Project Management

Chapter 1

Introduction to Project Management

Chapter 2

Initiate Projects

Chapter 3

Plan Projects

Chapter 4

Execute, Monitor and Control Projects

Chapter 5

Close Projects

Chapter 1

Introduction to Project Management

Contents:

1- Project Management of Facility Projects

VS

Project Management

Facility Management

What is the Project?

What is the Project Management?

Reason for FM Projects

Common Types of FM Projects

2- The Project Manager

Facility Manager's Role:

1-Project Manager

2-Team Member

3-Supervisor/Accountable Person

Role of Project Manager

1-Establishing Consensus

2- Managing the Project Team

3-Coordination and Integration

Qualities of Project Manager:

Leadership & Influence Management

Experience & Self-Assessment

Team Building

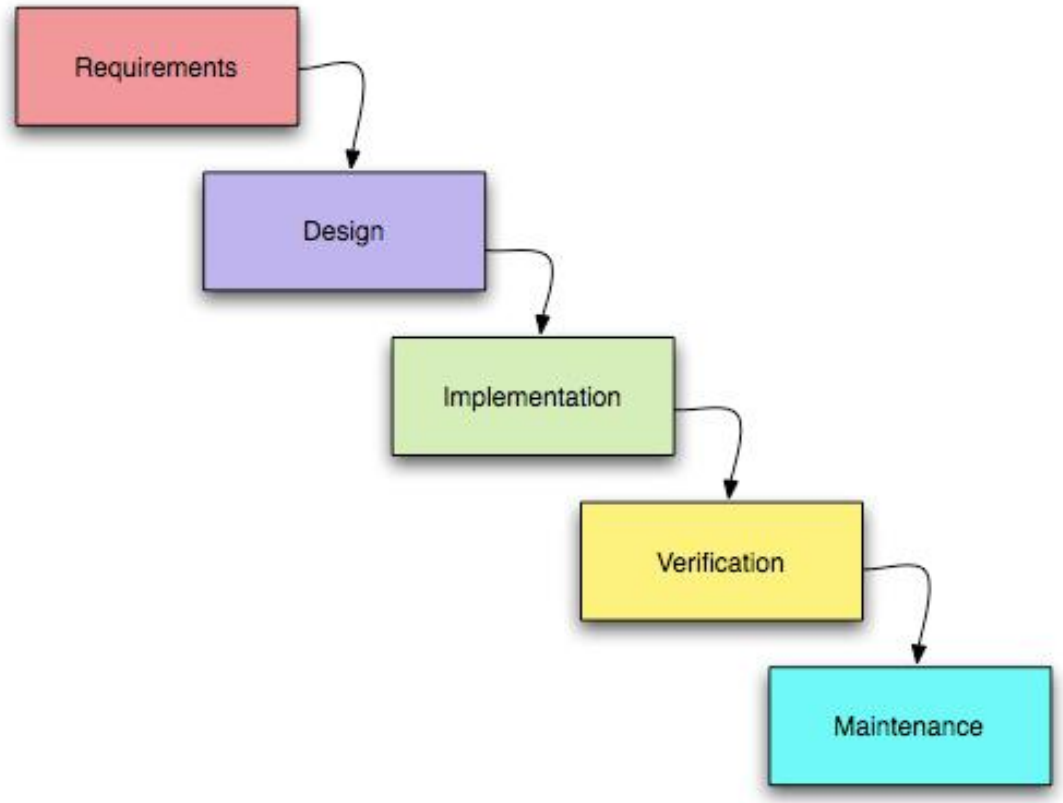
3- Project Management Processes and Cycles

