The image shows a spiral-bound notebook with a light brown, textured cover. The spiral binding is on the left side. The text is centered on the cover.

Contracts,  
Change Order Administration  
and Claims Management

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# What is a Contract?

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- 📄 A contract is a mutual business agreement recognized by law under which one party undertakes to do work (or provide a service) for a second party for a “consideration”.
- 📄 A contract is an agreement between two parties, one called the contracting party or owner and the other the contracted party or the contractor to perform a previously determined scope of work for a previously determined amount of money.

# Why do we need written contracts?

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- ❏ Basic lack of trust
- ❏ Clearly establishes the risks and obligations of each party
- ❏ Provides means by which performance can be assessed and measured
- ❏ Provides means by which breaches can be identified
- ❏ Provides means by which default can be established
- ❏ Establishes the owner's means of control
- ❏ Establishes the contractor's scope of work

# What does a written contract do for us?

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📄 A written contract provides the document by which risks, obligations, and relationships of both parties are clearly established, thus ensuring the performance of these elements in a disciplined manner.

# Goals of Contract Management and Administration

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☞ The effective management and administration of contracts results in reducing risks, maximizing cost savings, minimizing claims, and improving economic return.

# How do contracts minimize risks?

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- 📄 A contract provides the means to manage and allocate risks. You you want to “share” the risks appropriately through your contractual relationship.
- 📄 Your contracting strategy needs to be built around the relationship between the terms and conditions, and the accompanying risks and cost impacts.
- 📄 The type of contract and the specific language used should flow from these relationships.
- 📄 Failure to manage risks in this manner can result in cost overruns, loss of market, or loss of quality.

# Risk Areas

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- 📄 Cost - possibility of overruns and other financial losses
- 📄 Time - delays in schedule and resultant loss of market
- 📄 Quality - loss of desired quality of engineering and construction

# Contracting Strategy

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- ☞ Priority of project management goals
  - Cost, schedule, quantity
- ☞ Status of project definition
- ☞ Schedule and cost constraints
  - Facility startup date and availability of capital
- ☞ State of the economy
  - Market urgency for product
  - Number of competitive bidders
  - Workload of competitive bidders
  - Vendor backlogs

# Types of Contracts

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- 📄 Lump-sum fixed price
- 📄 Unit price
- 📄 Fixed price with escalation (price adjustment)
- 📄 Guaranteed maximum price (target price)
- 📄 Cost plus incentive fee (time/cost goals)
- 📄 Cost plus fixed fee
- 📄 Cost plus percentage of cost

