

Managing risk from procurement  
to completion of major  
infrastructure projects



**Paul Prescott**

Senior Associate  
Dentons and Co



Co-located with:



Introducing:



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# Managing Risk from Procurement to Completion on Major Infrastructure Projects

Paul Prescott, Construction and Infrastructure Lawyer, Dentons

[www.thebig5saudi.com](http://www.thebig5saudi.com)



# Agenda

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- 1 Risk Management**
- 2 Project Objectives**
- 3 Procurement Models**
- 4 Standard Forms**
- 5 Cost Models**
- 6 Common pitfalls affecting Projects**

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# Risk Management

# Risk Management on Major Infrastructure Projects

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- Risk may be defined as an uncertain outcome (either positive or negative) which may affect the course of a procurement exercise at a future date
- Risk management is a critical and continuous process on a project and should be monitored
- Effective risk management will help to manage and improve performance and mitigate risks

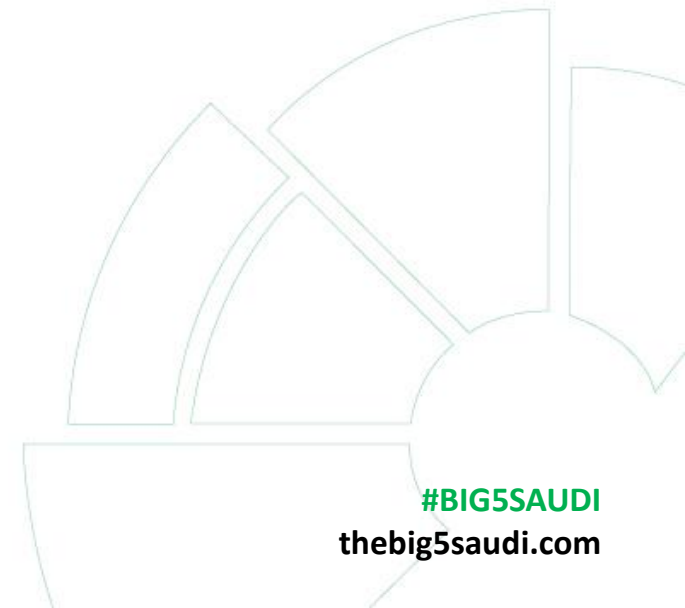
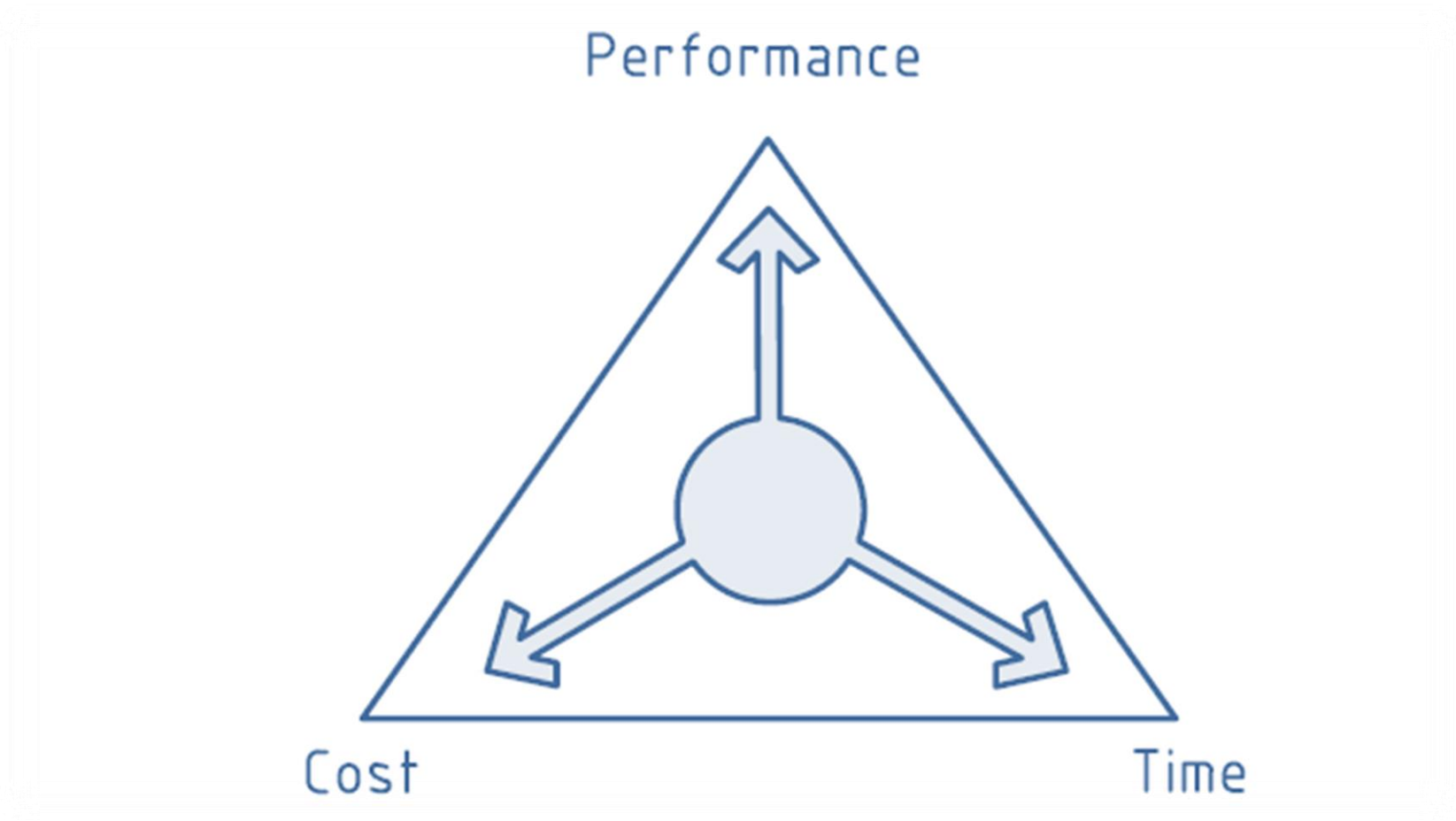
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# Procurement Models