Standardized PM Processes

PMBOK Knowledge Areas

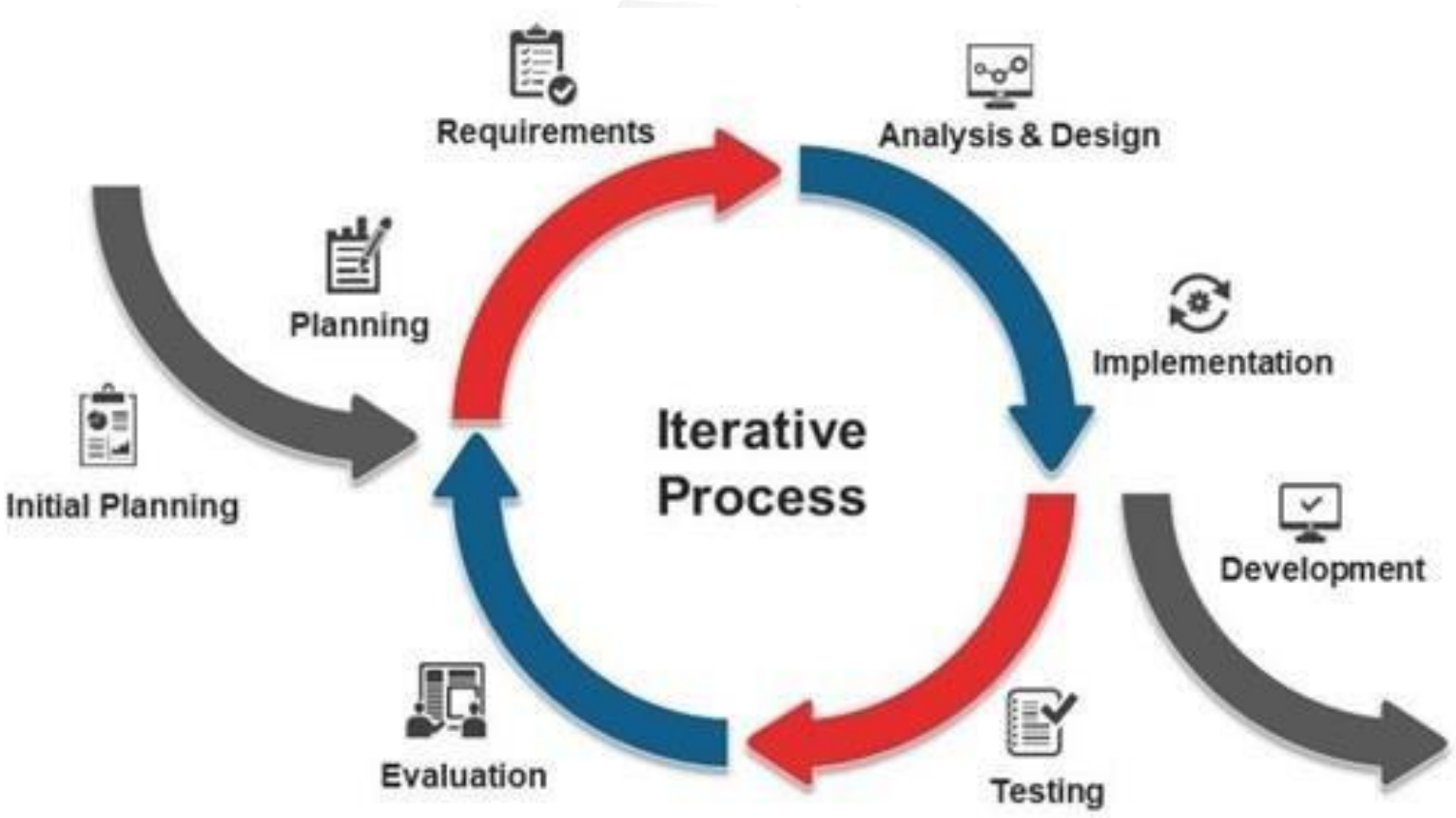
Project Cycles

1-Traditional Waterfall Model

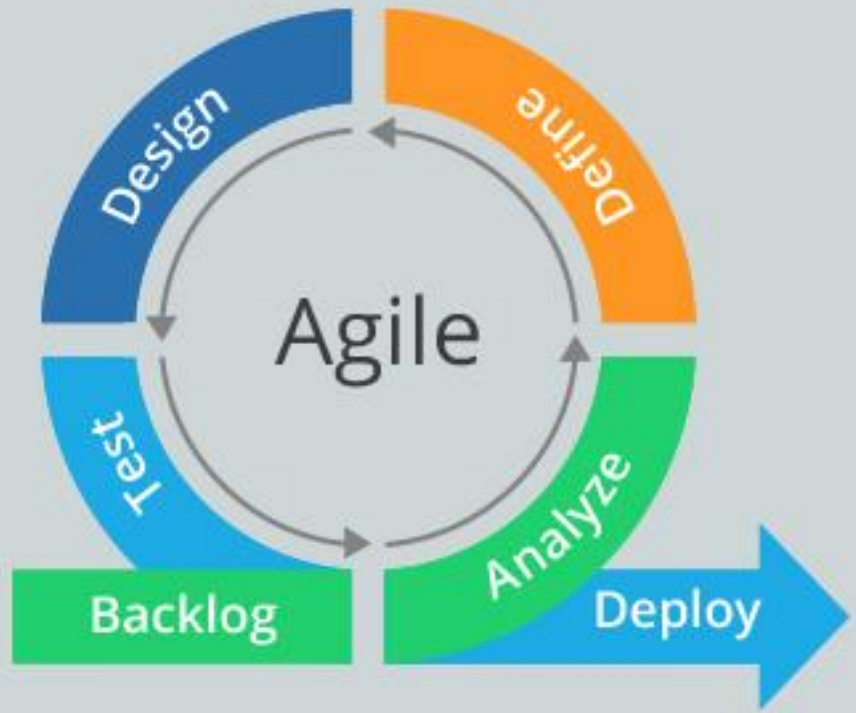


Project Cycles

2-Iterative Models



Waterfall vs. Agile



(PDCA) model

1- Plan

2- Do

3- Check

4-Act

Project Model for This Course

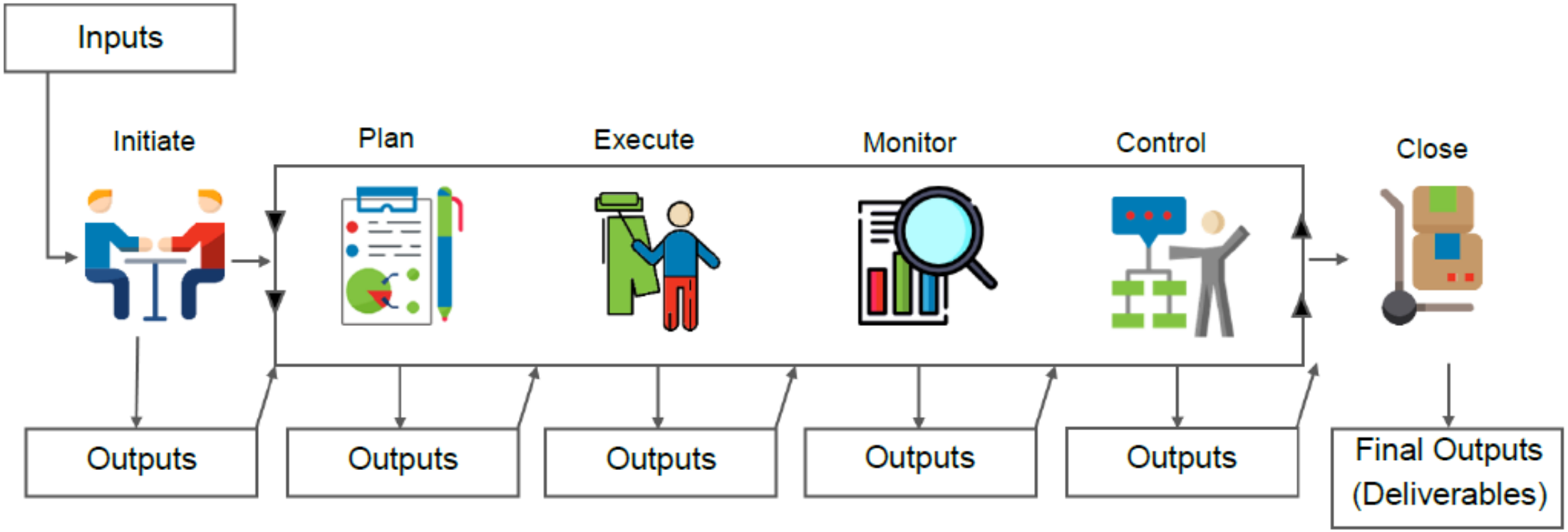


Exhibit 1-11: Project Model Inputs, Processes and Outputs

Chapter 2

Initiate Projects

Contents:

Contents:

Exhibit 2-1 shows the inputs, processes and outputs of a project during the Initiate phase.

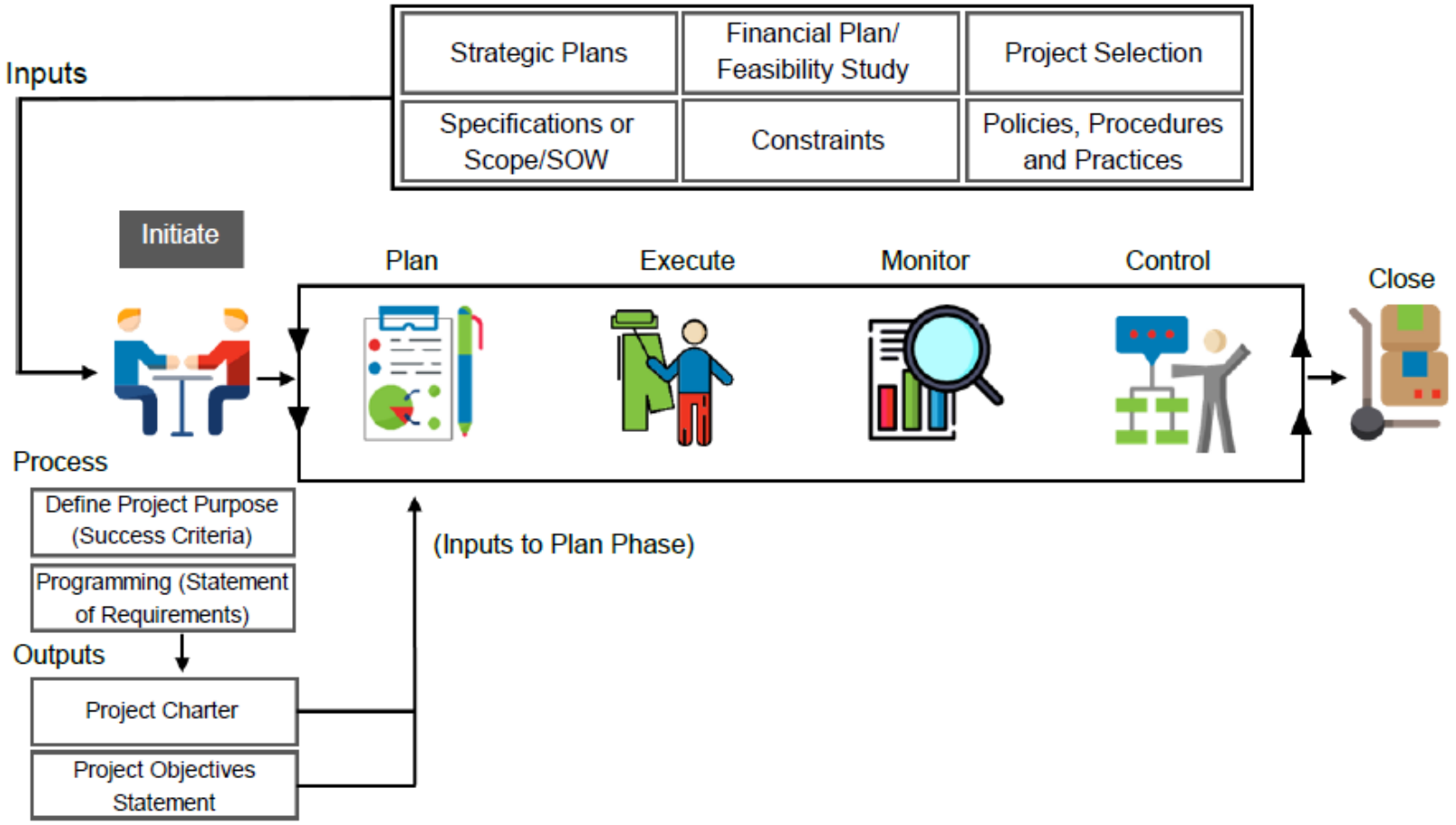


Exhibit 2-1: Inputs, Processes and Outputs in the Initiate Phase

Input

1-Initiate Phase and Project Inputs

Input

Strategic Plans

1-Facility Strategic Plan

2-Facility Master Plan

Input

Financial Plan

Feasibility Study

Input

Project Selection

Input

Specifications or Scope of Work (SOW)

