

Claims & Disputes in EPC (Engineering, Procurement, Construction) & Role of Project Control / Project Management

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Claims & Disputes in EPC

- 1 Claim & Dispute by Region**
- 2 EOT & Delay Analysis**
- 3 CLAIMS & Resolution Methodology**
- 4 Role of Project Control / Project Management & Key Takeaways**

Claims & Disputes in EPC

The construction sector is one of the largest in the world economy, with the contribution of \$10 trillion

1

The aggregate size of the construction market was valued at US\$7.28 trillion in 2021

2

HOWEVER, in recent years the industry is facing a notable burden on the performance due to the unresolved Contractual disputes.

4

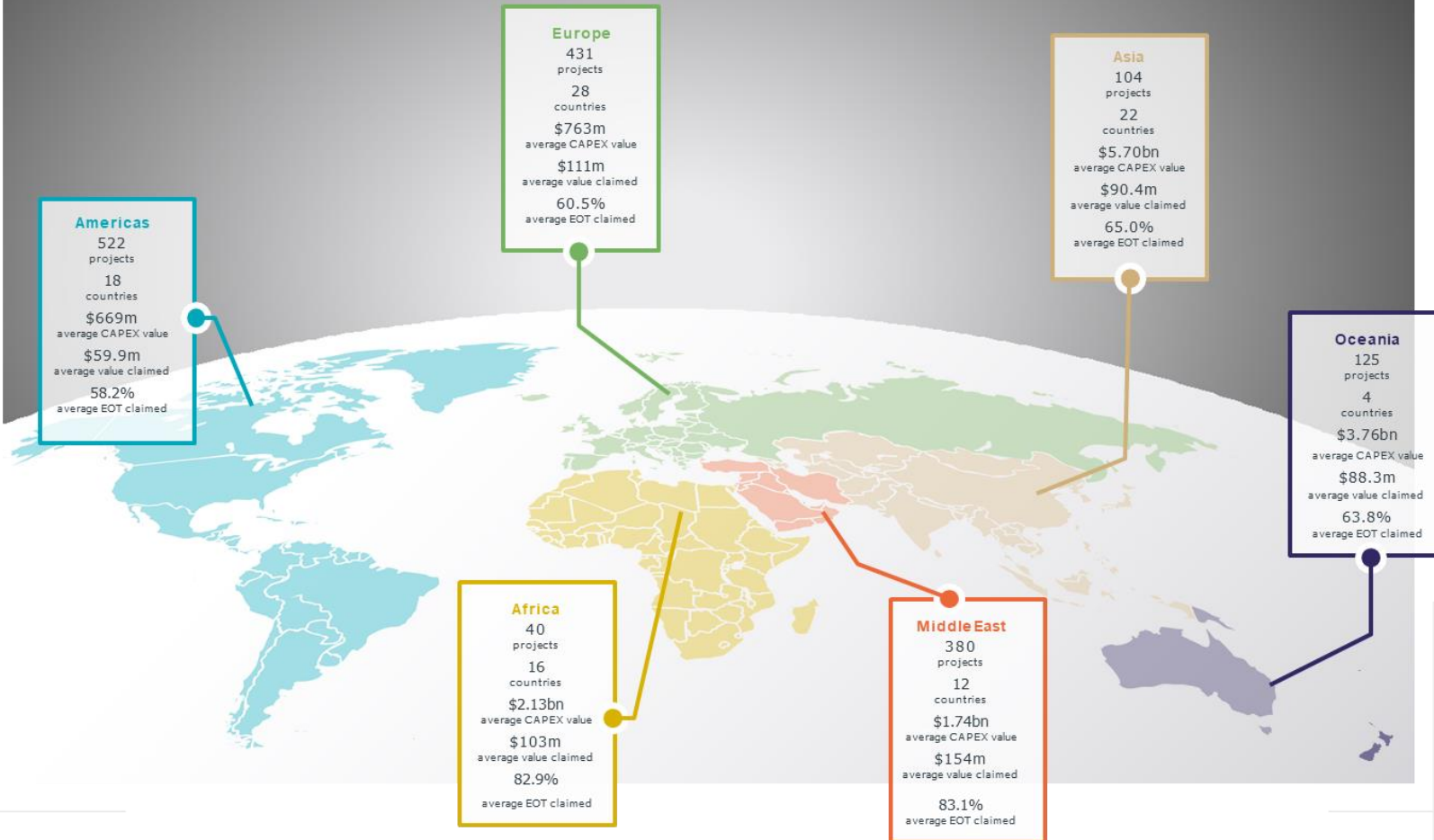
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The aggregate size of the construction market is predicted to reach **US\$14.41 trillion by 2030.**

Claims & Disputes

Over **1,600 projects** across **100 countries** valued at more than **\$2 trillion** were analyzed at first hand by expert consultants. The analysis paints a worrying picture for project owners, contractors and other stakeholders. Globally, the combined value of claims stood at **\$80 billion**, while cumulative delays added up to a staggering **840 years**.