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# Project Objectives



# Procurement Models

1. Traditional
2. Design and Build
3. Construction Management
4. Management Contracting
5. Early Contractor Involvement (ECI)
6. Framework Contracting

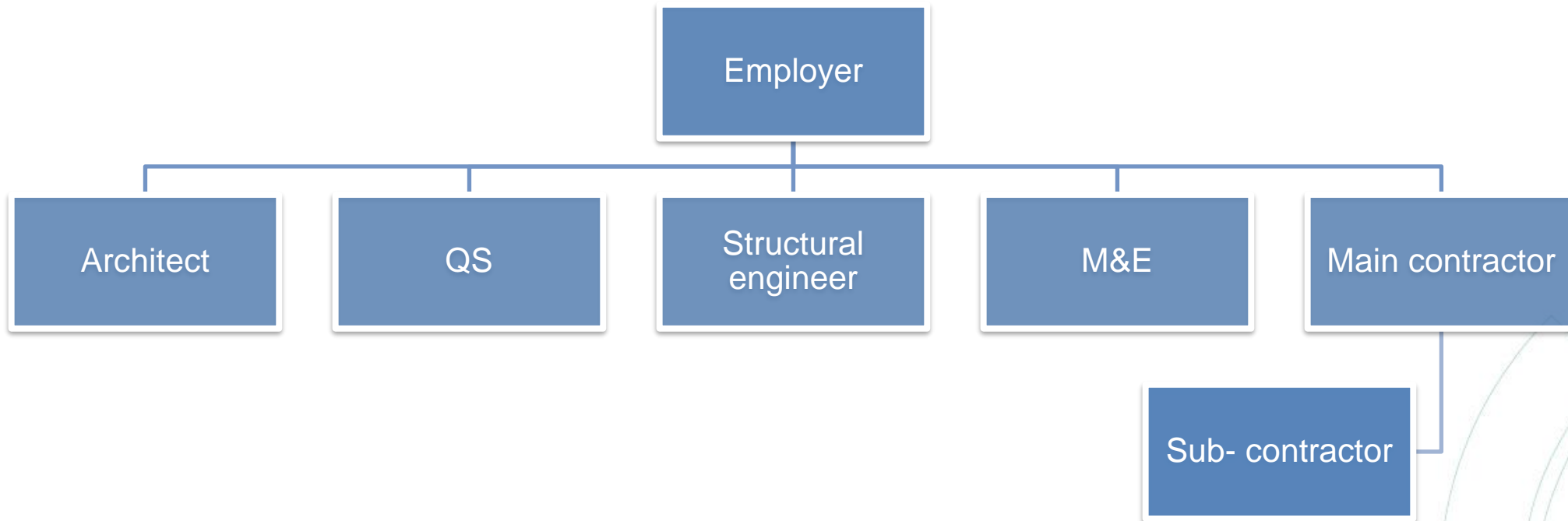
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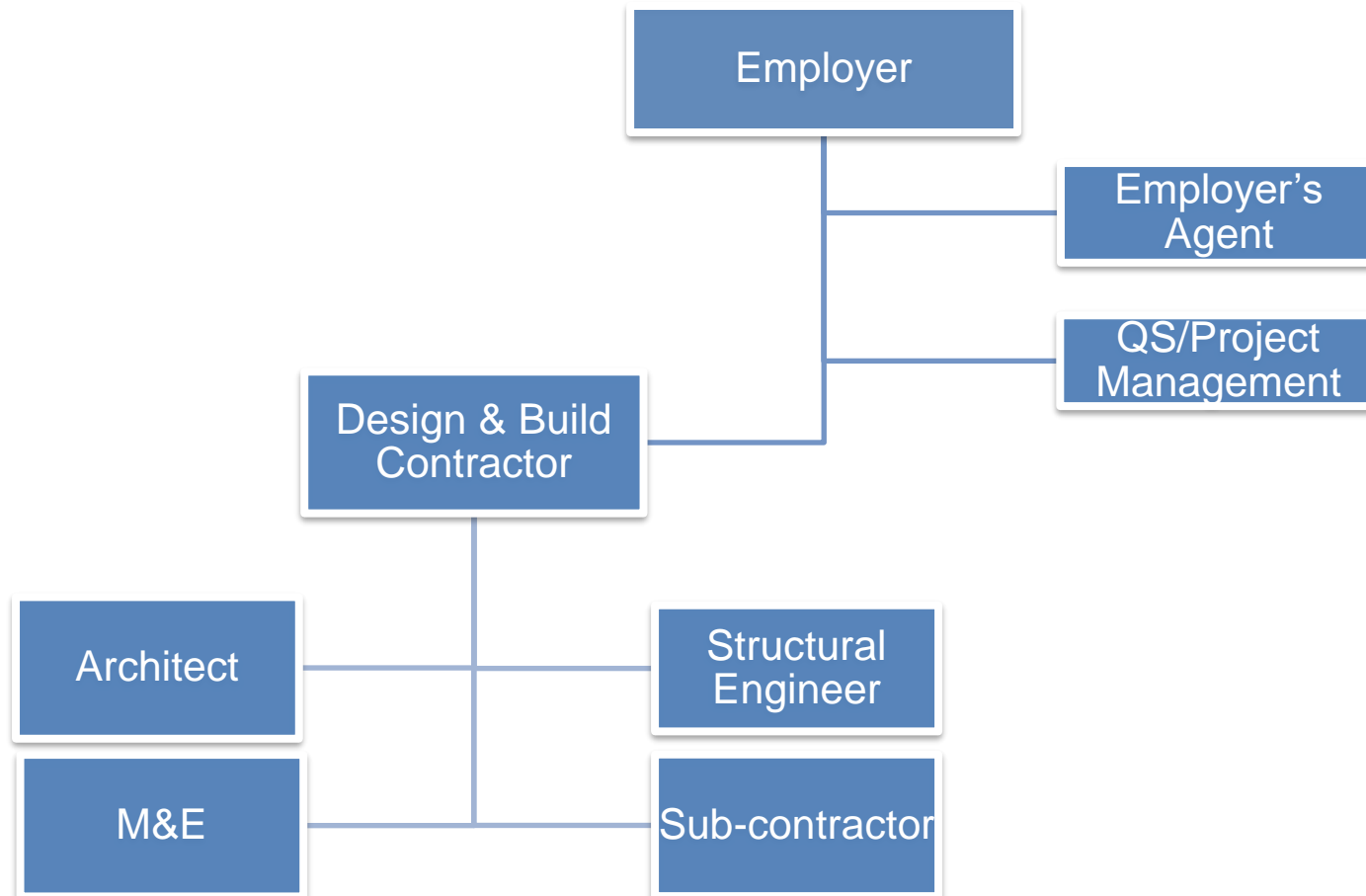