# Elements of Cost

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 Labor Costs

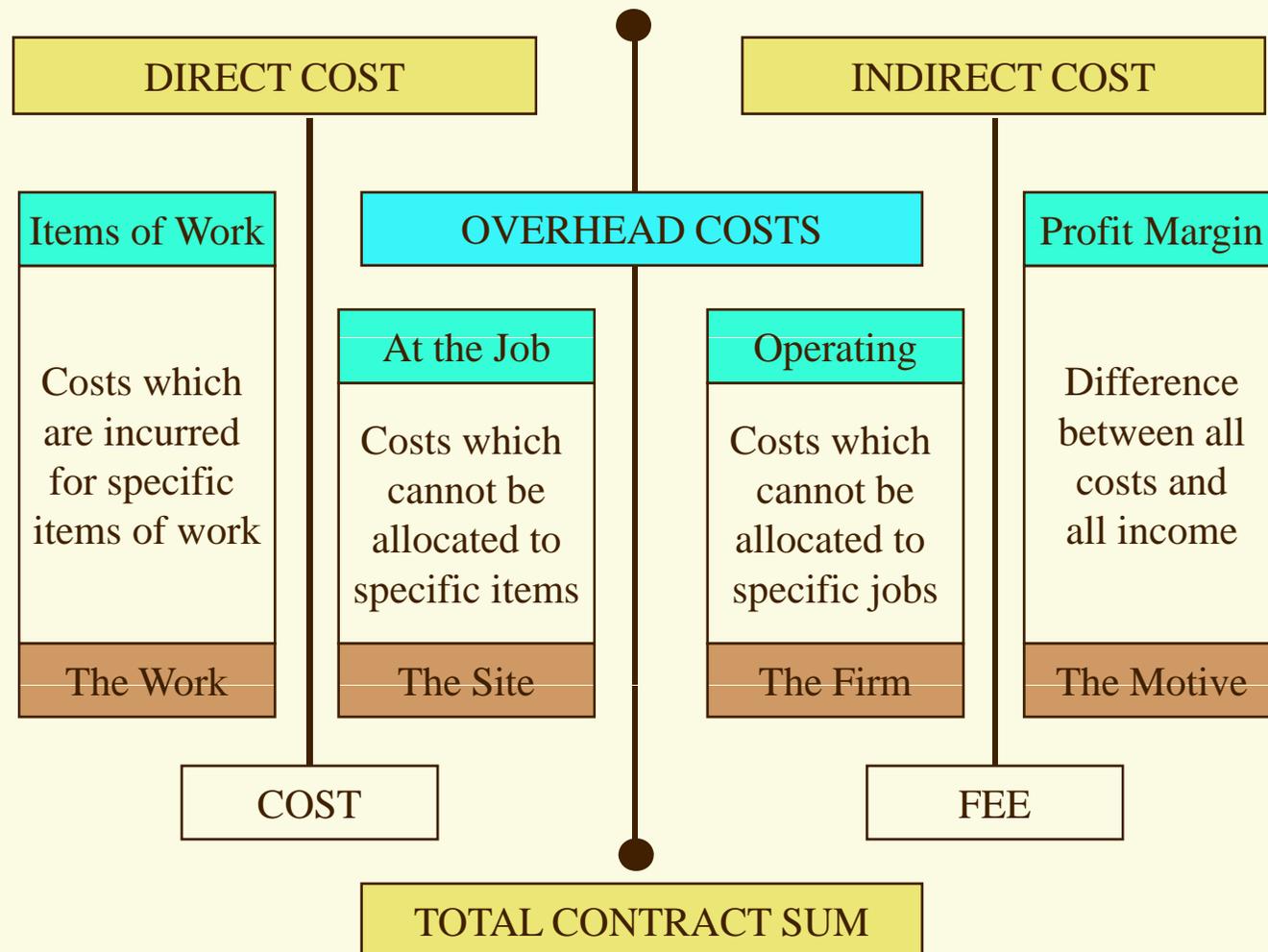
 Material Costs

 Equipment Costs

 Overhead Costs - Direct and Indirect

 Profit

# Analysis of Cost



# Fixed Price vs. Cost Reimbursable

## Definitions

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### Fixed Price

Agreement to perform the scope of work at a set price regardless of Contractor's actual cost.

### Cost Reimbursable

Agreement to perform work on a reimbursable basis.

# Fixed Price vs. Cost Reimbursable

## Basic Conditions

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### Fixed Price

Fair and reasonable price can be established using a detailed scope of work, complete design and specifications and known environmental and business conditions.

Adequate professional inspection & supervision provided by other parties.

Risk: Contractor assumes maximum amount of risk, and has incentive to perform economically.

### Cost Reimbursable

Scope & cost of work not defined sufficiently to allow fixed price quotes.

Qualified contractors unwilling to accept financial risk of fixed price.

Owner wishes to exert more control, develop design as project progresses, or achieve technology transfer from contractors.

Owner is required to be more sophisticated in contractor selection and oversight.

Risk: Owner accepts most risk

# Fixed Price vs. Cost Reimbursable

## Advantages

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### Fixed Price

Less risk on the Owner, at least on the surface.

Substantial amount of case law and administrative protocol.

Overall cost known before project begins.

Minimal Owner involvement

Owner realizes price competition.

Contractor has incentive to finish early.

### Cost Reimbursable

Construction can be phased.

Changes can be accommodated more easily.

Reduces adversarial relations: Contractor & Owner are partners.

Reduced Contractor contingency included in price.

# Fixed Price vs. Cost Reimbursable

## Disadvantages

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### Fixed Price

Adversarial relations  
Contractor may bear risk for conditions beyond his control  
Changes more likely to end in dispute.  
Contractor has no direct financial motivation to provide superior quality or service.  
Extra time required to complete the plans and specs.

### Cost Reimbursable

Generally, the construction costs are higher.  
Increased Owner involvement.  
Final cost not known until project is finished.  
More detailed negotiations and contractor selection process.  
More cumbersome administrative and bookkeeping requirements.

# Fixed Price vs. Cost Reimbursable Applicability

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## Fixed Price

Routine projects.

Conditions with an abundance of qualified contractors.

Public works projects.