THE SCALE OF CLAIMS AND DISPUTES BY REGION



GLOBAL FINDING - Cause of Claim & Disputes

TOP CAUSES OF CLAIMS or DISPUTE	Rank
Change in scope	1
Contract interpretation issues	2
Design information was issued late	3
Contract management and/or administration failure	4
Design was incorrect	5
Design was incomplete	6
Poor management of subcontractor/supplier and/or their interfaces	7
Access to site/workface was restricted and/or late	8
Physical conditions were unforeseen	9
Workmanship deficiencies	10
Approvals were late	11
Level of skill and/or experience	12
Cash flow and payment issues	13
Claims were spurious	13
Operational performance	15
Materials and/or products were delivered late	16
Tender errors and/or inaccurate estimates	17
Installation failure	18
Shortage of skilled and non-skilled workers	19
Targets and/or expectations were unrealistic	20
Weather conditions were exceptionally adverse	21
Inadequate responses to information requests	22
Poor interface management with a third party	23
Personality and/or cultural differences	24
Bias and/or failure to cooperate	25
Reporting was incomplete and/or incorrect	26
Late appointment of subcontractor/supplier	27
Socio-political/regulation	28
COVID-19	29
Fraud	30



1602

projects



100

countries



\$1.56bn

average
CAPEX



\$98.7m

average cost
claimed



68.6%

average EOT
claimed



**Project Controls
EXPO**
UAE, Middle East

AFRICA- Claims & Disputes

TOP CAUSES OF CLAIMS or DISPUTE	Rank
Access to site/workface was restricted and/or late	1
Change in scope	2
Cash flow and payment issues	3
Design was incomplete	4
Contract interpretation issues	5
Contract management and/or administration failure	6
Claims were spurious	6
Poor management of subcontractor/supplier and/or their interfaces	8
Level of skill and/or experience	8
Approvals were late	10



40
projects



16
countries



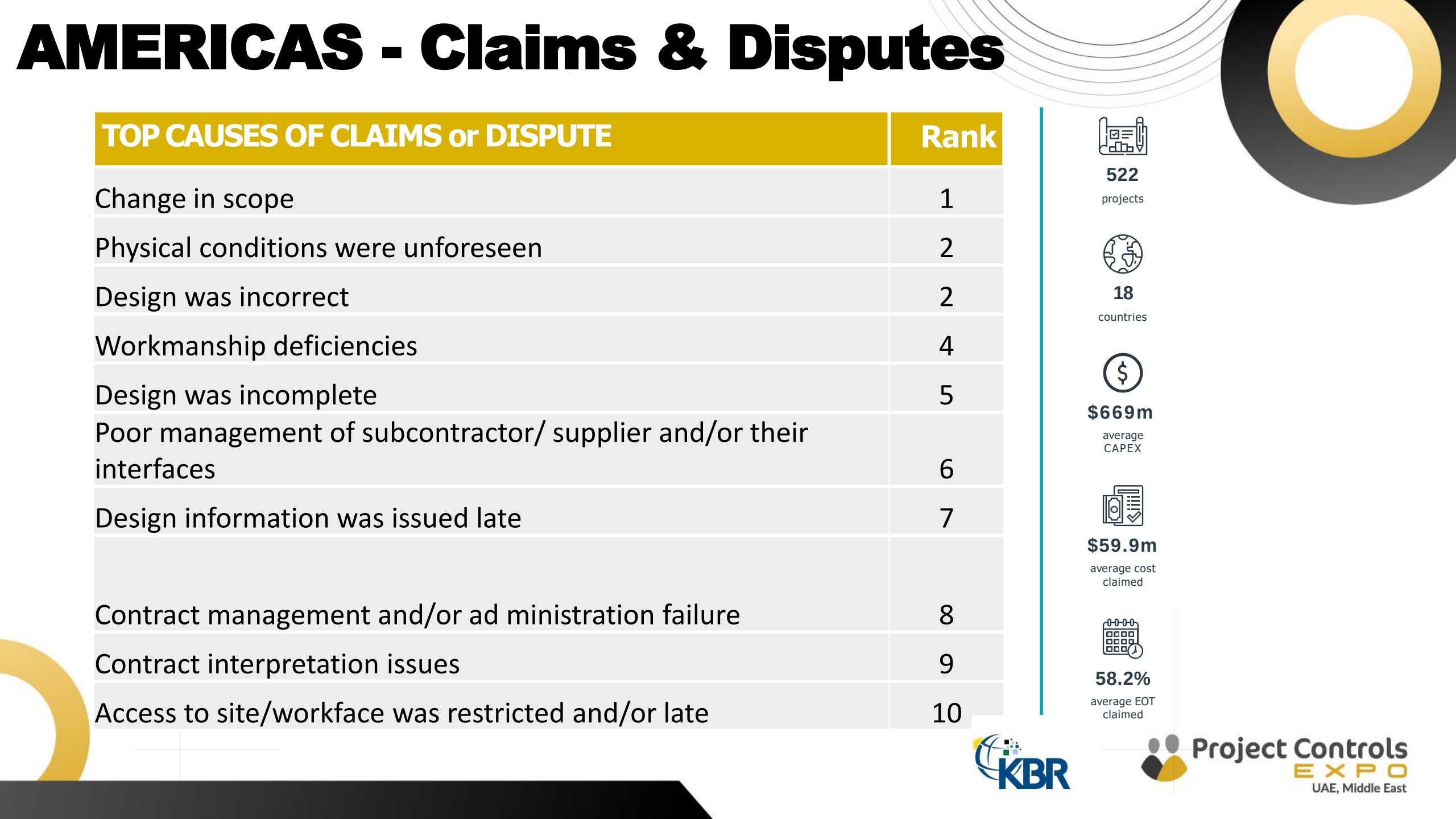
\$2.13bn
average
CAPEX



\$103m
average cost
claimed



82.9%
average EOT
claimed



ASIA-Claims & Disputes

TOP CAUSES OF CLAIMS or DISPUTE	Rank
Change in scope	1
Access to site/ workplace was restricted and/or late	2
Poor management Of subcontractor/ p plier and/or their interfaces	3
Contract management and/or administration failure	3
Design information was issued late	5
Approvals were late	6
Level of skill and/or experience	7
Contract interpretation issues	8
Design was incomplete	9
Cash flow and payment issues	10