# Procurement Routes – Traditional



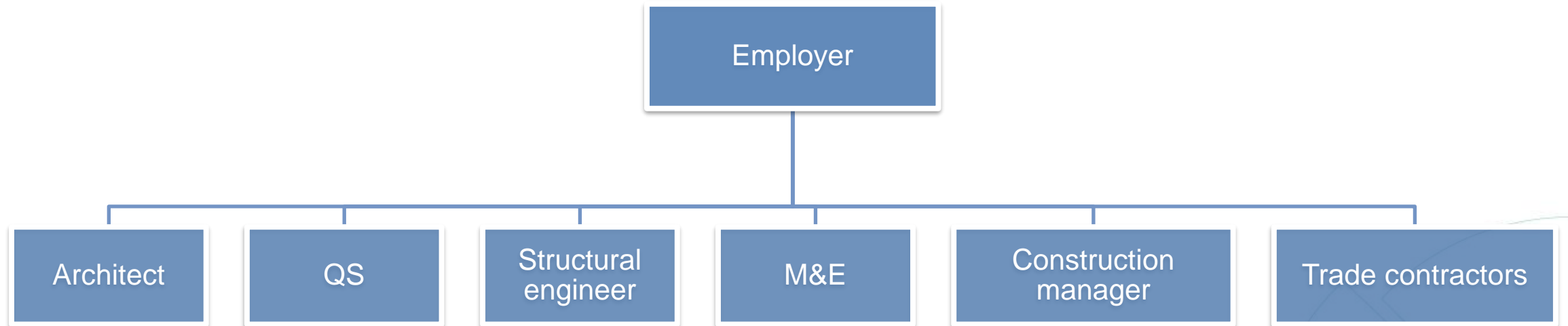
# Procurement Routes – Design and Build

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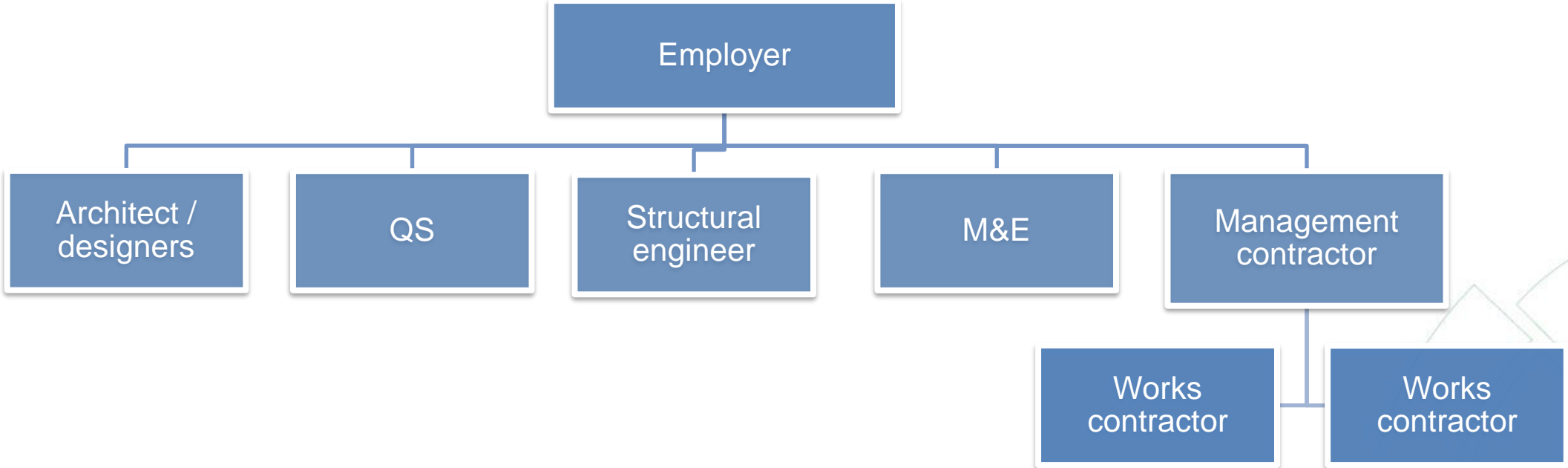


# Procurement Routes – Construction Management

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# Procurement Routes – Management Contracting