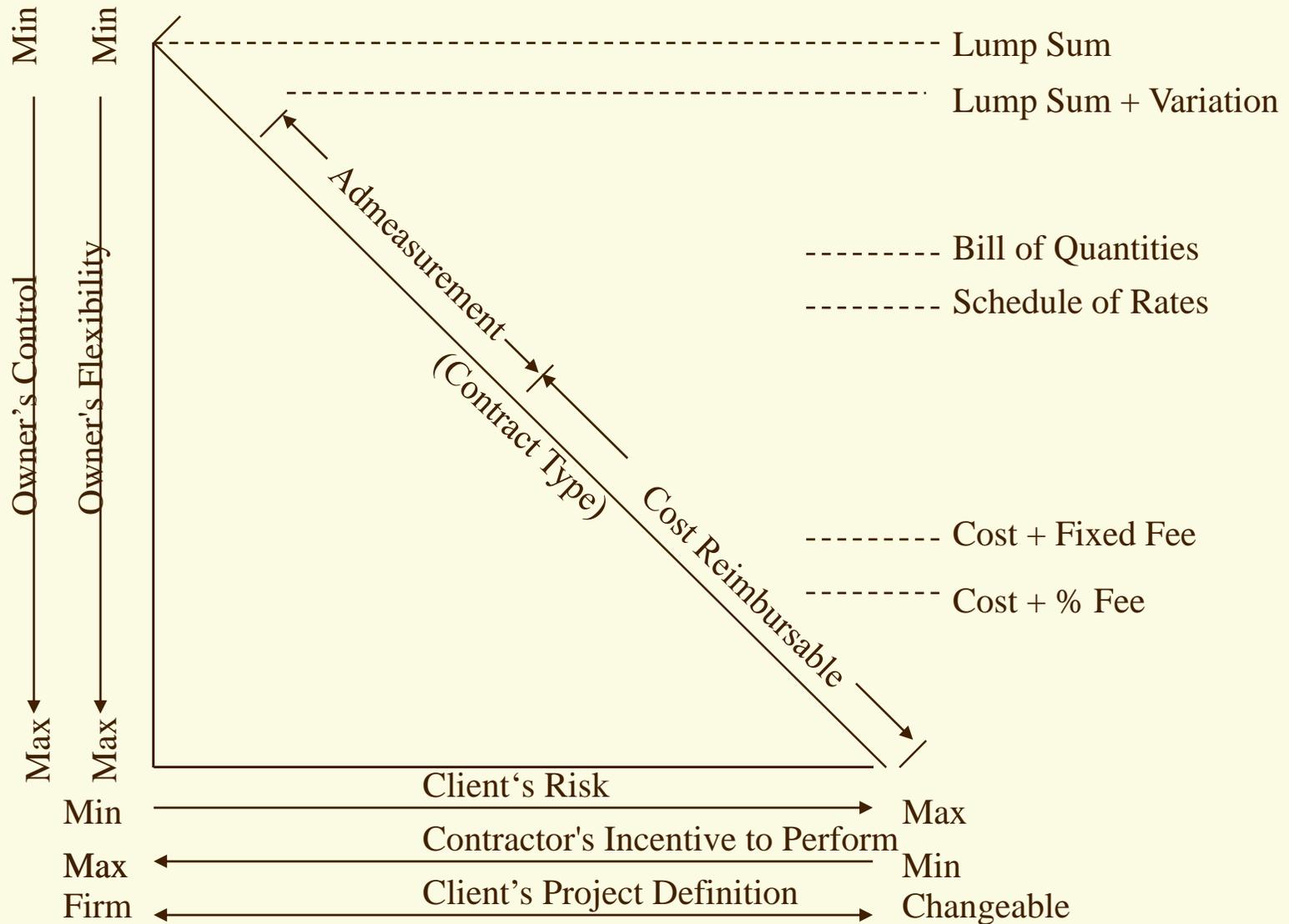
## Cost Reimbursable

High-risk industrial or manufacturing projects (petrochemical, power, offshore).

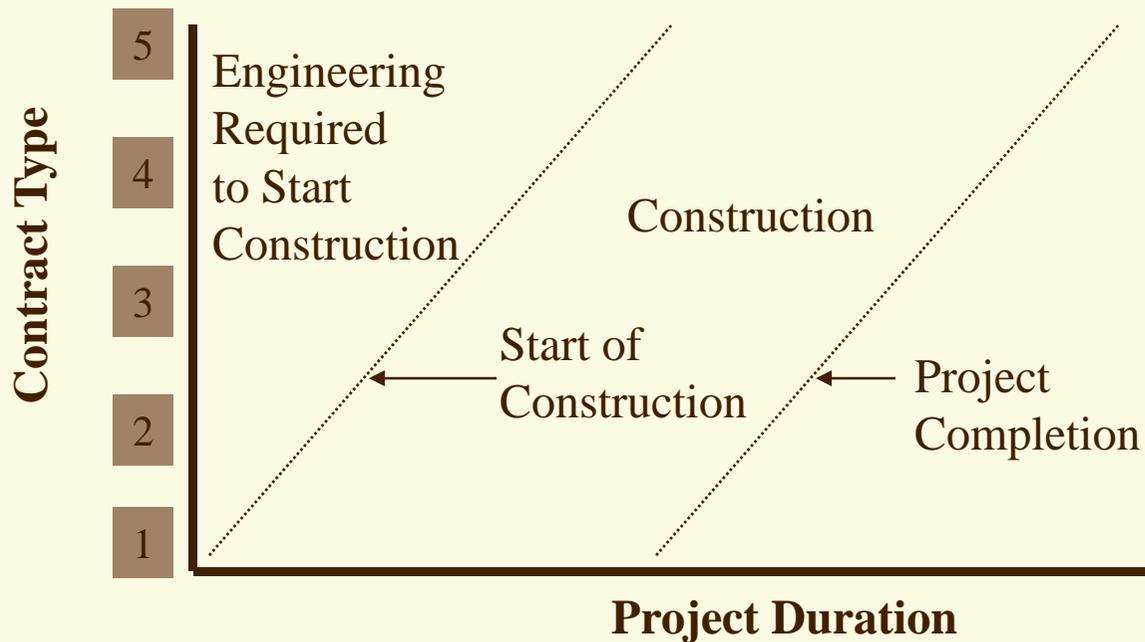
Situation where qualified contractors are scarce.

R&D projects (aerospace, military).

# Types of Contracts



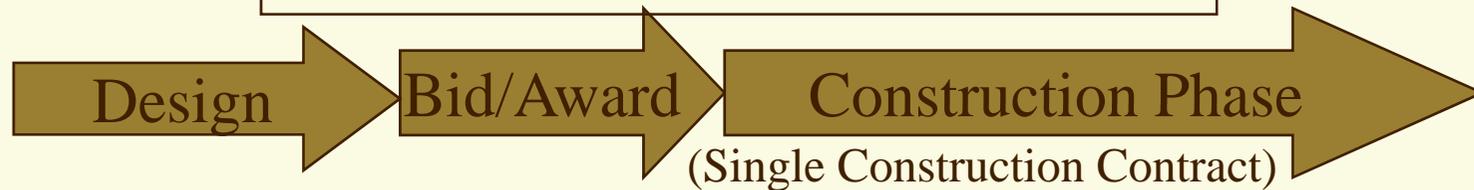
# Project Schedule Duration vs. Type of Contract



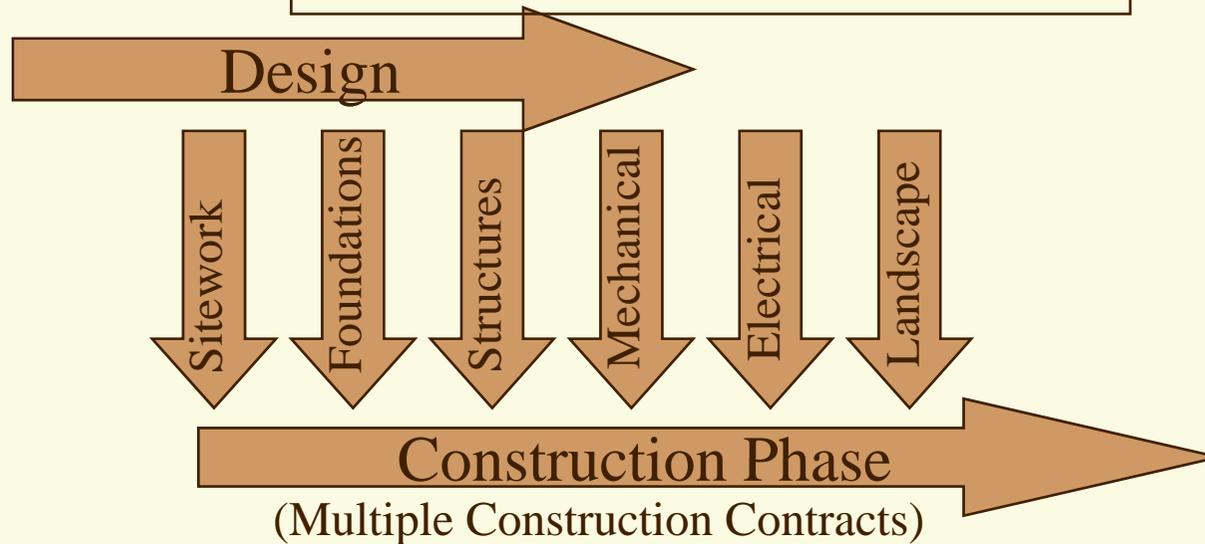
1. Cost Reimbursable w / %Fee
2. Cost Reimbursable w / Fixed Fee
3. Cost Reimbursable w / Incentive
4. Guaranteed Maximum Price
5. Lump-Sum Fixed Price