104

projects



22

countries



\$5.70bn

average
CAPEX



\$90.4m

average cost
claimed



65.0%

average EOT
claimed



**Project Controls
EXPO**
UAE, Middle East

EUROPE - Claims & Disputes

TOP CAUSES OF CLAIMS or DISPUTE	Rank
Design was incorrect	1
Change in scope	2
Contract interpretation issues	3
Poor management of subcontractor/ supplier and/or their interfaces	4
Workmanship deficiencies	4
Contract management and/or administration failure	6
Design was incomplete	7
Design information issued late	8
Level Of skill and/or experience	9
Physical conditions were unforeseen	10



431
projects



28
countries



\$763m
average
CAPEX



\$111m
average cost
claimed



60.5%
average EOT
claimed

MIDDLE EAST FACES THE HEAVIEST CONSTRUCTION **PROJECT DELAYS** EVER IN 2022

TOP CAUSES OF CLAIMS or DISPUTE	Rank
Change in scope	1
Design information was issued late	2
Contract interpretation issues	3
Design was incomplete	4
Contract management and/or administration failure	5
Approvals were late	6
Access to site/ workplace was restricted and/or late	7
Cash flow and payment issues	8
Poor management Of subcontractor/ supplier and/or their interfaces	9
Design was incorrect	10



380

projects



12

countries



\$1.74bn

average
CAPEX



\$154m

average cost
claimed



83.1%

average EOT
claimed



OCEANIA - Claims & Disputes

TOP CAUSES OF CLAIMS or DISPUTE	Rank
Change in scope	1
Contract interpretation issues	2
Access to site/ workface was restricted and/or late	3
Contract management and/or administration failure	4
Design was incorrect	5
Design information was issued late	6
Claims were spurious	7
Design was incomplete	8
Poor management Of subcontractor/ supplier and/or their interfaces	9
Physical conditions were unforeseen	10



125
projects



4
countries



\$3.76bn
average
CAPEX



\$88.3m
average cost
claimed



63.8%
average EOT
claimed

Claims & Disputes

Why are delay and disruption claims common?

Because there are a lot of stakeholders, who impact the project in different ways...

ENGINEERS & ARCHITECTS	OWNERS	CONSTRUCTION MANAGERS	CONTRACTORS	OTHER
• Poor Design • Incomplete Design • Slow Response Time	• Excessive Changes • Delayed Approvals/Permits • Prolonged Planning • Delayed Payment	• Poor Planning/Scheduling • Poor Contract Management • Coordination Issues • Unachievable Schedule • Poor Data Management • Mismanagement of Resources	• Unachievable Bid • Poor Productivity/Performance • Mismanagement of resources • Labor Shortages • Default	• Unanticipated Weather • Changing Market Conditions • Unforeseen Conditions • Force majeure

EOT & DELAY ANALYSIS



EOT- (Extension of Time)

1

EOT (Extension of Time) are often the very beginning of disputes in construction projects because they deal with a fundamental aspect of the **Project's Timeline** and **Schedule**.

2

When a project experiences **Delays or Unforeseen Events**, it can impact the schedule and ultimately the completion date. Hence equitable allocation of responsibility for **Project Delays** is essential to the resolution of many construction disputes.

3

Contractors frequently assert that they have been delayed for reasons **beyond their control**. Owners often remain unconvinced that the Contractor is **legitimately entitled** to a time extension or delay, acceleration and loss of productivity damages.

4

In such dispute **Schedule Delay Analyses** is performed to **Identify and Quantify** delays attributable to Owner / Contractor .Concurrent delays are also analyzed to properly understand the Owner's and Contractor's liability for delay and impact damages.