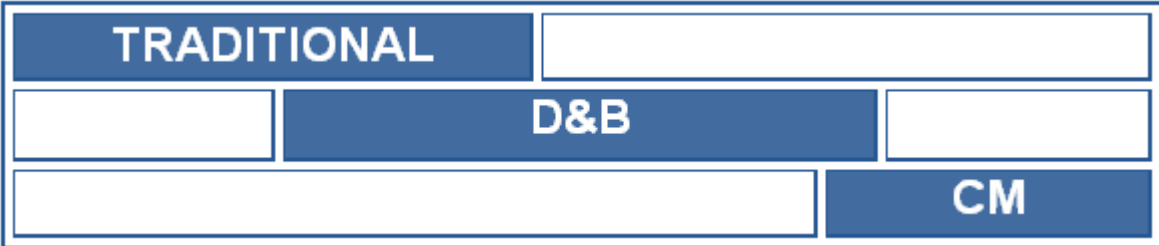


# Procurement Routes Compared



## EMPLOYER'S RELATIVE LEVEL OF INVOLVEMENT

Least involved



Most involved

# Procurement Routes Compared

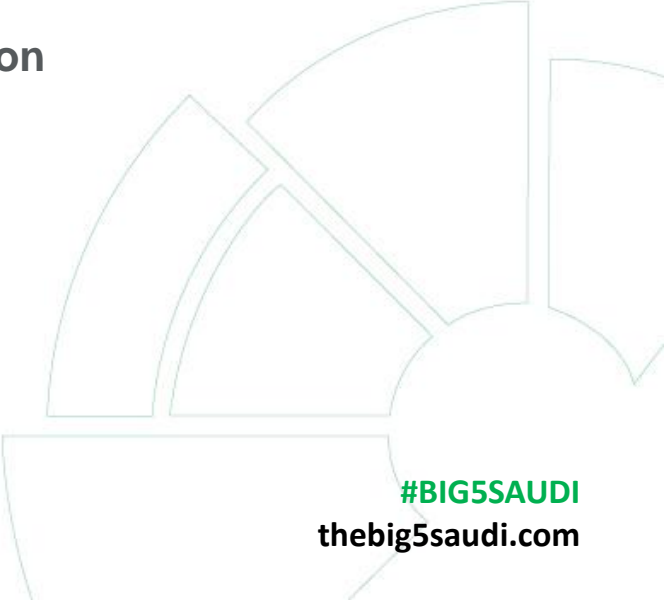


## SEPARATION OF DESIGN FROM MANAGEMENT

Least separation



Most separation

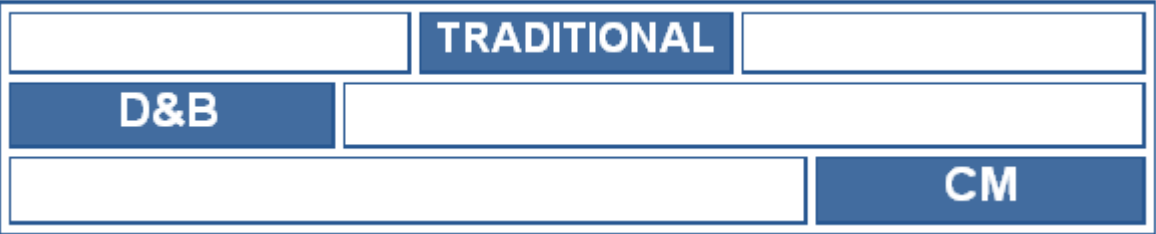