# Phased Construction

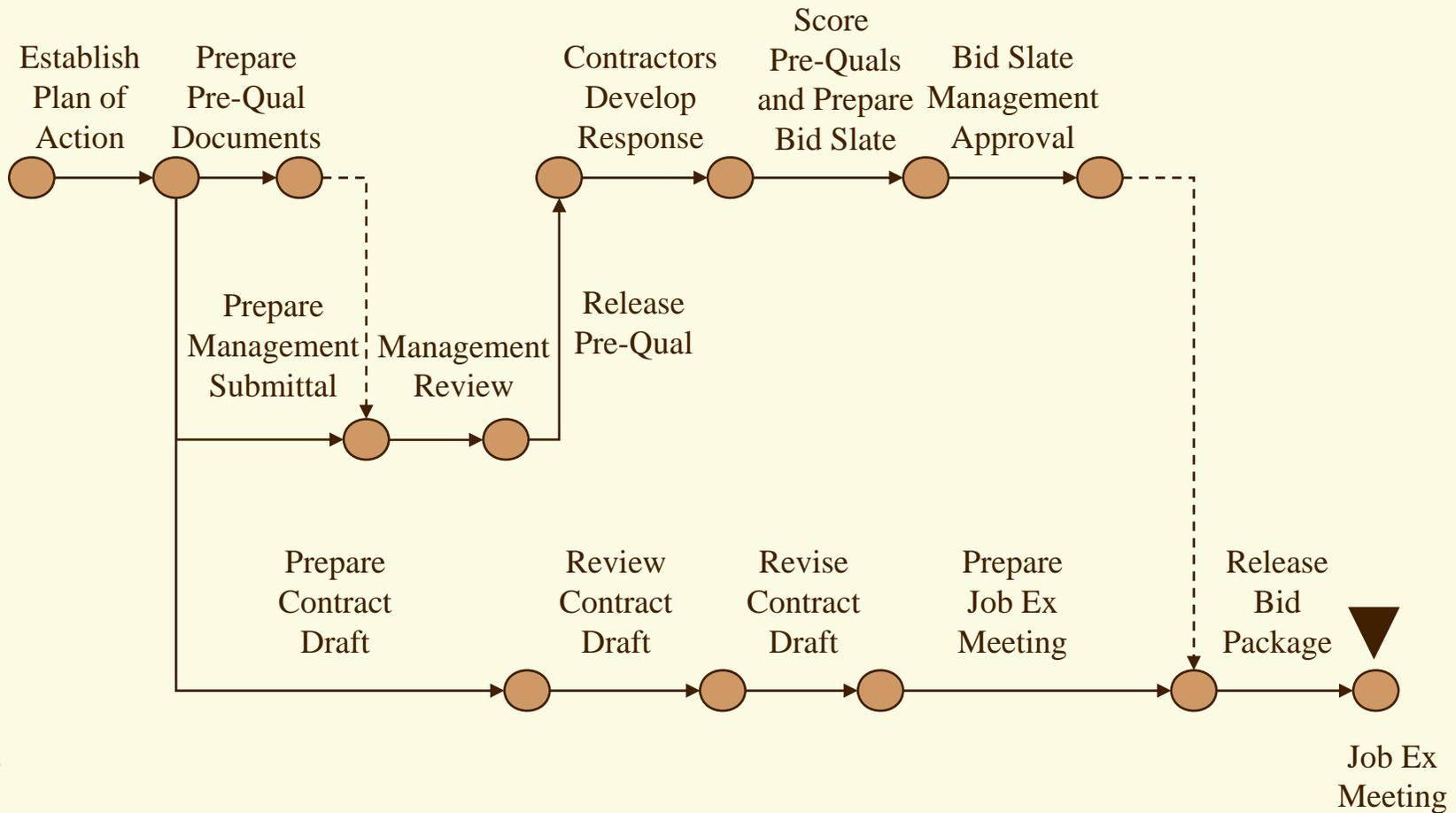
## Traditional Construction Method



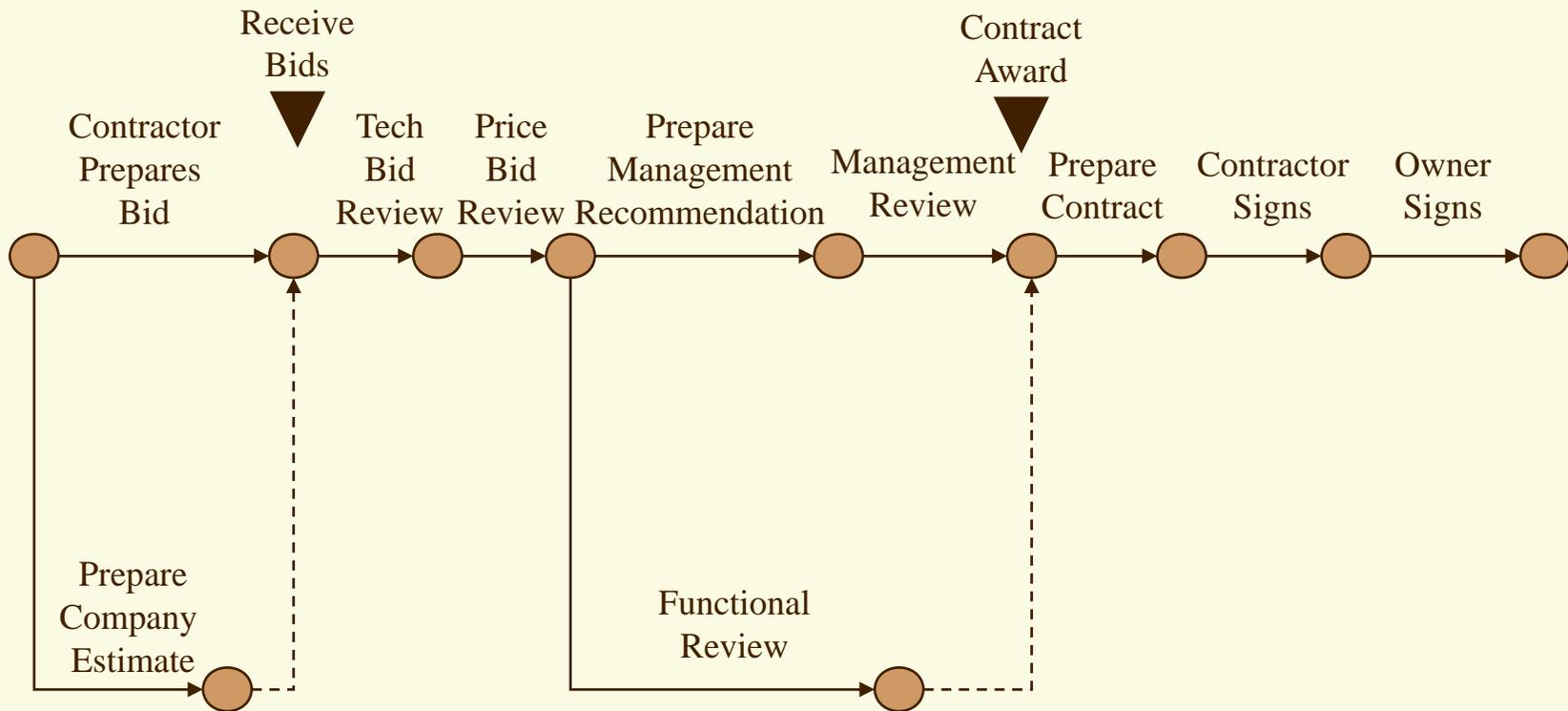
## Phased Construction Method



# Precontracting Activities



# Pre-Contracting Activities



# Pre-Qualification Process

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- Financial Strength and Credit Rating
- Previous Experience on Similar Projects
- Organization
- Loss Prevention Program
- QA/QC Program
- Equipment Availability
- Availability of Key Personnel
- Current and Future Workload

# Components of Contract Package

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- 📄 Invitation for the Bid
- 📄 Instructions to Bidders
- 📄 Bid Form
- 📄 Contract Form
- 📄 Schedule of Plant
- 📄 General Conditions or Provisions
- 📄 Special Conditions, Supplementary Conditions or Special Provisions

# Components of Contract Package

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 Performance Schedule

 Price Schedules

 Scope of Work

 Specifications

– Performance Specification

– Proprietary Specification

 Design Drawings

# Contract Bonds

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- 📄 Bid Bond (5% to 10% of contract price)
- 📄 Performance Bond (50% of contract price)
- 📄 Payment Bond
- 📄 Maintenance Bond

# Insurance

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## Public Liability Insurance

- Provides coverage against bodily injury and property damage to third parties as the result of construction activities.

## Builder's Risk Insurance

- Protects against loss/damage of structures and equipment

## Comprehensive Automobile Liability Insurance

## Special Policies



CHANGE ORDER  
ADMINISTRATION

# Change Order Administration

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 An organized effort to eliminate unnecessary cost and time impact as a result of processing project work outside the scope of the contract.

A Change is not a Claim.

# Contract Change Clause

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- Fixed price contract require a change clause.
- Establishes the owner's right to make changes and provides a mechanism for their administration and resolution.

# Types of Changes

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## Formal

- Via contract change clause

## Constructive

- Action of owner that has the effect of directing a change, although not initially documented as such.

## Cardinal

- Change totally out of scope of original contract.
- Should re-negotiate entire contract.

# Change Orders

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- 📄 Virtually all project have change orders.
- 📄 Need to recognize their implications.
- 📄 Set up an effective management system to handle them.
- 📄 Minimize cost/time impact and prevent costly legal action.
- 📄 Modification of the contract.

# Sources of Change Orders

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- 📄 Unanticipated site conditions
- 📄 Owner requested design modifications, additions or deletions
- 📄 Clarification of contract documents

# Disagreements

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- Change or design development
- Scope of the change
- Material cost
- Equipment rental rates
- Acceptable profit
- Overhead cost
- Consequential effects of the change