5

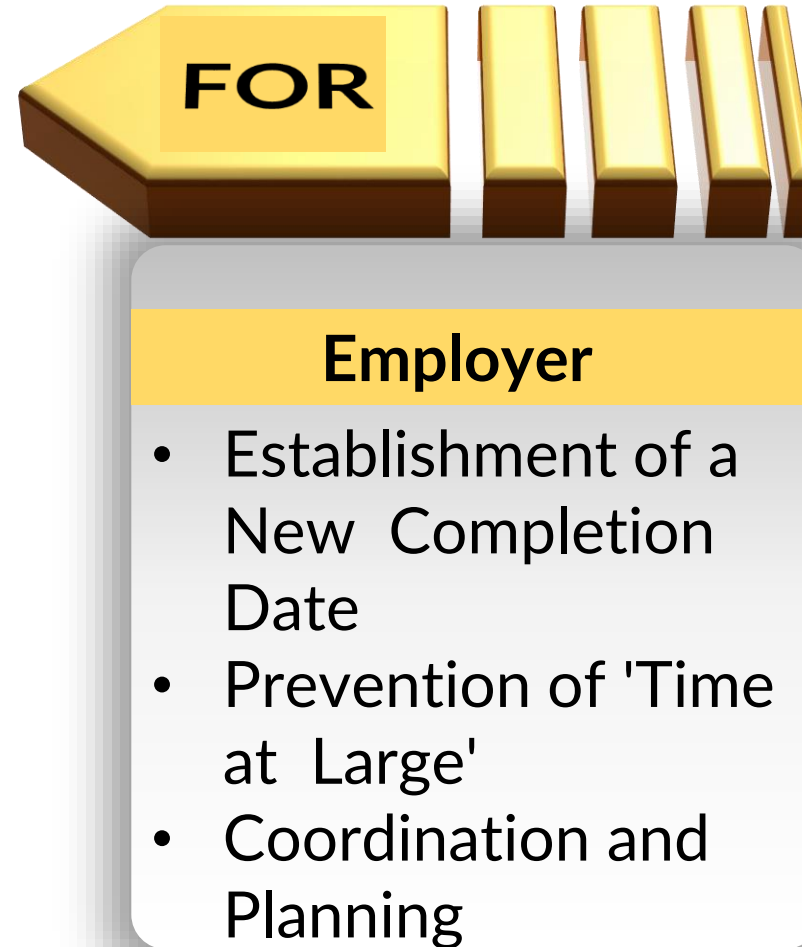
This process often involves the organization and analysis of **extensive project documentation** to establish the **cause-effect relationships** of each party's actions or inactions and the **resulting delays**.

Purposes of Extension of Time (EOT)

EoT is a provision that allows for an extension to the original contract completion date due to delays that are beyond the control of the contractor.

The purpose and benefits of an Extension of Time (EOT) can be summarized as follows:

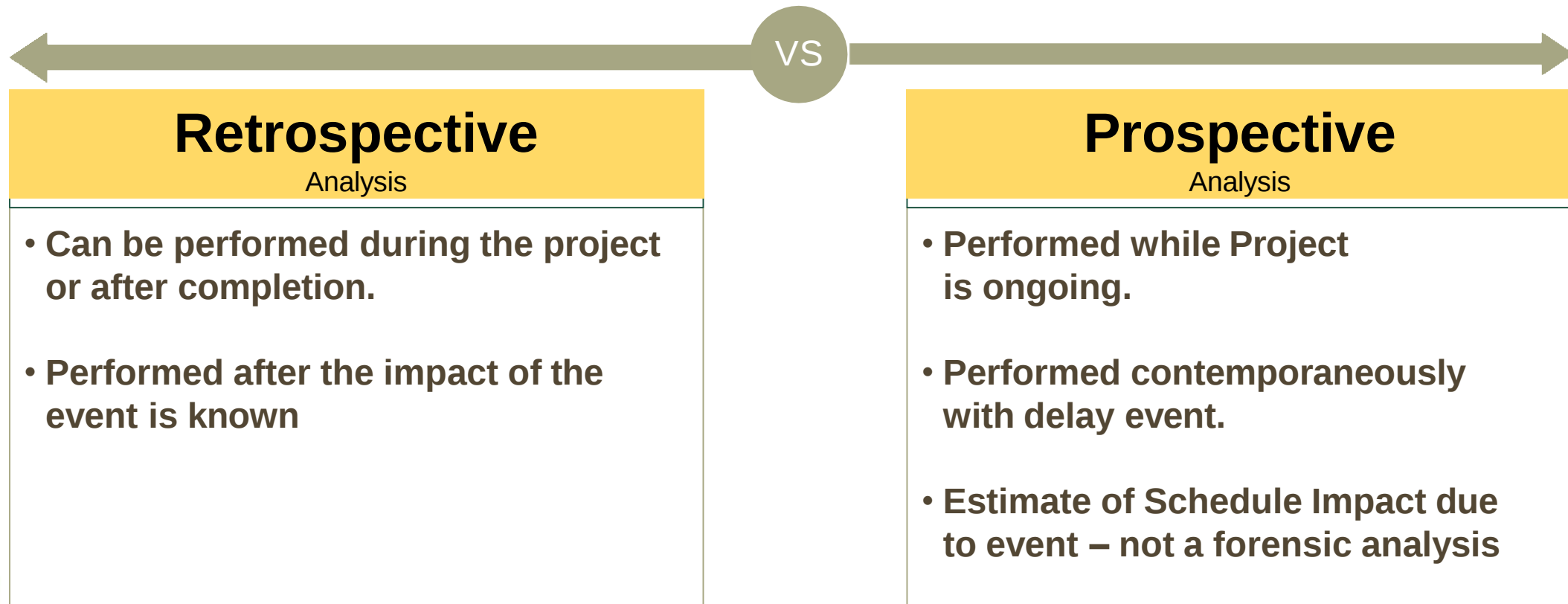
Purposes of Extension of Time (EOT)