# Procurement Routes Compared



## CAPACITY FOR VARIATIONS

Least capacity



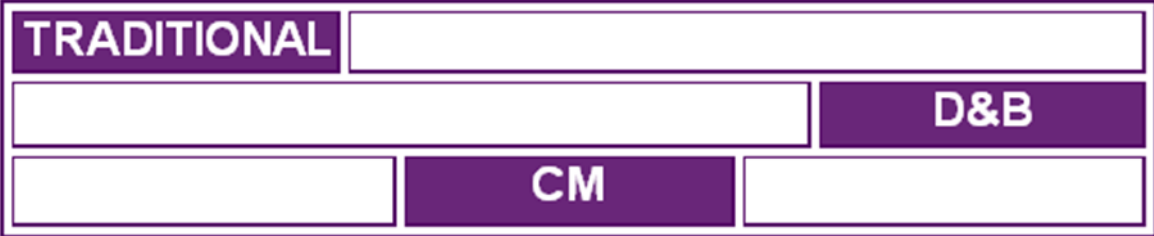
Most capacity

# Procurement Routes Compared



## CLARITY OF CLIENT'S CONTRACTUAL REMEDIES

Least clarity



Most clarity



# Procurement Routes Compared



## COMPLEXITY OF PROJECTS

Least complexity



Most complexity

# Procurement Routes Compared



SPEED FROM INCEPTION TO COMPLETION

Slowest