# Change Orders

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## Prior approval

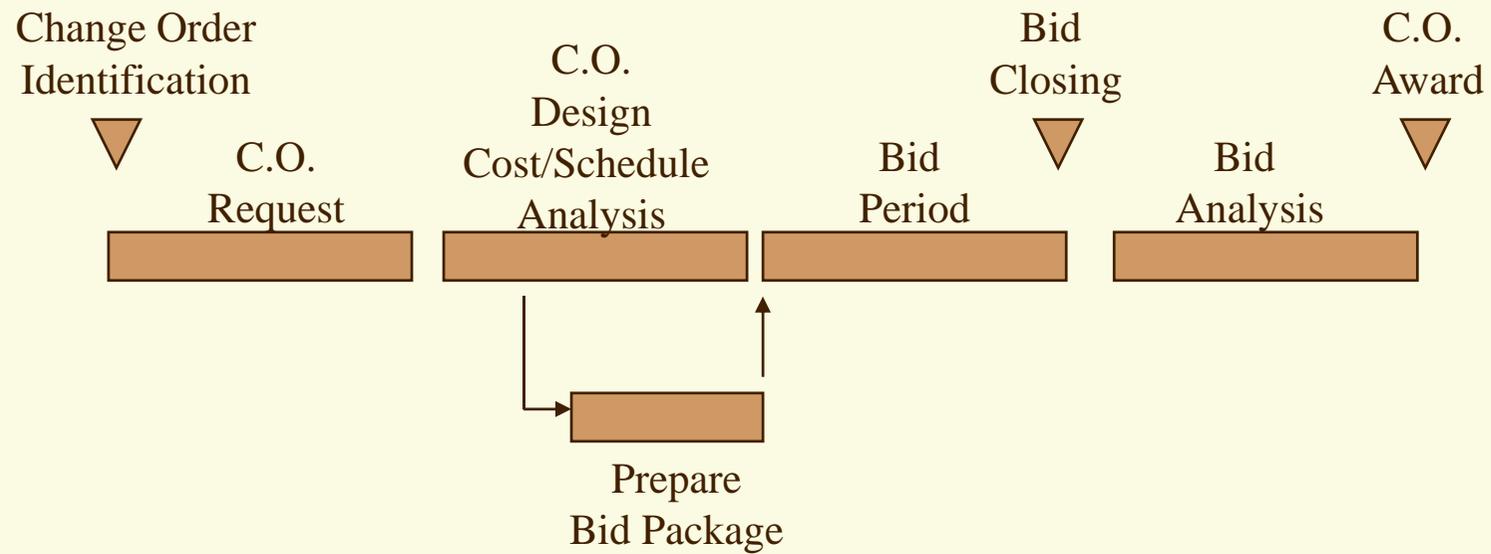
- Adverse effect on construction

## Unilateral change order

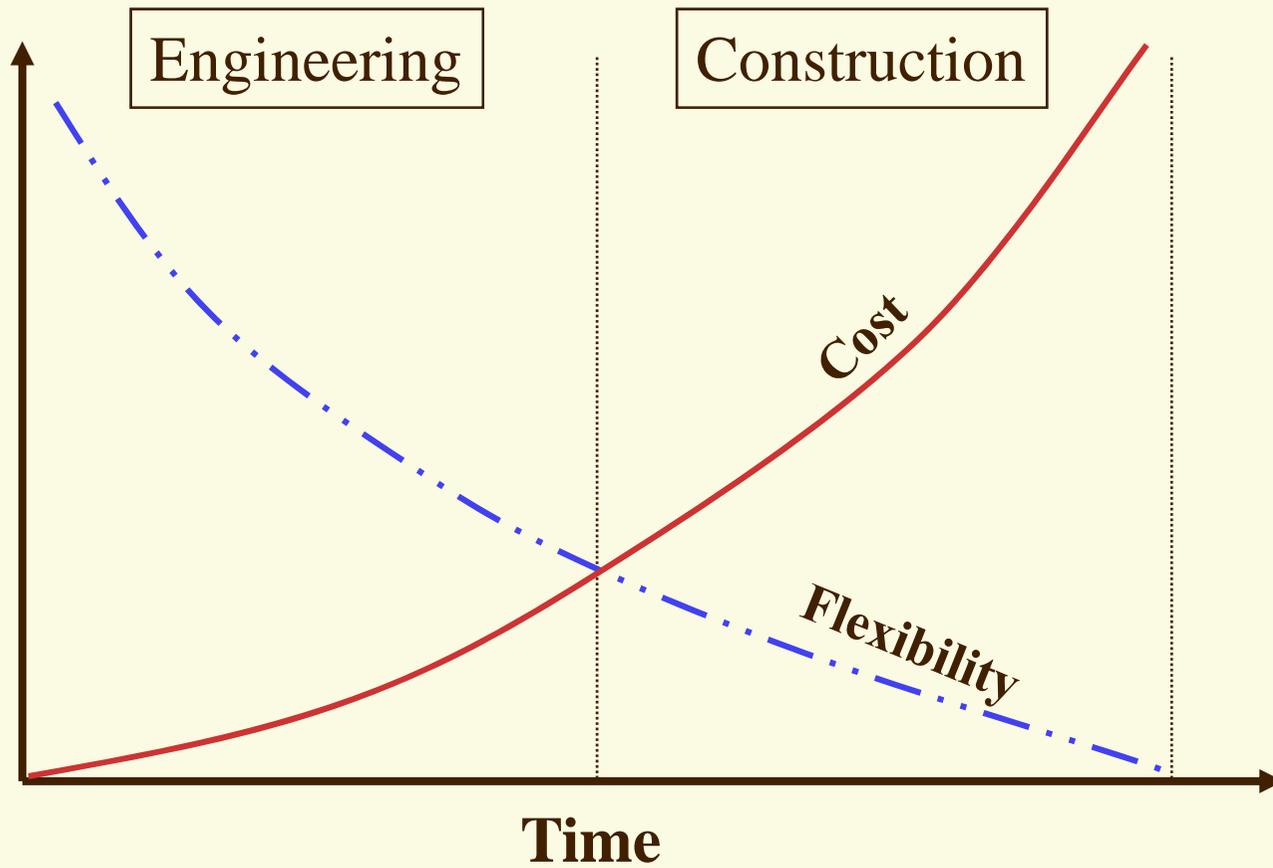
- Urgent situations or conditions

## After the fact

# Change Order Process



# Cost of Changes





# CLAIMS MANAGEMENT

# Typical Claims Against Owner

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- ❏ Poor project planning
- ❏ Scope changes
- ❏ Constructive change orders
- ❏ Errors and omissions
- ❏ Contract accelerations and stoppages
- ❏ Site access or availability
- ❏ Other construction interference and delays
- ❏ Strikes and acts of God
- ❏ Low bidders