Schedule Delay Analysis

Retrospective or Prospective

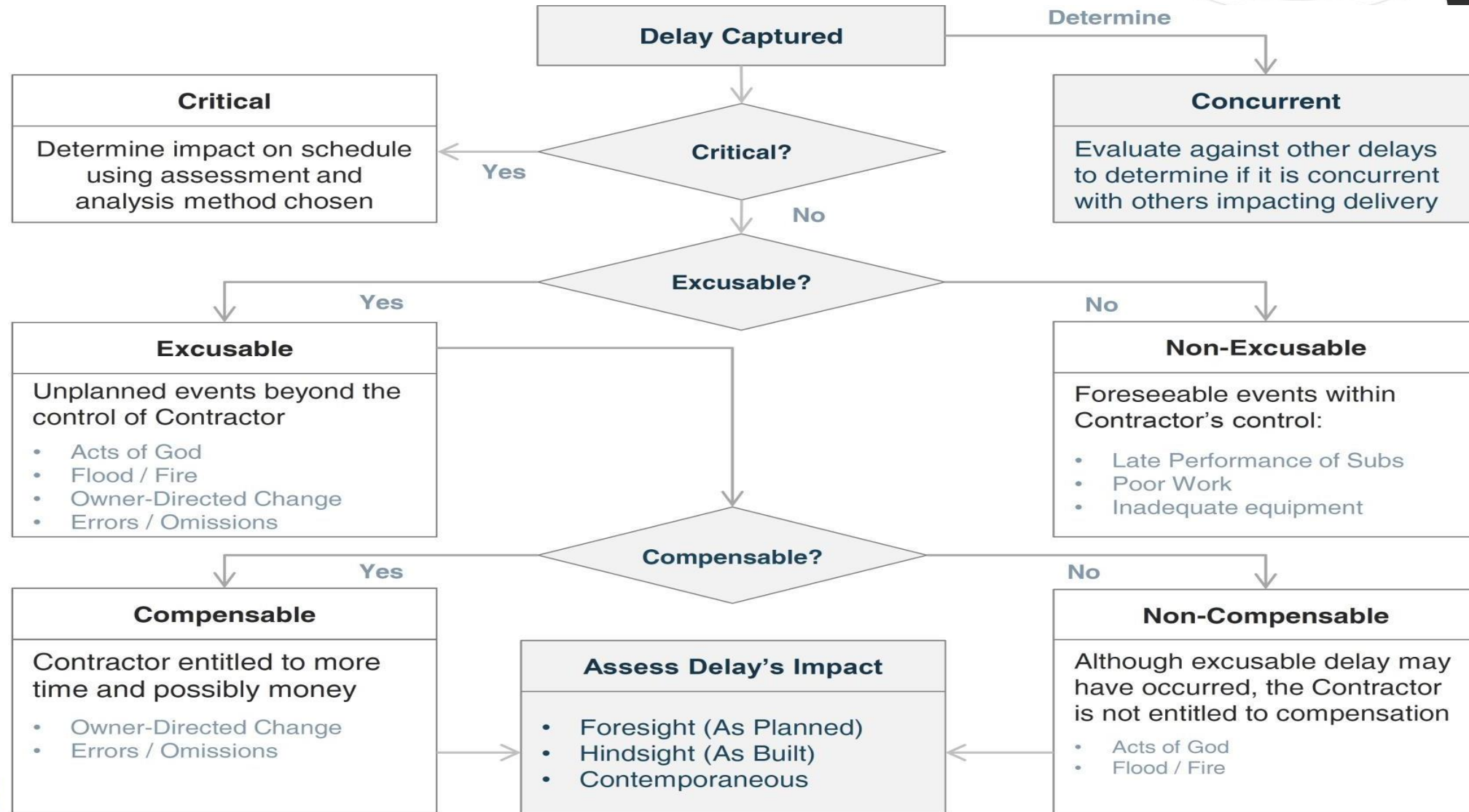
Depending on whether you are in the midst of construction or after the fact, when a construction delay claim is identified, analysis falls into one of two categories.



Forensic Schedule Analysis

1	RETROSPECTIVE															
2	OBSERVATIONAL								MODELED							
3	STATIC LOGIC			DYNAMIC LOGIC				ADDITIVE				SUBTRACTIVE				
4	3.1 Gross	3.2 Periodic		Contemporaneous Updates (3.3 As-Is or 3.4 Split)		3.5 Modified / Reconstructed Updates		3.6 Single Base 2		3.7 Multi Base1		3.8 Single Simulation		3.9 Multi Simulation		
5		Fixed Periods	Variable Periods	All Periods	Grouped Periods	Fixed Periods	Variable Windows	Global Insertion	Stepped Insertion	Fixed periods	Variable Window or Grouped	Global Extract	Stepped Extract	Fixed Periods	Stepped Extract	
Common Names	As Planned VS As-Built	Window Analysis		Contemporaneous Period Analysis,Time Impact Analysis,Window Analysis	Contemporaneous Period Analysis, Time Impact Analysis,Window Analysis	Contemporaneous Period Analysis, Time Impact Analysis	Window Analysis, Time Impact Analysis	Impacted As Planned, What-If	Time Impact Analysis, Impacted As-Planned	Time Impact Analysis	Window Analysis, Impacted As-Planned	Collapsed As-Built	Time Impact Analysis, Collapsed As-Built	Time Impact Analysis, Collapsed As-Built	Time Impact Analysis,Window Analysis, Collapsed As-Built	