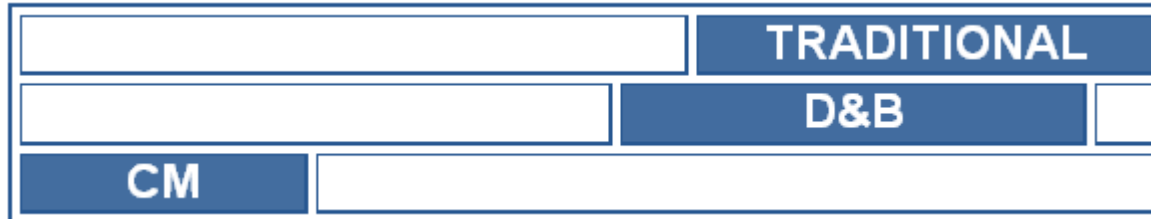
Quickest

# Procurement Routes Compared



## CERTAINTY OF CONSTRUCTION PERIOD

Least certain



Most certain

# Procurement Routes Compared



## CERTAINTY OF PRICE

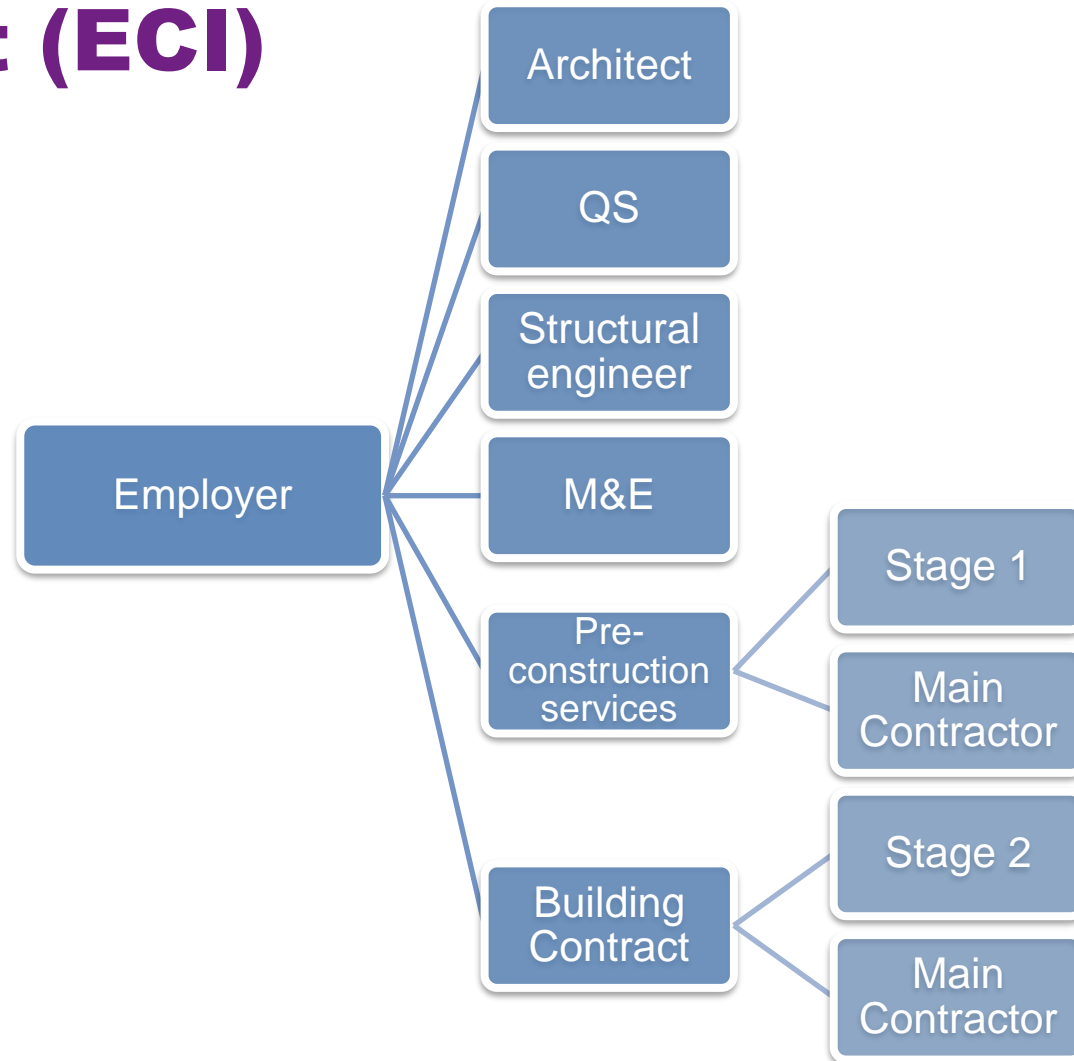
Least certain



Most certain

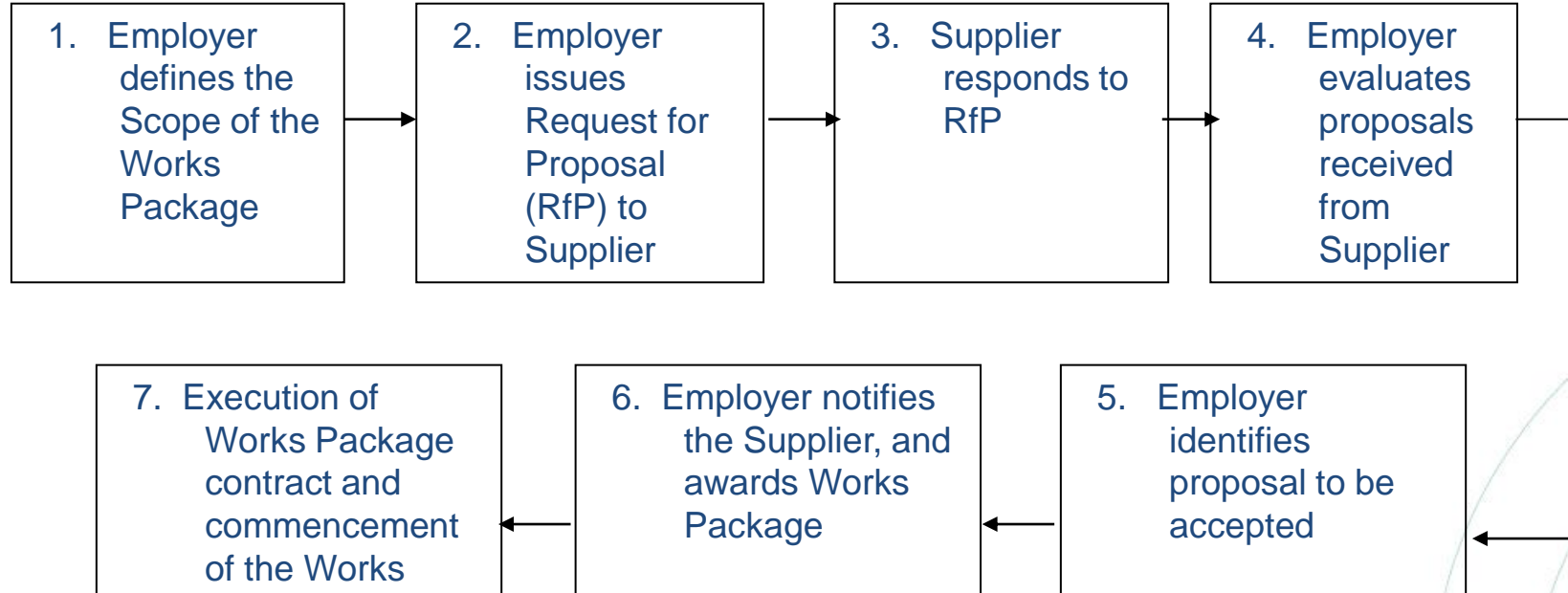
# Procurement Routes – Early Contractor Involvement (ECI)