# Typical Claims Against Contractor

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- 📄 Late completion - liquidated damages
- 📄 Out of specification materials
- 📄 Defective work
- 📄 Property damage

# Delays

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## Excusable Delay

- Beyond control of owner or contractor

## Inexcusable Delay

- Beyond the control of the contractor
- Owner caused changes to work
- Differing site conditions
- Suspension or termination of work by owner

## Concurrent Delay

- Two or more delays in same time frame

# Claims Analysis

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- ☞ Brief of the case
- ☞ Owner's position
- ☞ Contractor's position
- ☞ Analysis and evaluation
- ☞ Recommendations

# Claim Prevention Suggestions

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- ☞ Carefully analyze and consider exactly what you are building and precisely how it will be built so the contractor does not have to assume or guess about any aspect of the job.
- ☞ Complete the project design before the contract is bid, and if some parts of the project cannot be completely designed at bid stage, clearly identify them and its possible impact.

# Claim Prevention Suggestions

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- ❏ Conduct a thorough review of the design prior to the bid stage to identify and correct any design errors or inadequacies.
- ❏ Give bidders sufficient time to carry out a complete review of the bid package and an investigation of the construction site.
- ❏ Allow enough construction time, remember in this context, time is not money. Do not assume that bidders will simply increase their bids to cover a short schedule.

# Claim Prevention Suggestions

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- ☞ Identify with enough anticipation what type of contract will best suite the project.
- ☞ Think about every sentence included in the contract, why it is there and whether it is necessary.
- ☞ Clearly identify in the contract every operation that the contractor must accomplish to complete the job.

# Claim Prevention Suggestions

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- ❏ Draft for clarity, not confusion. Use standard list of definitions, and always use the same defined word consistently.
- ❏ Consider material arrival schedules as part of the contract. Identify long-lead items and possible vendors in the bid package. Avoid sole-source procurement unless absolutely necessary.
- ❏ Clearly identify who will be responsible for material delays.

# Claim Prevention Suggestions

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- 📄 Analyze all potential bidders before preparing a bid slate. Examine contractors' prior contracting experience, claims history, management capabilities and financial ability.
- 📄 Carefully analyze contractors' technical proposal paying particular attention to the proposed method of construction and the planned number of man-hours claimed necessary to execute the job.

# Claim Prevention Suggestions

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- ☞ Seriously question the contractors' excessively low bid.
- ☞ If you are forced to accept a low-ball contractor, anticipate a claim and work on it from the beginning.
- ☞ Be reasonable when analyzing the contractors' complaints about changes and omissions.  
Negotiate settlement as soon as possible and keep in mind that the older the issue, the more difficult it will be to settle.

# Claim Prevention Suggestions

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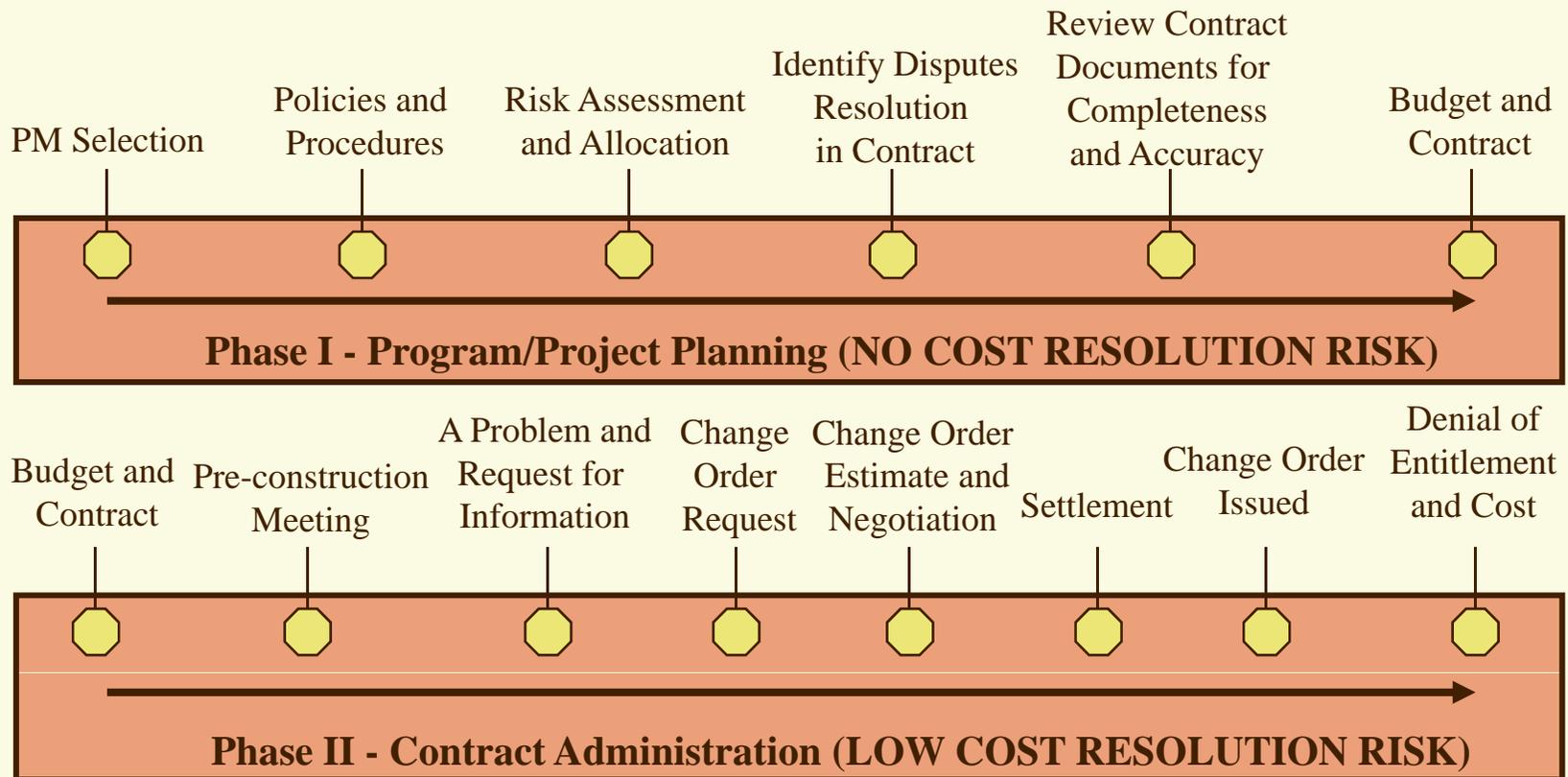
- 📄 Appreciate the contractors' right to perform the contract in any fashion he deems appropriate, as long as the methods and results conform to contractually specified standards.
- 📄 Keep in mind that the owner has the obligation to provide: a suitable construction site, accurate plans and specifications, well-defined scope of work, and inspection without interference.