Delay Categorization



Net Effect With Concurrent Delay

Delay Event	Concurrent With	Net Effect
Owner Delay	Another Owner Delay or Nothing	Compensable to Contractor, Non-Excusable to Owner
Owner Delay	Contractor Delay	Excusable but Not Compensable to both Parties
Owner Delay	Force Majeure Delay	Excusable but Not Compensable to both Parties
Contractor Delay	Another Contractor Delay or Nothing	Non-Excusable to Contractor, Compensable to Owner
Contractor Delay	Force Majeure Delay	Excusable but Not Compensable to both Parties
Force Majeure Delay	Another Force Majeure Delay or Nothing	Excusable but Not Compensable to both Parties

Delay Analysis Procedure

5 Step Process

Original baseline schedule is examined which was approved by CLIENT /PMC

Step 1

Critical and near critical paths on the baseline schedule were identified.

Step 2

Events which were recorded during construction process are identified, investigated & determined as delay events which have adversely affected the project duration.

Step 3

All these delay events are inserted into the baseline as planned schedule and linked in an appropriate manner. Baseline is then rescheduled in order to detect the impact of these events on project

Step 4

Impacted schedule is then compared with the baseline as planned schedule. The period between the completion date on the As-Planned Schedule and the impacted as-planned schedule is regarded as delay on project.

Step 5

CLAIMS & Resolution Methodology



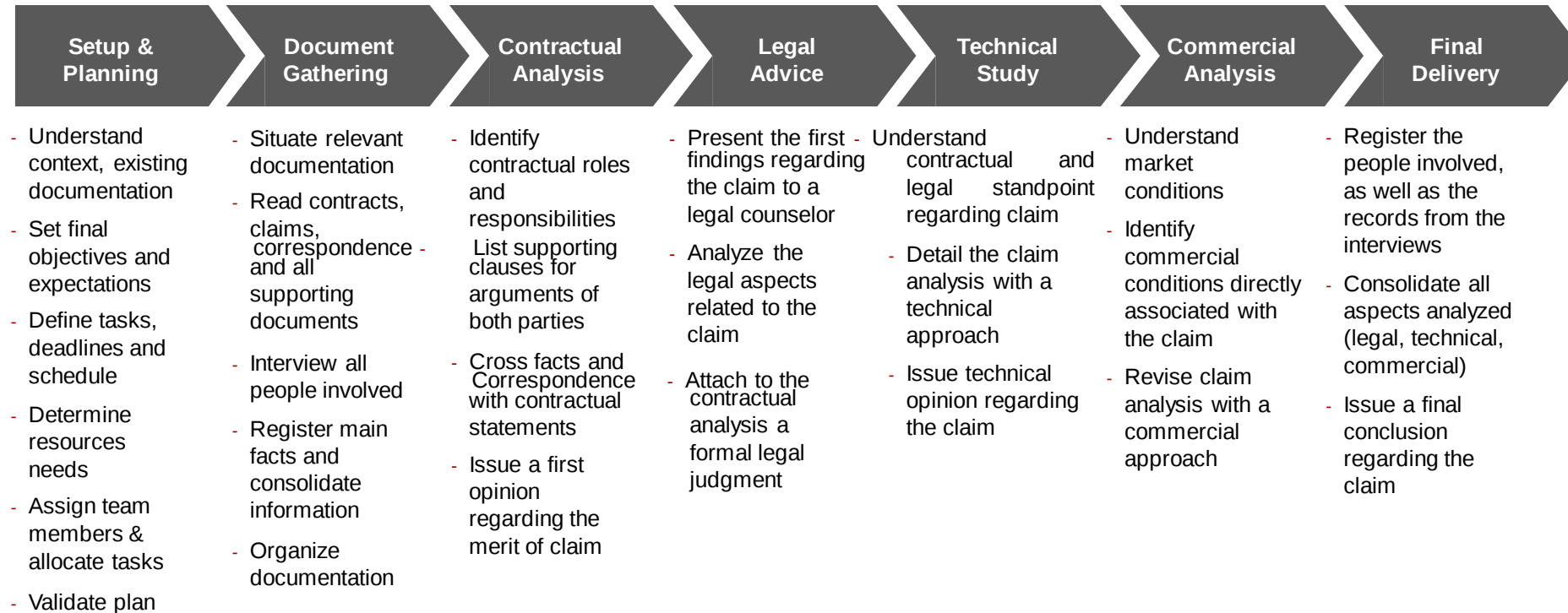
CLAIMS

- ❑ A claim is, “**A demand for something due or believed to be due**”, usually the result of an action or direction. In construction “something” is usually additional compensation for work claimed to be extra to the contract or an extension of time for completion or both.
- ❑ A construction claim is the assertion of a right that requires either more time or/and payment by either party of the contract (often the contractor) for compensation of the losses brought on by the other party's failure to uphold their portion of the responsibilities as defined in the contract