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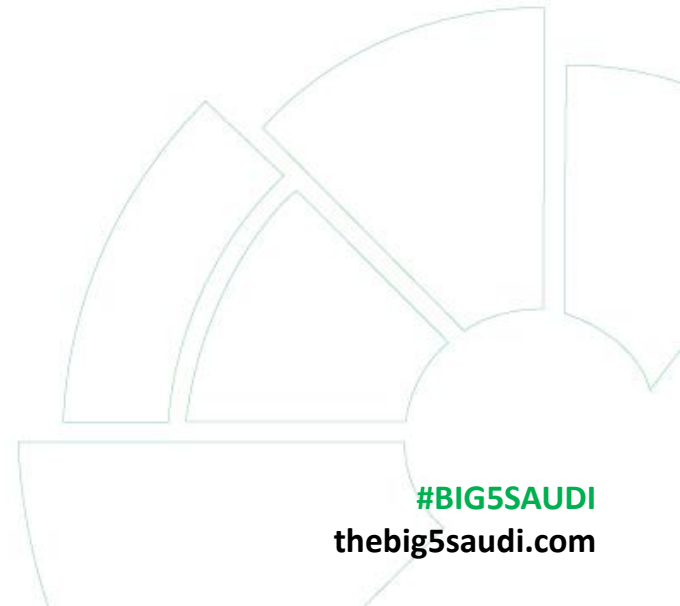