# Claim Prevention Suggestions

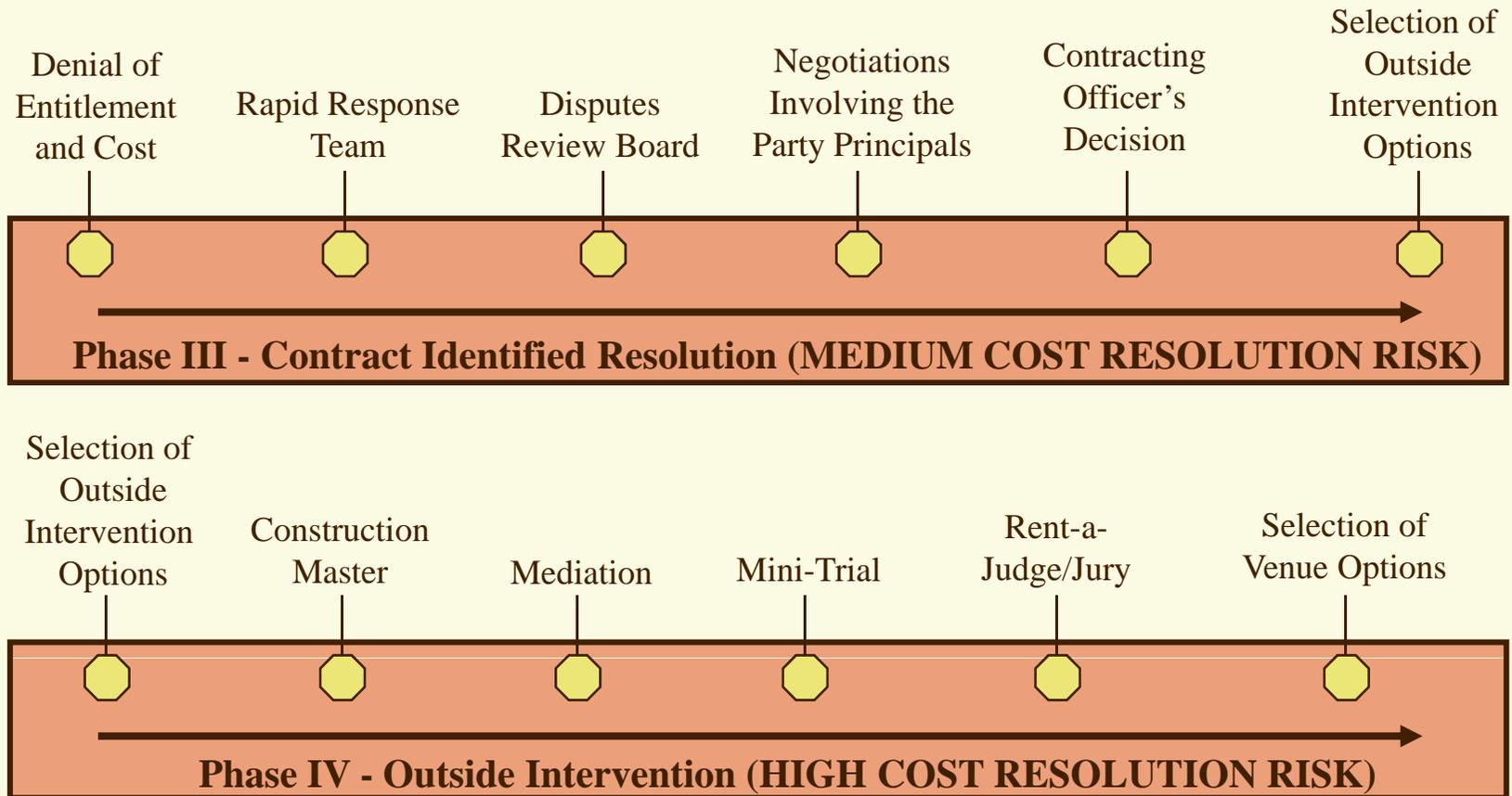
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- ☞ Understand how many factors can affect a contract and delay and disrupt the work. Cooperate to establish an atmosphere of understanding and mutual respect.
- ☞ Keep strict control of: progress reports, daily meetings, schedule revisions, cost estimates, change orders and their justifications, correspondence.
- ☞ Develop a solid document control plan.

# Contract Disputes Resolution Continuum



# Contract Disputes Resolution Continuum



# Contract Disputes Resolution Continuum

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