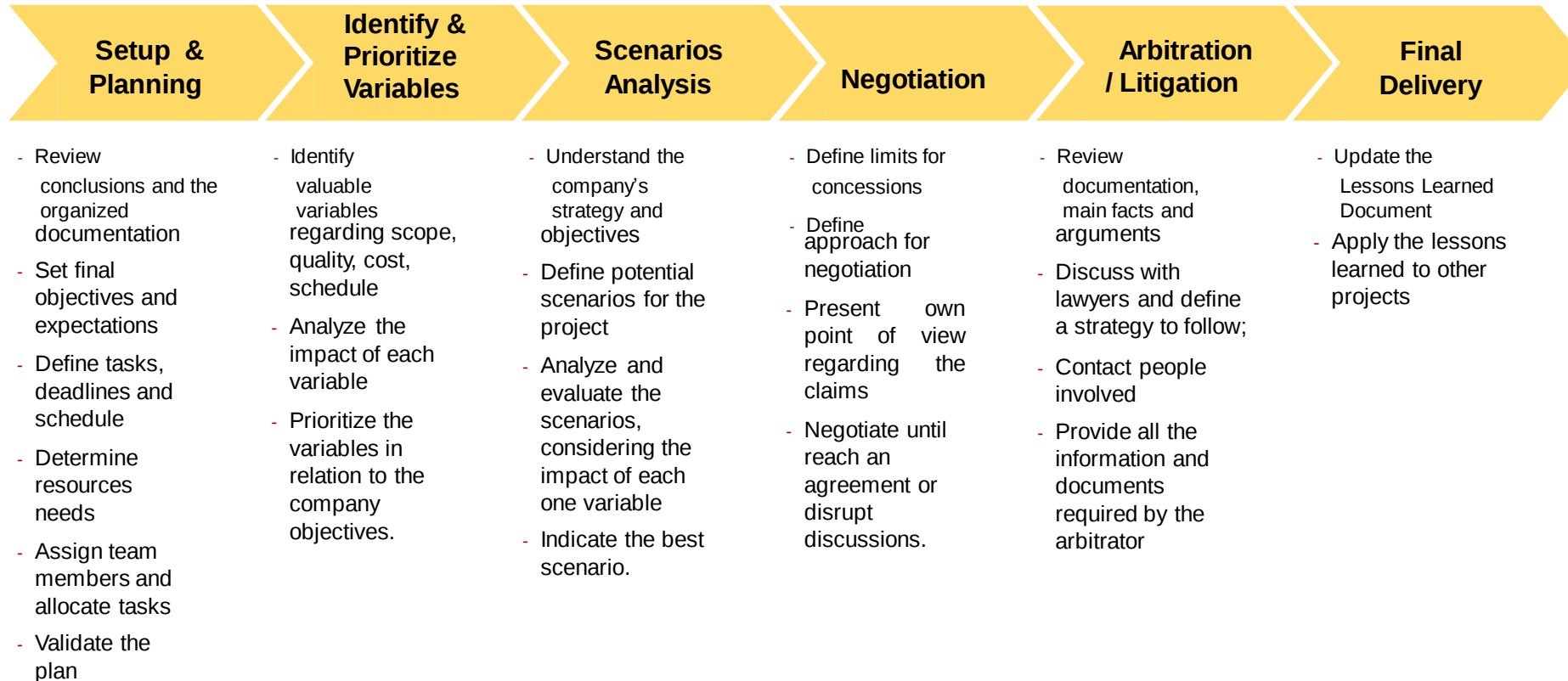
TYPES OF CLAIMS

- 1. Delay & Disruption Claims**
- 2. Change Order Claims**
- 3. Design Deficiency Claims**
- 4. Cost Overrun Claims**
- 5. Payment Disputes**
- 6. Quality of Claims**
- 7. Warranty Claims**
- 8. Termination Claims**
- 9. Liquidated Damaged Claims**
- 10. Performance Bond Claims**

Claims Analysis Methodology



Claims Resolution Methodology



Role of Project Control & Project Management



Role of Project Control & Project Management

1

The Owner Project Control / Project management team can employ proactive strategies, taking steps at the front-end of a project and during construction to reduce the likelihood of disputes.

2

The Owner project management team must include a plan for dispute management in their contracts, mandating a process for promptly addressing unresolved issues before they adversely impact the project

3

The Owner Project Control / Project management team and their counsel must plan and develop strategies for avoiding disputes

Role of Project Control & Project Management



1

Choose the right design professionals/consultants and contractors.

2

Select the most suitable contractual and procurement models.

3

Assign risks to the party best able to manage (or share) them, rather than simply trying to offload as many risks as possible.

4

Identify disputes early by including reasonable, but not impossible, timeframes for providing written notice to the Owner.

5

Require the submittal of claims immediately after a disputed event is completed. Impose a deadline within 30–60 days .

Role of Project Control & Project Management

6

Require prompt claim review by mandating a specific timeframe for the Owner representative's response to claims submittals.

7

Use a dispute resolution clause that meets the project's needs in terms of timeliness, flexibility, and finality—there are creative options beyond arbitration

8

Include a dispute resolution board (DRB) in the contract; the DRB recommendation should be a condition prior to any legal action.