Input

Constraints

Input

Policies, Procedures and Practices

Process

2-Define Project Purpose

Process

Project Purpose

1-Define Need

Process

Project Purpose

2-Define Stakeholders

Process

Project Purpose

3-Define Scope and Intended Use

Process

Project Purpose

4-Define Constraints and Parameters

Process

Project Purpose

5-Document Project's Purpose

Process

Project Purpose

6-Test for Feasibility

Process

Project Purpose

7-Define and Document Success Criteria

Process

3-Perform Programming

Programming Steps

1- Define scope, goals, and success criteria

2- Obtain approval

3- Set a schedule

4- Refer to programming standards

Programming Steps

5-Collect data

6- Assess user needs

7 - Compile data

8- Present the statement of requirements

Space Planning and Space Standards

Needs Assessments

Statement of Requirements

Adjacency or “bubble” diagrams

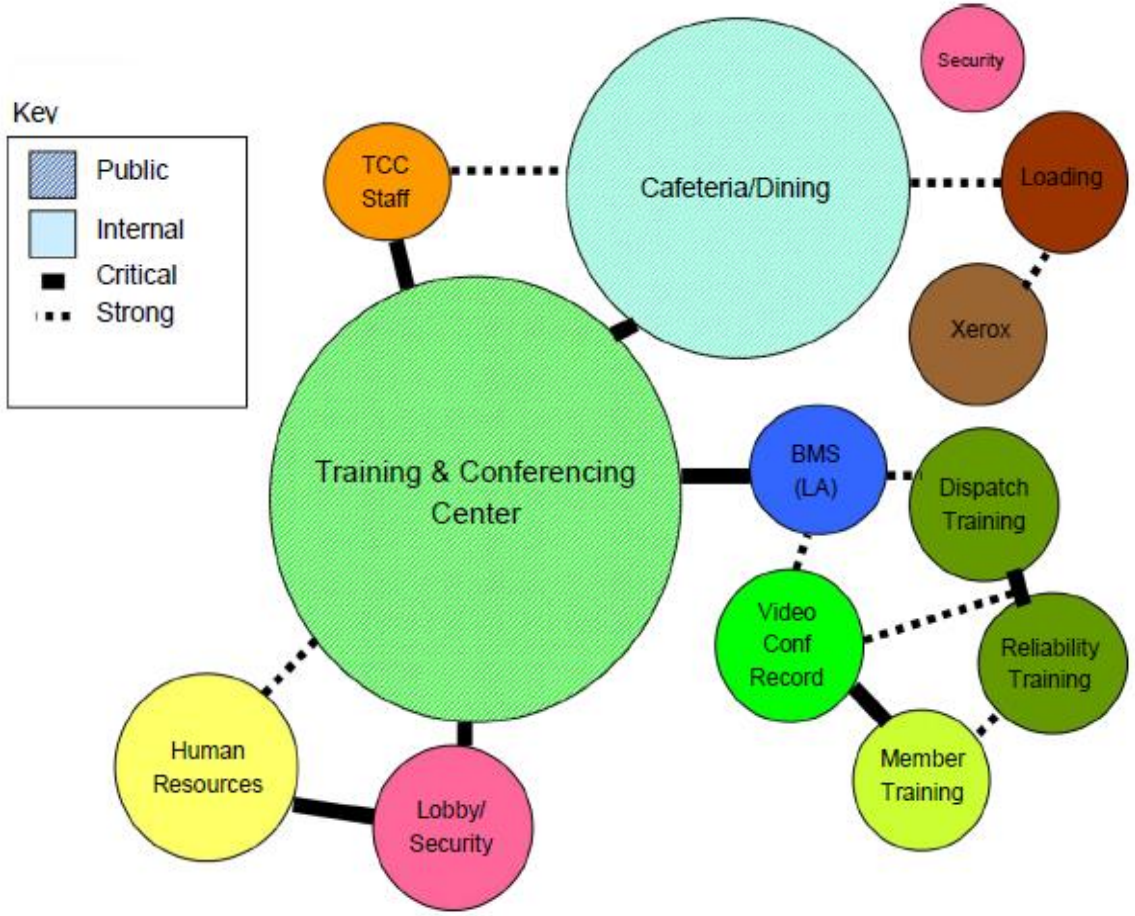


Exhibit 2-19: Adjacency Diagram

Output

4-Project Charter

Output

4-Project Charter

A- Business Case or Funding Request

B- Approvals

C-Initial Project Team Selection

Output

PROJECT CHARTER TEMPLATE

Project title	

Project manager		Project sponsor	
Business unit		Date	

Project purpose

Scope	
In scope	Out of scope

Deliverables	

Output

5-Project Objectives Statement

Output

Schedule Documentation

Output

Budget/Cost Documentation

Output

Quality Documentation

Chapter 3

Plan Projects

Contents

1-Designing Deliverables or Space

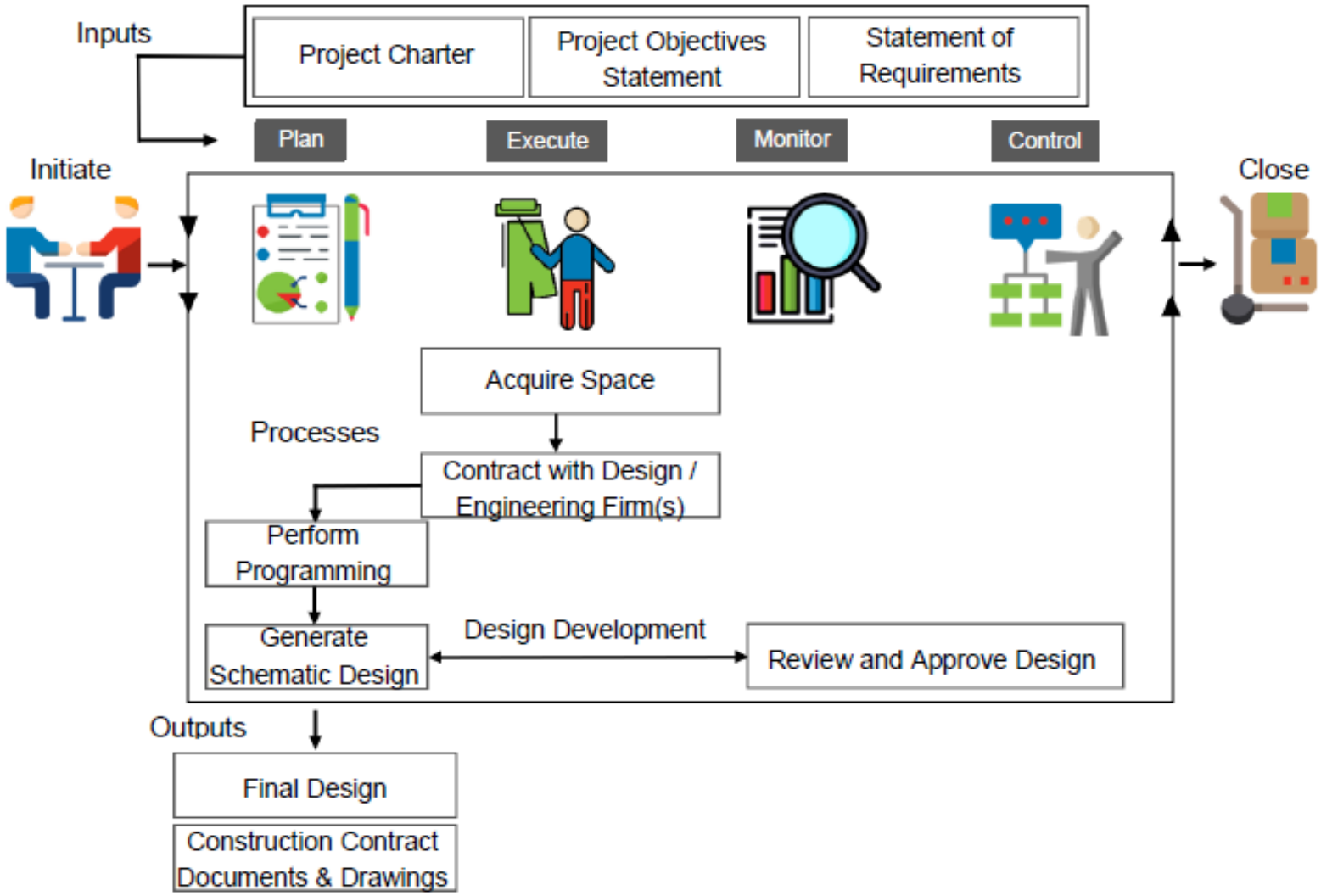


Exhibit 3-2: Inputs, Processes and Outputs for Designing Deliverables or Space

B-Acquire Space

1-Selection Criteria

2-Site Search

3-Selecting a Firm

B-Acquire Space

4-Building Evaluation

5-Purchase or Lease Space

C-Design Process

1-schematic design

2-Design development

3-Final Design

2-Create PM Plan

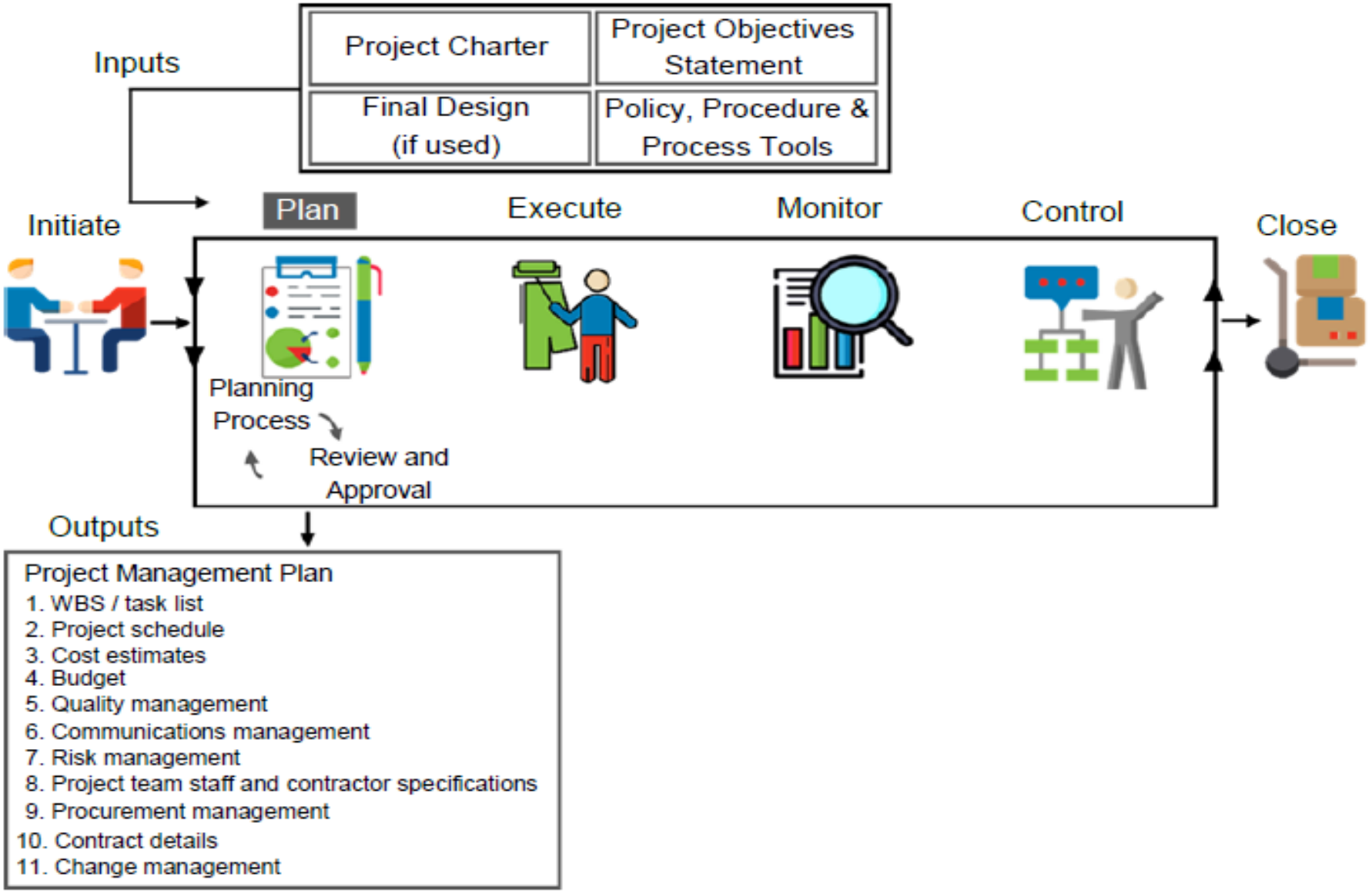


Exhibit 3-6: Inputs, Processes and Outputs for Creating Project Management Plan

PM Plan:

