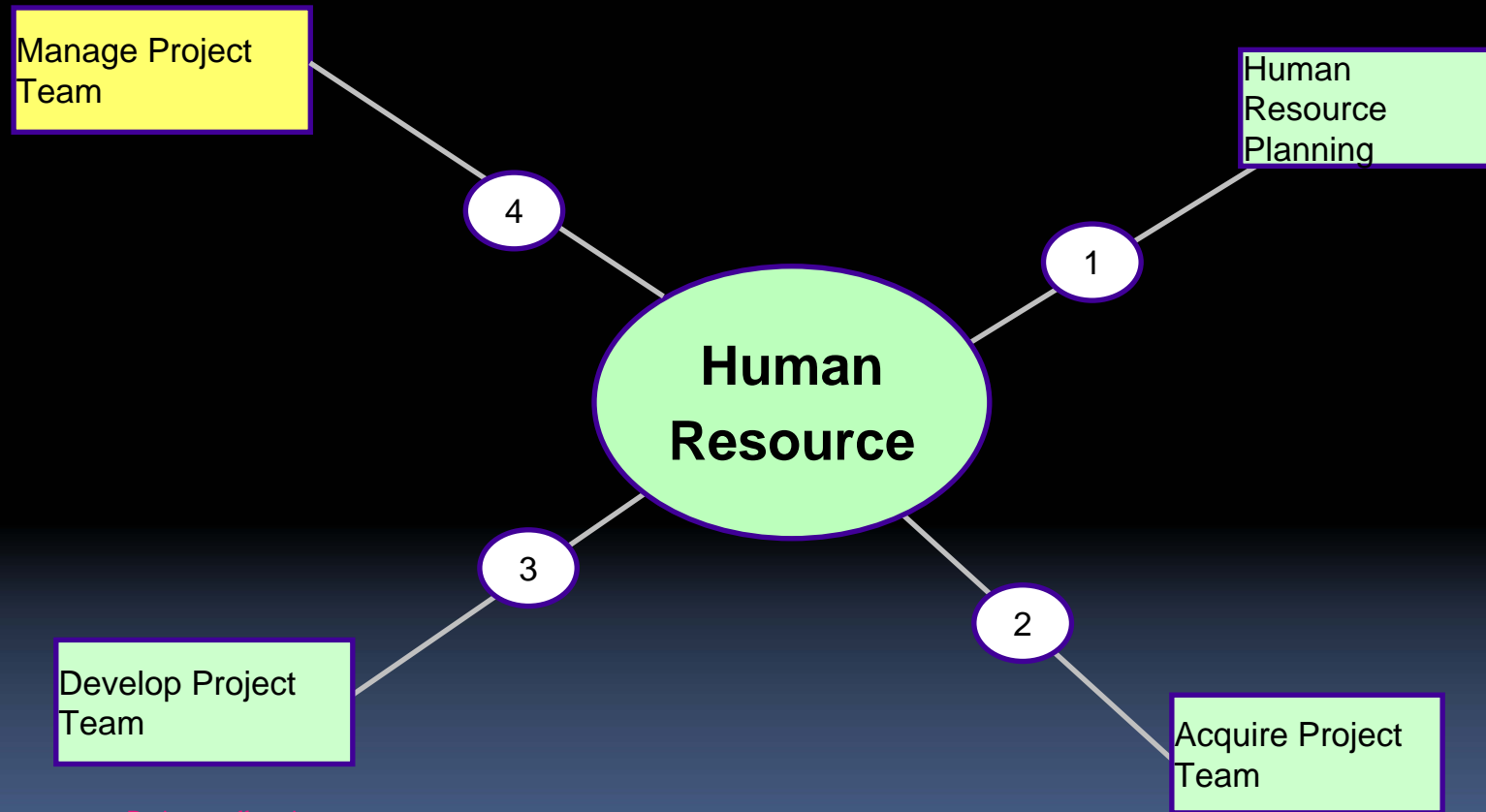




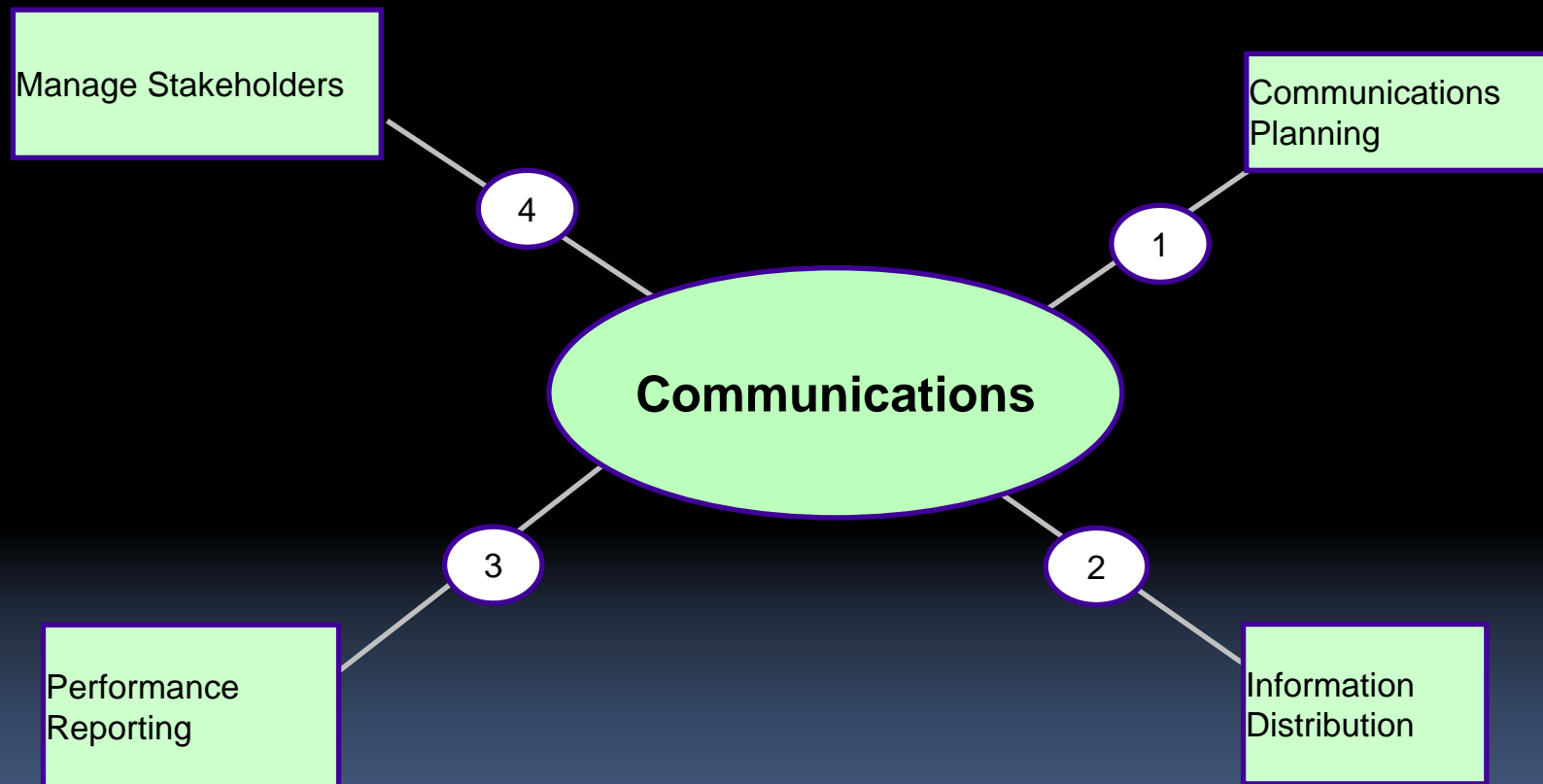




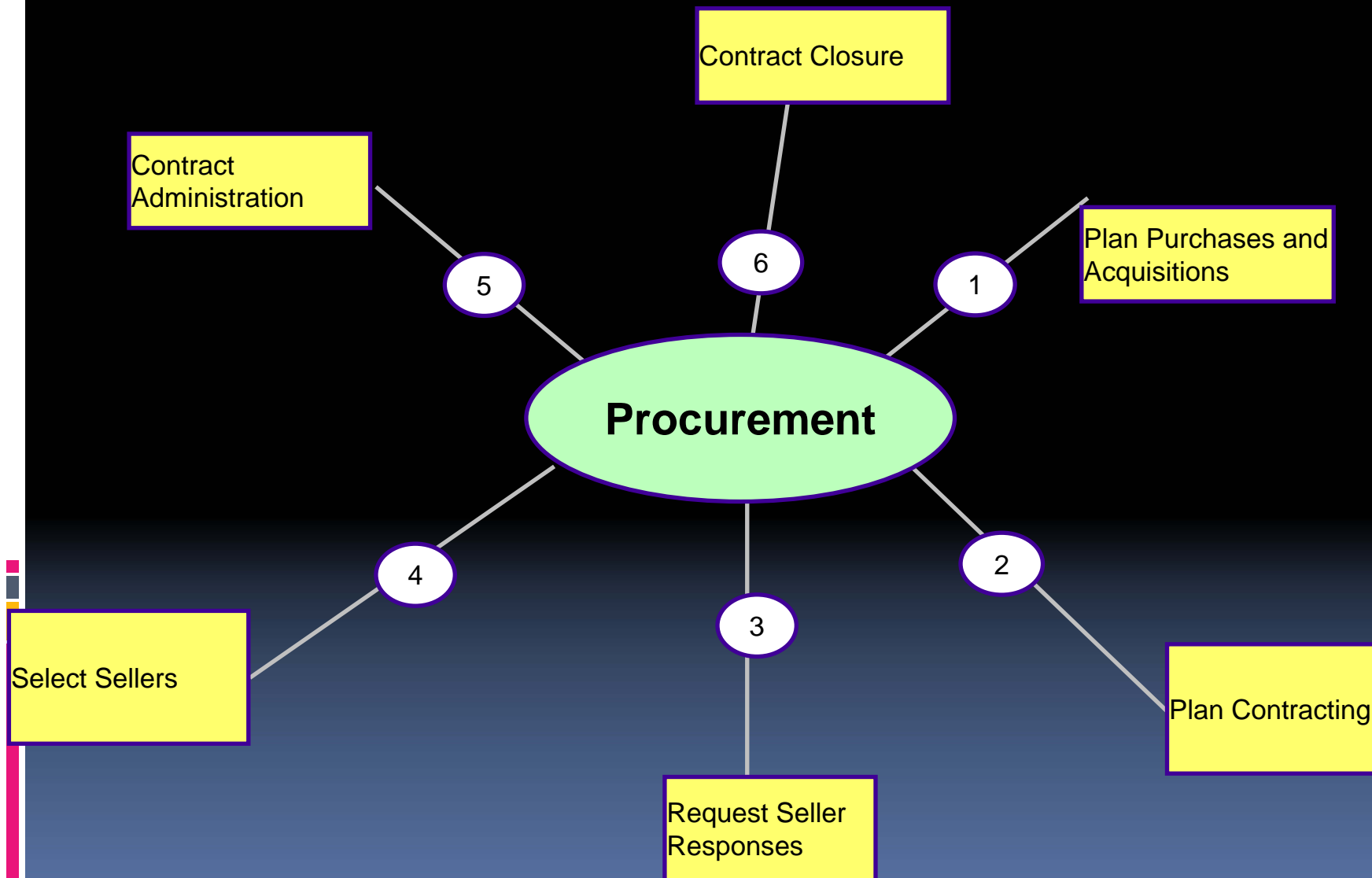




Project staff assignments
Staffing management plan
Resource availability







Project vs. Program Management

- 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

Литература

- 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