# Framework Contracting

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# Standard Forms



# Standard form construction contracts

## 1. FIDIC 1999



## 2. FIDIC 2017

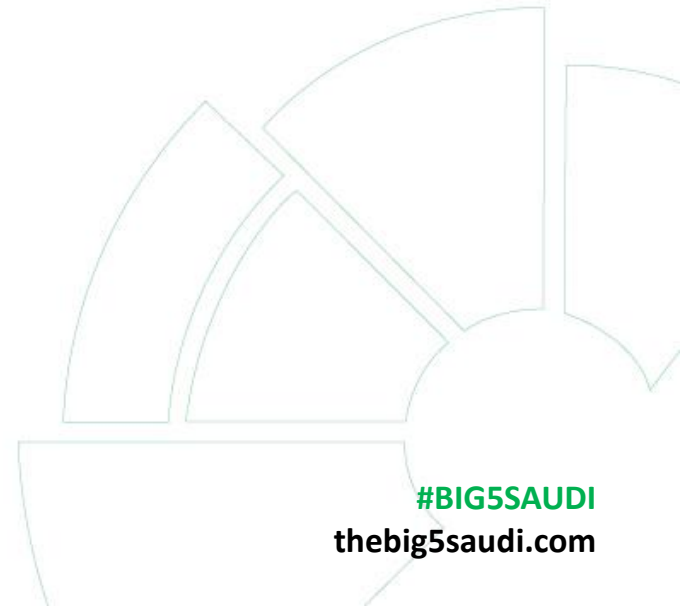




# Standard form construction contracts



## 3. New Engineering Contract (NEC)

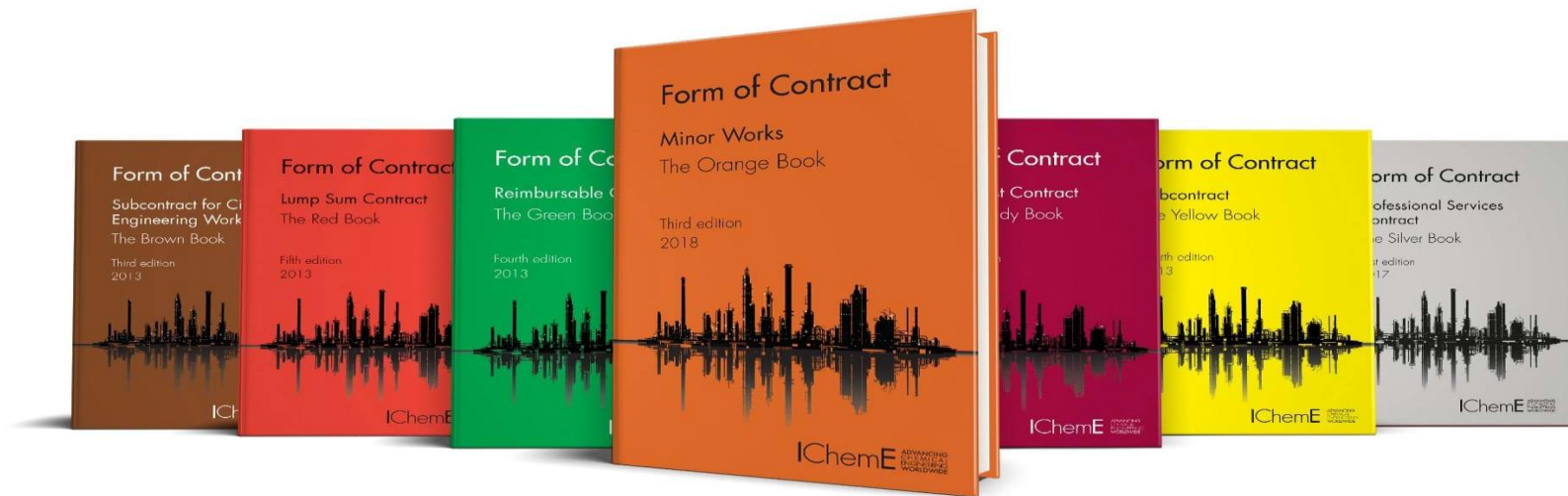


# Standard form construction contracts

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## 4. Institute of Chemical Engineering (IChemE)



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# Cost Models

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# Cost Models

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1. Lump sum
2. Remeasurement
3. Cost plus/Cost reimbursement
4. Target cost contract

# Lump Sum

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Under a lump sum contract, a single 'lump sum' price for all the works is agreed before the works begin



# Remeasurement

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A contract where the amount to be paid for the work carried out is based on the remeasurement of work after it has been carried out, usually against a schedule of rates contained in the contract.



# Cost plus / Cost Reimbursement

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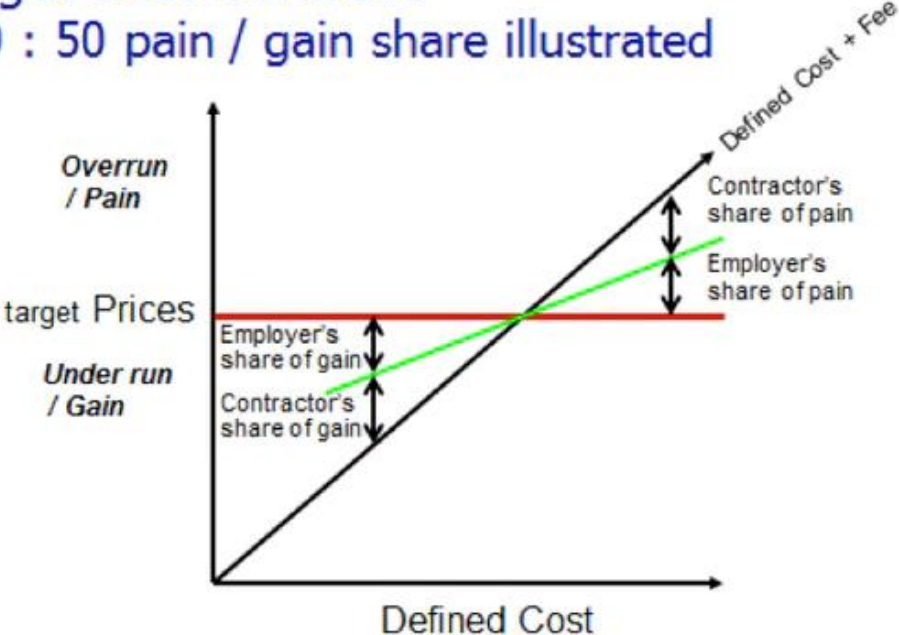
Cost-plus contracts can be separated into four categories. They each allow for the reimbursement of costs as well as an additional amount for profit:

1. **Cost-plus award fee contracts** allow the contractor to be awarded a fee usually for good performance.
2. **Cost-plus fixed-fee contracts** cover both direct and indirect costs, in addition to a fixed fee.
3. **Cost-plus incentive fee contracts** happen when the contractor is given a fee if their performance meets or exceeds expectations.

# Target cost contract



## Target Cost Contract - 50 : 50 pain / gain share illustrated





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# Common pitfalls affecting Projects

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# Common pitfalls affecting Projects

1. Unclear or incomplete scope of work
2. Variations and Instructions
3. Issues around Approvals

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# Q & A

# THANK YOU