1-WBS

2- Project Schedule

3-Cost Estimates

4- Budget Management

PM Plan:

5-Quality Management

6- Comm. Management

7- Risk Management

8- Staff and Contractor

PM Plan:

9-Procu. Management

10- Contract Details

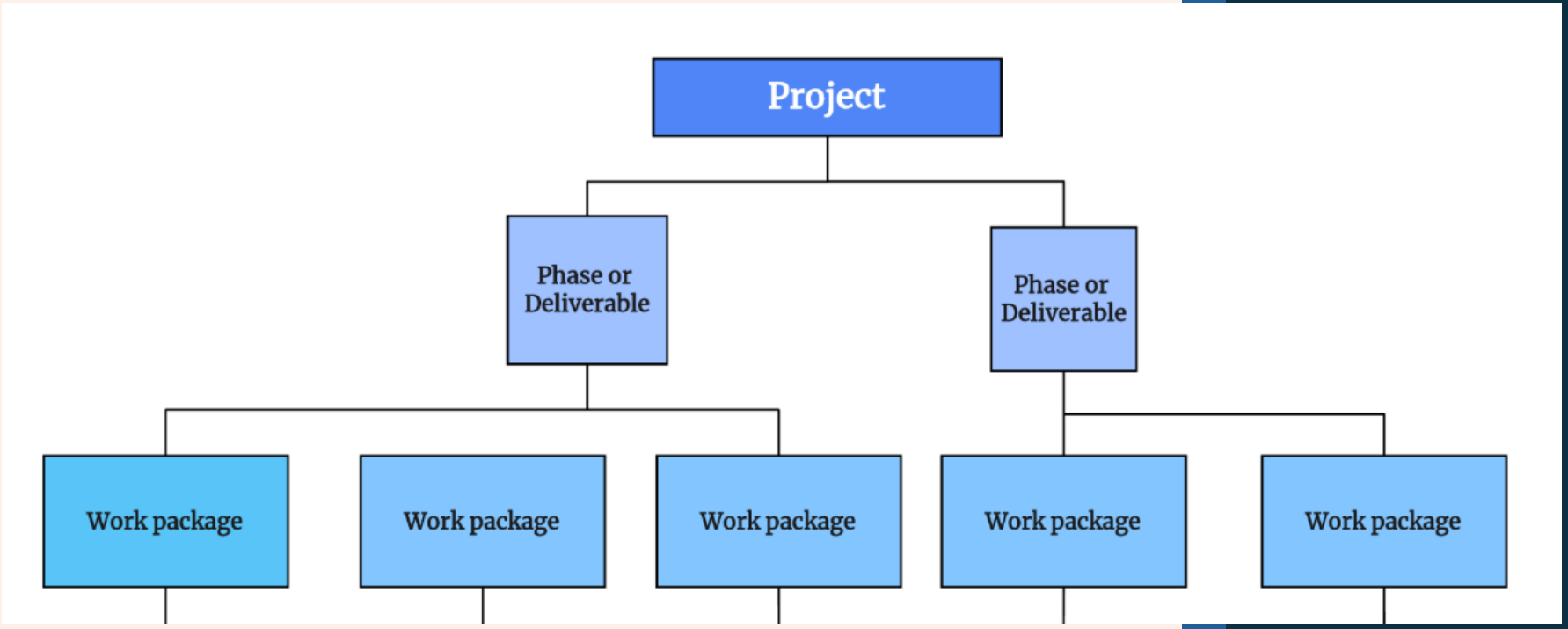
11- .Change Order

1-Work Breakdown Structure (WBS)

Task

Subtask

Work Packages



Steps

1- Divide Tasks into Subtasks

2- Divide Subtasks into Work Packages

3- Iterate and Validate

2- Project Schedule

PS Process:

1- Determine Resource and lead time

2- Sequence Tasks

3- Estimate Resources

PS Process:

4- Estimate Duration

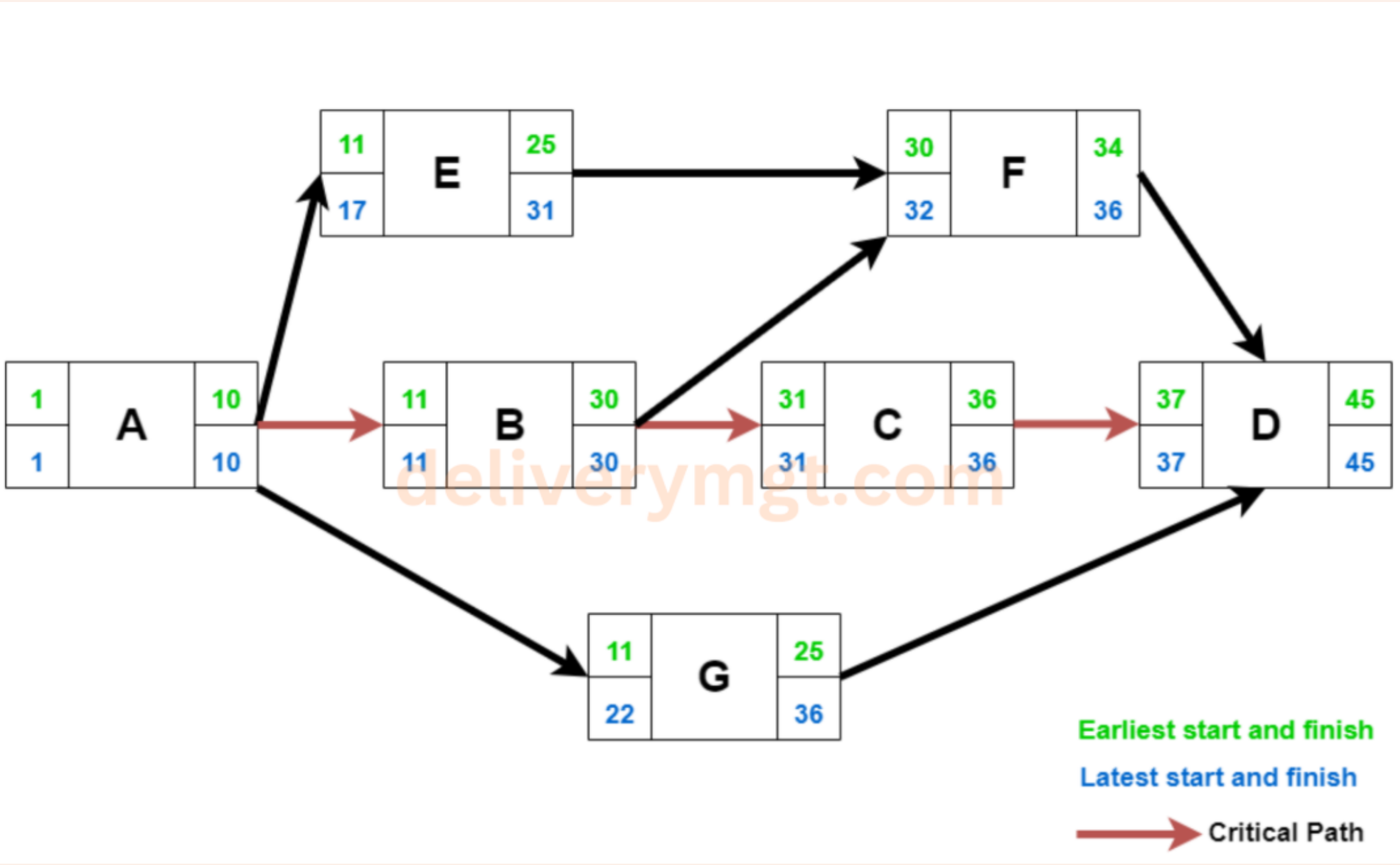
5- Build Project Schedule

Methods :