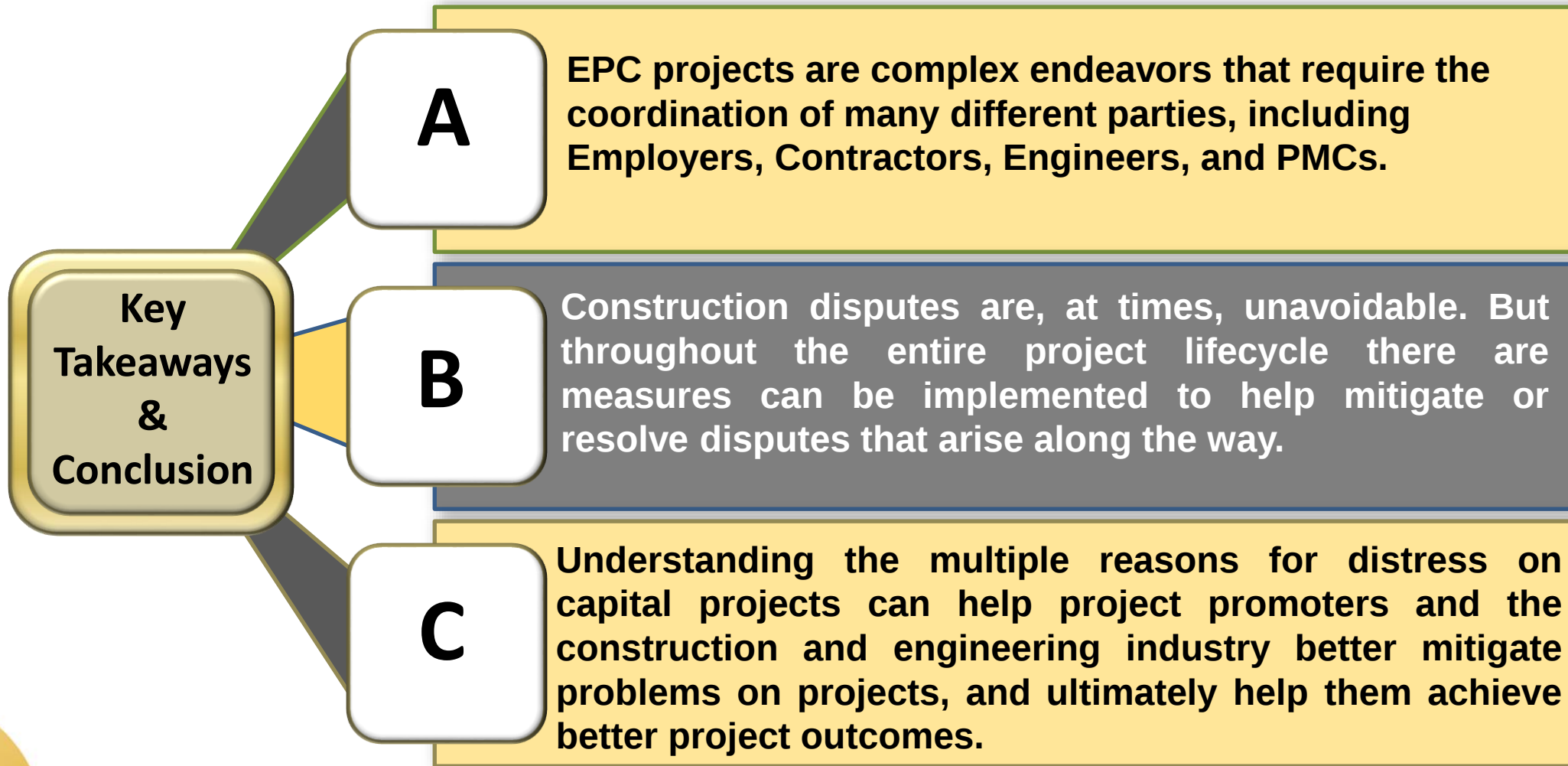
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If a DRB recommendation is rejected, require subsequent mediation

Role of Project Control & Project Management

Supporting Documents for EOT Claim		
S.No	Description	Remarks
1	Baseline schedule	Submitted within certain period from the project effective date , as per the contract
2	Method of construction	To be submitted with the baseline schedule . Also , should be updated and submitted with any new schedule revision
3	Planned manpower & machinery resources	To be submitted with the baseline schedule and its revisions
4	Program updates	Weekly or monthly , based on contract requirements . Weekly updates are recommended as they allow the contractor to keep more accurate history .
5	Notices of delay	Submitted upon becoming aware of the delay event , as per the contract .
6	Program revisions	In case of major changes , or if the baseline program becomes outdated or misleading .
7	Delay analysis	With each program update .
8	Time impact analysis	To be submitted once contractor becomes aware of the event , to show the potential impact of changes . Should be done for all delay events .
9	Cause and effect analysis	Once the contractor becomes aware of the event . Should be done for all events .
10	Productivity analysis reports	Submitted Weekly
11	Minutes of meetings	Upon request by the consultant .
12	Change of work notices	Within certain period , as per the contract , from the date the contractor came to know about the change .
13	Daily progress reports	Submitted Daily
14	Weekly progress reports	Submitted Weekly
15	Monthly progress reports	Submitted Monthly
16	Claim register	Updated on monthly basis
17	Delay events log	Updated on monthly basis

Key Takeaways & Conclusion



Key Takeaways & Conclusion

Avoidance of Construction Claims or Disputes has been emerged as one of the significant roles of Claims management in EPC Industry for Owner / EPC Contractor. Whatsoever the nature of the Claim such as scope variations and/or delay and/or disruption etc.,



THANK YOU