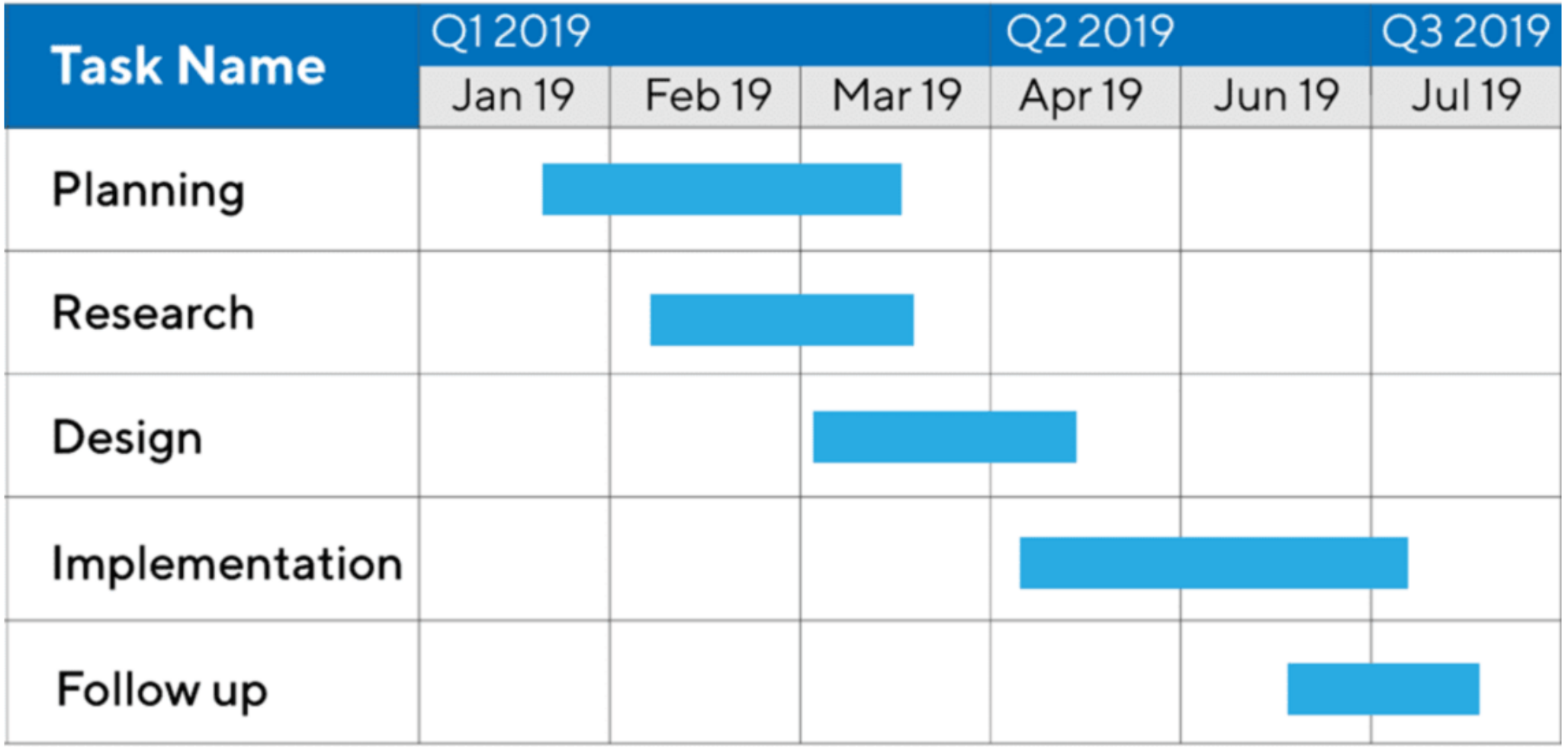
1- Critical path method(CPM)

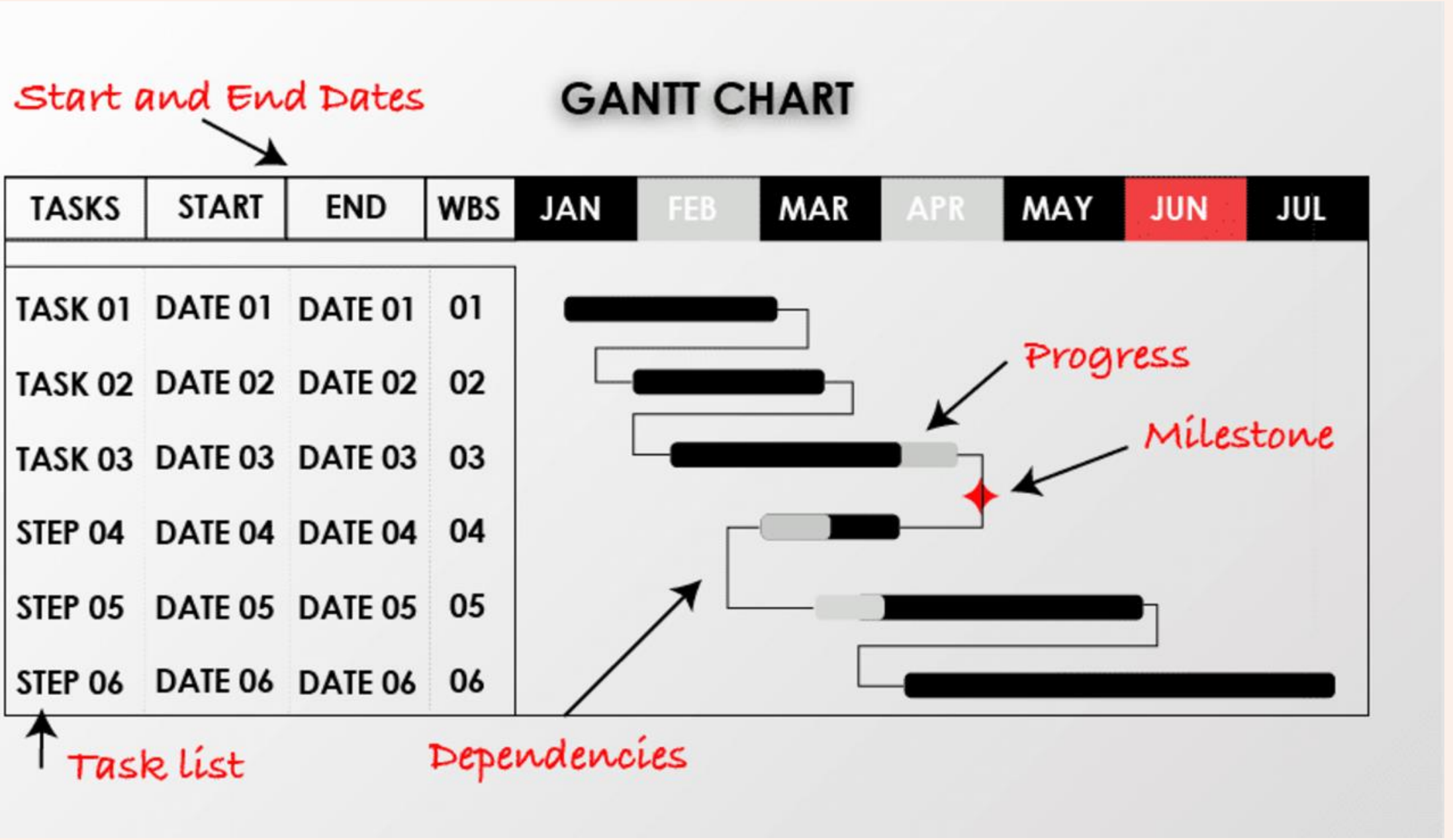
2- Network diagrams

3- Gantt charts


1
A
10
1
10
11
E
25
17
31
11
B
30
11
30
31
C
36
31
36
30
F
34
32
36
37
D
45
37
45
11
G
25
22
36
deliverymgt.com
Earliest start and finish
Latest start and finish
Critical Path

Gantt Chart


Task Name
Q1 2019
Q2 2019
Q3 2019
Jan 19
Feb 19
Mar 19
Apr 19
Jun 19
Jul 19
Planning
Research
Design
Implementation
Follow up


Start and End Dates
GANTT CHART
TASKS
START
END
WBS
JAN
FEB
MAR
APR
MAY
JUN
JUL
TASK 01 DATE 01 DATE 01 01
TASK 02 DATE 02 DATE 02 02
TASK 03 DATE 03 DATE 03 03
STEP 04 DATE 04 DATE 04 04
STEP 05 DATE 05 DATE 05 05
STEP 06 DATE 06 DATE 06 06
Progress
Milestone
Task list
Dependencies

3- Cost Estimates

Methods:

1-Historical costs

2-Bottom-up estimating

3-Top-down estimating

Methods:

4-Parametric modeling

5-Evaluation of competitive bids

4- Budget Management

Methods:

1-Reconciliation with Funding Priorities

2-Project Costing Plan

3-Cost Management Plan

Methods:

4-Budget Change Control Process

5-Contingency Reserve Analysis

5- Quality Management

Methods:

1-Cost-benefit analysis

2-International quality standards

Methods:

3-Total quality management (TQM)

4-Benchmarking

5-Cost of quality (COQ)

6- Communications Management

Methods:

1- requirements analysis

2- Communication model

Methods:

3- Online software

4- Meetings

7- Risk Management

RM Process:

1-Risk Identification

2-Rate Probability

3-Rate Severity

4-Determine Priority

RM Process:

5- Preventive Strategy

6-Contingency Plan

7-Recovery Plan

Methods:

1- Avoid

2-Mitigate

3-Transfer

4-Accept

8- Project Team Staff and Contractor Specifications

Methods:

1-organizational charts

2-Position descriptions

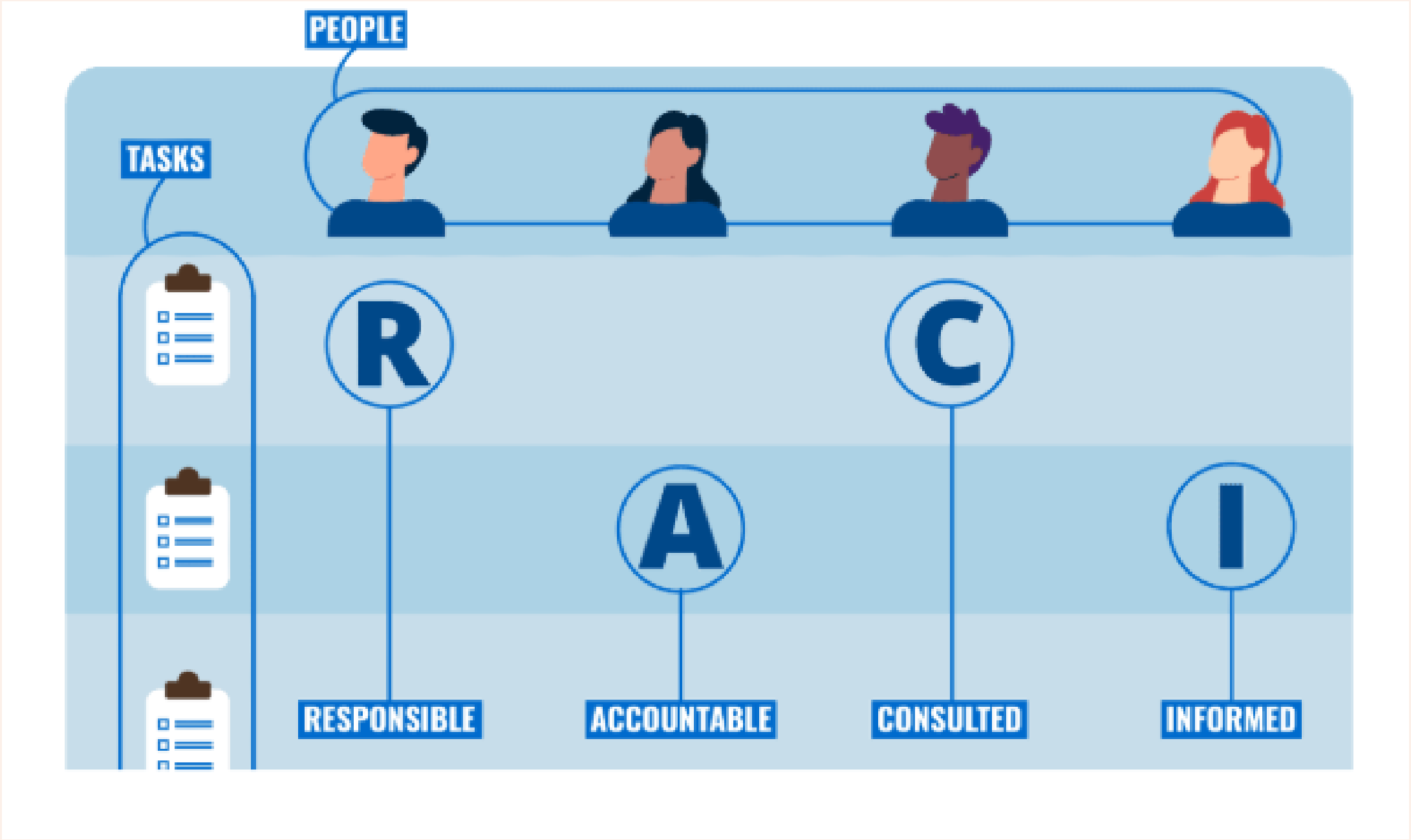
3-PMO

Methods:

4-Communication and control

5-Allocation of resources

6-RACI chart


PEOPLE
TASKS
R
C
A
I
RESPONSIBLE
ACCOUNTABLE
CONSULTED
INFORMED

9- Procurement Management

Contact Model:

1-Design-Bid-Build

2-Design-Build

3-Construction Management (CM)

Contact Model:

4-Multiple Prime Contracts Approach

5-PM at-risk or CM at-risk

Type of Contract:

1-Fixed Price

2-Cost Reimbursement

3-Time and Materials

10- Contract Details

Legal and Expert Review

Bond:

1- Bid bond

2-Performance bond

3-Payment bond

Insurance Coverage

11-Change Order Management

Chapter 4

Execute, Monitor and Control Projects

Contents

1-Acquire Team and Resources

2-Execute, Monitor and Control Projects

1-Acquire Team and Resources

Exhibit 4-1 shows the inputs, processes and outputs for acquiring the team and resources.

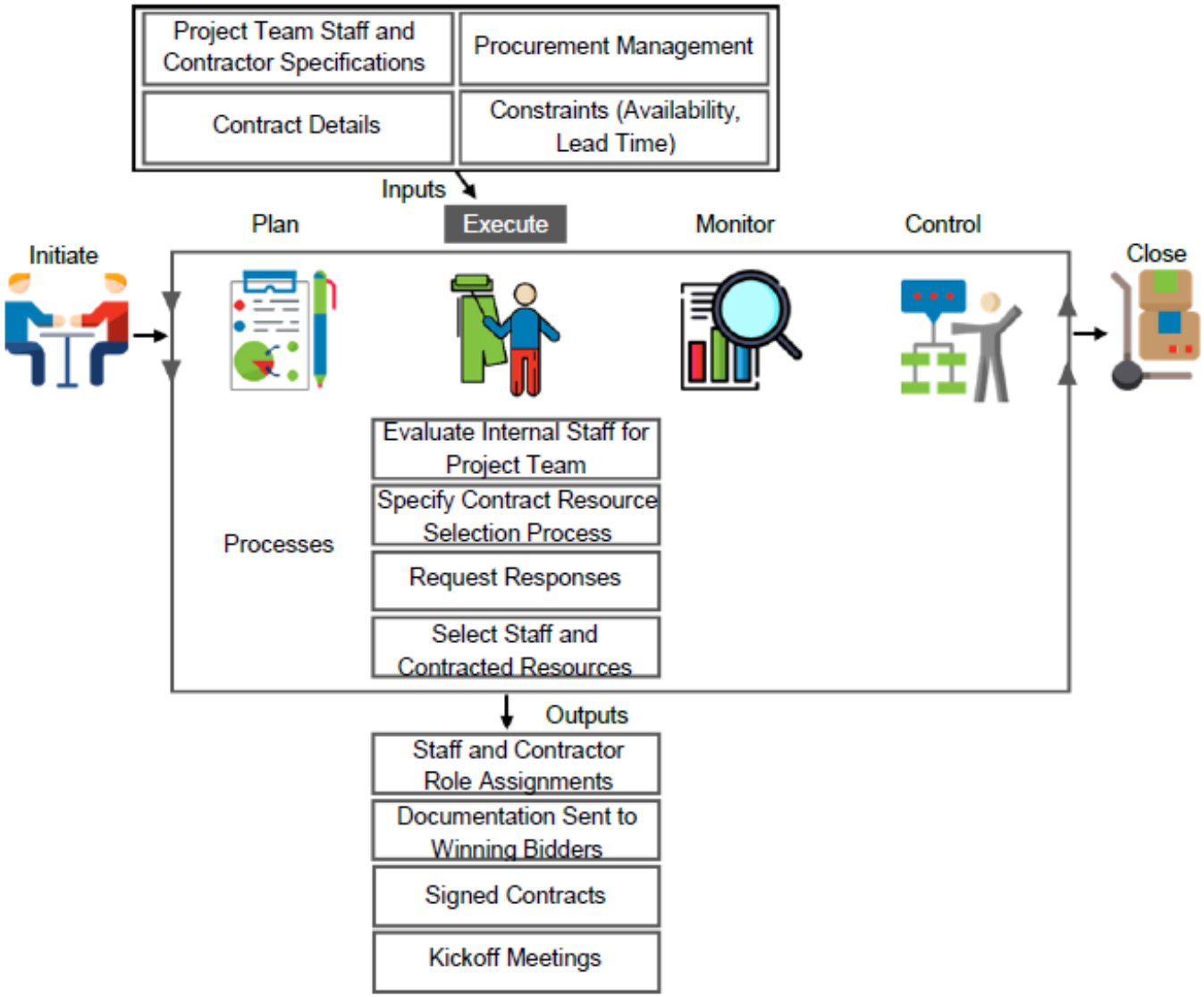


Exhibit 4-1: Inputs, Processes and Outputs for Acquiring Team and Resources

Process

1-Evaluate internal Staff

Process

2-Specify Contracted Resource Selection Process

A-Open Tender/Bidding

B-Direct Negotiation

Process

3-Request Responses

4-Select Staff and

Contracted Resources

Output:

1-Documentation Sent to Winning Bidders

2-Staff and Contractor Role Assignments

Output:

3-Signed Contracts

4-Kickoff Meetings

2-Execute, Monitor and Control Projects

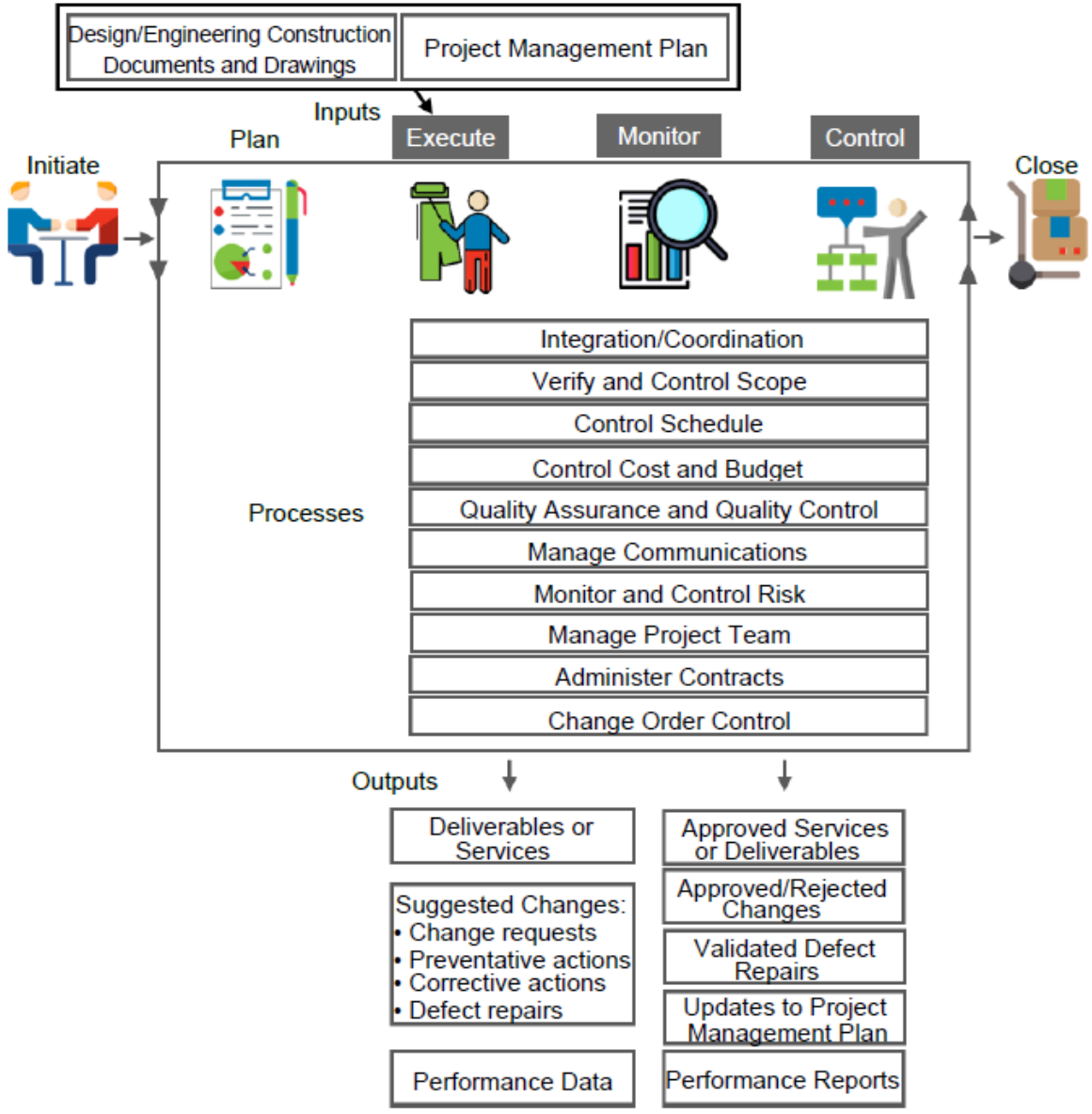


Exhibit 4-6: Inputs, Processes and Outputs for Executing and Controlling Projects

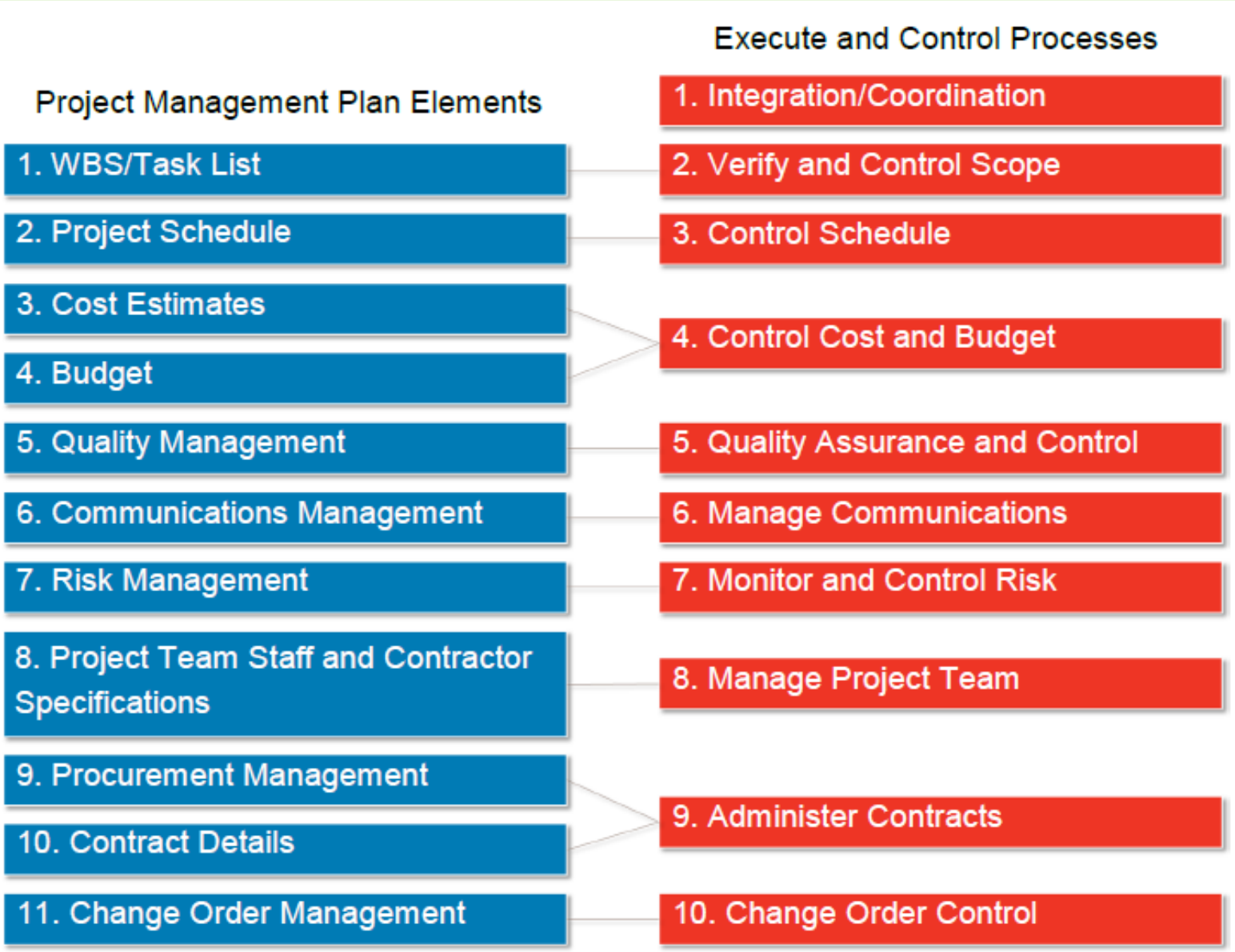


Exhibit 4-7: Phase Comparison

Process

1-Integration/Coordination

Earned value analysis

Forecasting

PM technology

Process

2-Verify and Control Scope

Design review

Deliverable inspections

PM technology

Process

3-Control Schedule

progress reports

resource schedule updates

Root cause analysis

Process

4-Control Cost and Budget

Tracking Costs

Verifying Accuracy

Identifying Variances

Analyzing Variances

Process

5-Quality Assurance and Quality Control

Process

6-Manage Communications

Reporting Performance

Managing Stakeholders

Process

7-Reporting Performance

1-Data Collection

2-Data Analysis

3-Information Arrangement

4-Presentation

Process

8-Managing Stakeholders

Leadership and influence

Communications

Issue logs

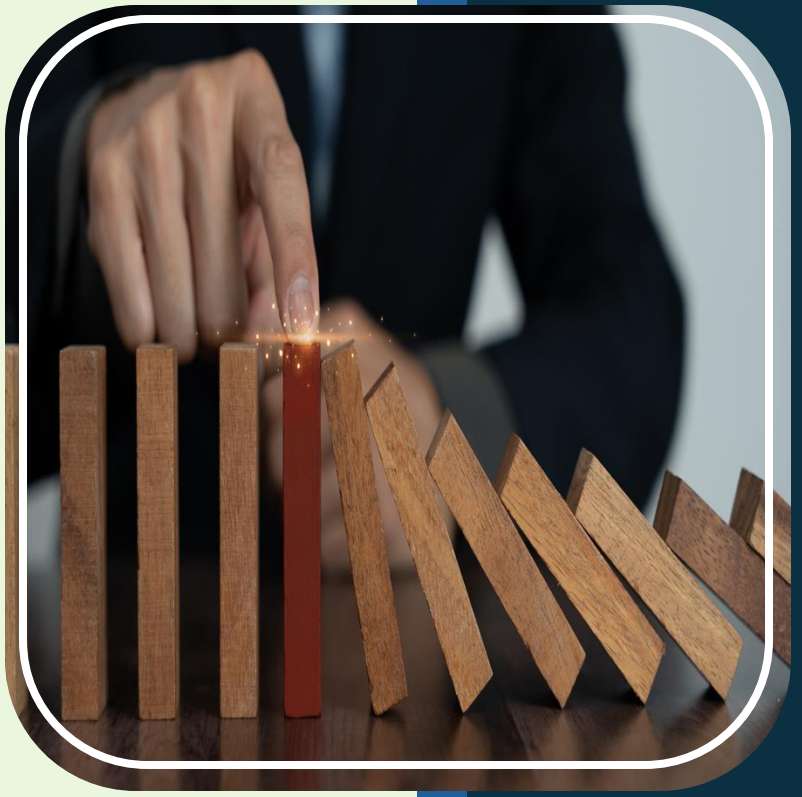
Process

9-Monitor and Control Risk

Risk assessment updates

Contingency funds review

Status meetings



Process

10-Manage Project Team

Man. and leadership

Rewards or penaltie

Contract Changes

Process

11-Administer Contracts

Payment Processing

Service Levels

Conflict resolution

Process

12-Change Order Control

Expert Judgement

Approve/Reject process

RFI / RFC

Meeting minutes

Chapter 5

Close Projects

Contents:

1- Accept Deliverables or Occupy Space

2- Close Contracts and Project and

Evaluate Outcomes

1- Accept Deliverables
or
Occupy Space

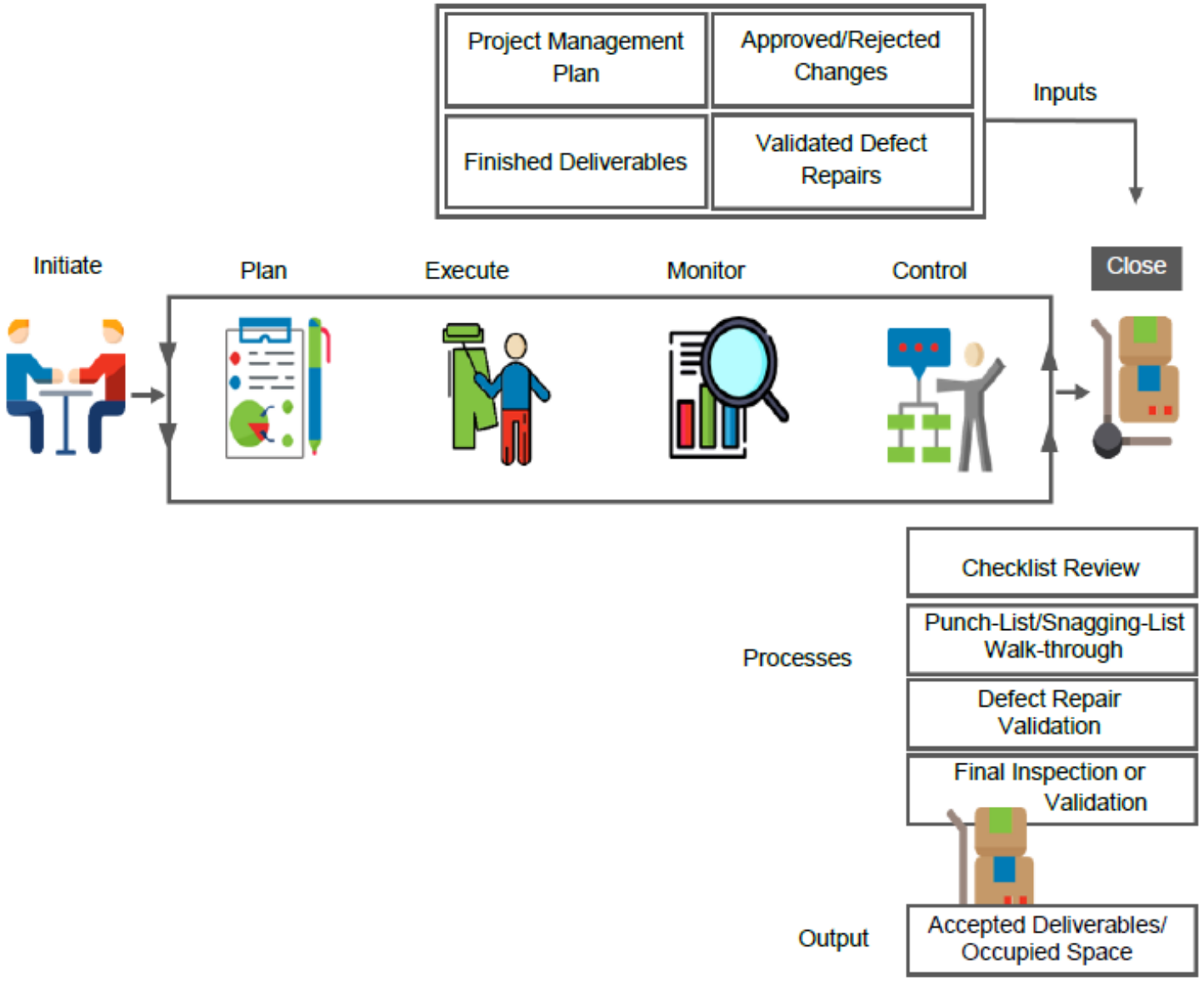


Exhibit 5-1: Inputs, Processes and Outputs for Accepting Deliverables or Occupying Space

Input:

1-The PM plan

2-Approv / reject changes

3-Validated defect repairs

4-Finished deliverables

Process

1-Checklist Review

2-Snagging-list

3-Defect Repair

4-Final Inspection

Process

5-Certificate of Occupancy

3-Commissioning

Output

1-Deliverable Acceptance

Waranety

Maintenance Period

Limit of Retention

Output

2-Occupying Space

Relocating staff, furniture, and equipment

Training

Engaging in change

2- Close Contracts
and
Project and Evaluate Outcomes

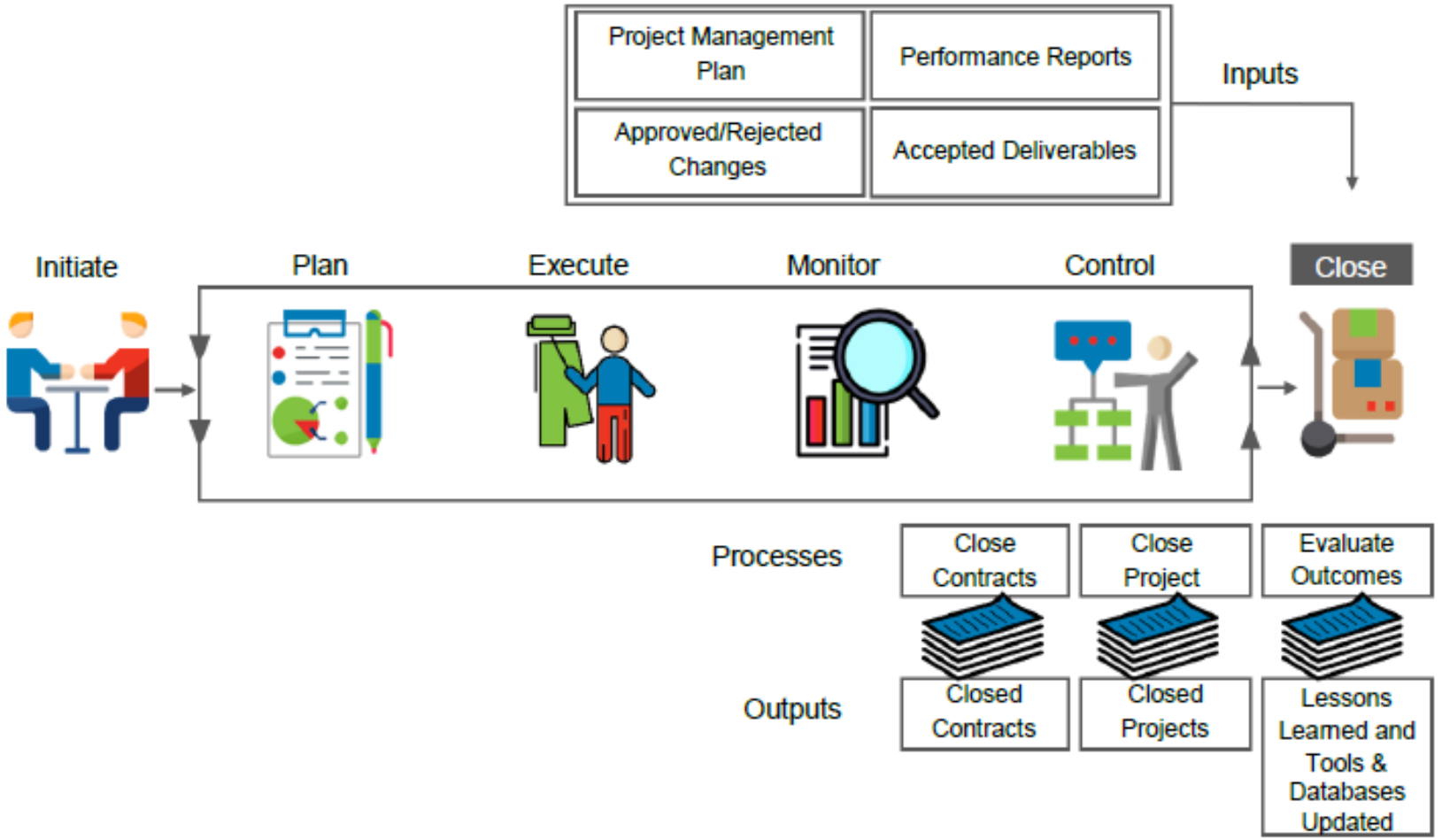


Exhibit 5-3: Inputs, Processes and Outputs for Closing Contracts and Project and Evaluating Outcomes

Process and Output

1-Close Contracts

Specifications are met

Deliverables meet acceptance criteria

Contractor & Procurement audits

Process and Output

2-Close Projects

Verifying Transfer and Acceptance

Closing Remaining Contracts

Issuing Formal Acceptance Documentation

Process and Output

2-Close Projects

Releasing Project Team Members

Generating Project Files

Process and Output

3-Evaluate Outcomes

Release of liens

lessons learned

Occupancy Surveys

Process and Output

3-Evaluate Outcomes

Performance Reviews

Training

Celebrating Success