

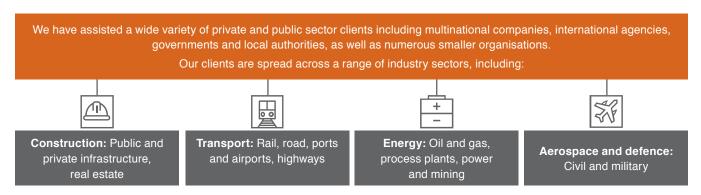


Why you need Construction Disputes and Claims Management Advisory Services

- For robust schedule management through global best practices
- For a professional approach and use of technology to continually plan, schedule and monitor the project
- For maximising your contractual benefits and safeguarding the interest of the project
- For securing profit and saving on costs
- For reducing risks related to contractual obligations
- For avoiding unjustified claims and threat of litigation
- For an integrated document covering all potential claims
- For evidence compilation in an organised manner
- For solid ground work for negotiation, arbitration and litigation
- For quantification and apportionment of delay to extend the time claim
- For quantification and apportionment of cost for prolongation, disruption, acceleration and variation cost claims
- For resolving disputes in reduced time and saving money
- For successful resolution of negotiations
- · For attaining a robust set of results and opinions to be used in the case

We offer

- In-depth industry and operational experience on complex infrastructure projects
- An independent perspective on construction and project disputes
- An ability to combine technical, contractual, financial and economic solutions
- · Seamless global reach with teams working across different geographies
- An experienced team including civil engineering, business, finance and accounting experience, technology specialisation, valuation and investigation specialisation



Professional experience



Who we can help

We support our clients and their legal advisors to manage construction disputes ranging from avoidance or early-stage settlement to binding resolutions in large and complex projects.

We work closely with:

The contracts department

Project and site teams

CFOs, COOs

Legal counsels

The internal audit department

Board of directors and audit committees



What we do

Contract Management

- · Use of technology to increase the efficiency of contract management
- Identification of contractual risks and advice on mitigation
- Monitoring of payments made to subcontractors based on mutually agreed contractual terms and conditions as well as avoiding any overpayment
- Determining of roles and obligations of various parties to the contract

Dispute avoidance

Schedule Management and Programme Control

- · Technology-based analysis on platforms
- Assessment of the underlying schedule design and integrity
- Identification of critical paths, subcritical paths or concurrent critical paths
- · Analysis of the changing nature of the project and supporting schedules
- · Identification of the slippage in an activity or a sequence of activities
- · Comparison of the project schedule to highlight interface issues

Cost Overrun Investigations

- Recovering costs from clients, stakeholders and other entities who may be involved in malpractice, fraud or corruption
- · Understanding and mitigating risks associated with cost overrun
- · Achieving budgeted revenue and profits
- Improving and maintaining shareholder value in the construction asset as a financial or strategic investor

Construction Disputes and Claims Management **Advisory Services**

Expert Testimony Services

- Review of the opposing expert's delay and damages or loss report
- Review of financial as well as other business documents of the opposing party
- · Assistance in negotiations and optimisation of such proceedings
- · Preparation of a professional and coherent written expert report

Pre-Disputes Claim and Validation

- · Validation of computed claims
- · Red-flagging of the claim computation methodology
- · Advice on missed out claims
- · Assistance with evidence compilation
- · Corrective measures and the way forward

Dispute resolution

Delay Analysis and Compensation Claims

- · Programme impact analysis
- · Financial impact, loss and damage
- quantification
- Implementation of schedule analytics tools to extract, organise and analyse large volumes of data from a variety of scheduling tools databases



Contract Management

Contract Management involves making timely decisions and monitoring the flow of information across various levels in order to achieve successful closure of contracts. It enables the client to determine the conformity of work as per the contract documents and provides an opportunity to detect any inaccuracies, ambiguities or inconsistencies in the contract and deploy appropriate mitigation.

How we can help you

PwC can assist you in contracts review as well as administration in the different phases of construction contracts.

Contracts review

- Examination of the process of entering into contractual relationships
- Analysis of due diligence or the precedent conditions to be adhered to in accordance with the contracts
- Appreciation of the contract compliance issues in project management
- Gap analysis of the contract through robust document review
- Review of the strengths and weaknesses of your contracts based on our recognised industry experience

Contracts administration

- Understanding of the contracts: How to read, interpret and evaluate
- Examination of the key aspects of contract administration as well as the claims process

- Appreciation of the contractual issues surrounding variations, delays and defects, as well as development of procedures to effectively deal with these issues
- Analysis of effective document control, reporting and communication systems
- Discovery of cooperative negotiation as well as partnering skills for dispute avoidance and resolution
- · Development of contract claims procedures
- · Termination or suspension of contracts due to default
- · Closing of contracts



- Contract awareness to increase the efficiency in contract management
- Identification of contractual risks and advice on mitigation measures
- Monitoring of the payment to subcontractors based on mutually agreed contractual terms and conditions as well as avoiding overpayments
- Determining of roles and obligations of the various parties to the contract

Why PwC?

We draw upon the experience of engineers and contract managers with significant experience in construction contracts (FIDIC, government contracts, international contracts). Our contract specialists are highly experienced in interpretation as well as analysis and can assist with the independent assessment of contracts to identify financial and operational issues. We can help you:

- Maximise your contractual benefits and safeguard the interest of the project
- · Secure profit and save on cost
- Reduce risks related to contractual obligations
- · Avoid unjustified claims
- · Avoid the threat of litigation
- Keep the management updated with the current status of their contract management and suggest the best practices
- Avoid contractual disputes
- Mitigate disputes arising from the contract in time to avoid disruption of construction work





Cost Overrun Investigations

Cost overrun is a critical issue faced by the construction industry in India. Significant cost overruns have been seen turning profitable EPC construction projects into loss making propositions. More importantly, managements and boards of directors often do not have a clear view or evidence that may have led to such a situation. This makes it impossible for them to identify or mitigate the risks or losses in time.

Considering the sheer volume of mega construction projects, it can be challenging to keep a vigil on factors such as managerial incompetency, malpractice, fraud, deception and even corruption, which may largely contribute to cost overruns.

Why you need Cost Overrun Investigations

- To provide a robust report for you to challenge the factors leading to cost overrun
- To highlight the current operational, financial and commercial issues for resolution
- To keep the management updated with the current status of the financial health of the project



- Recovering costs from clients, stakeholders and other entities who may be involved in malpractice, fraud or corruption
- Understanding and mitigating risks associated with cost overrun
- · Achieving budgeted revenue and profits
- Improving and maintaining shareholder value in the construction asset as a financial or strategic investor



Why PwC?

We draw upon the experience of our forensic investigation specialists, forensic accountants, civil engineers, construction management specialists, quantity surveyors, contracts specialists, scheduling professionals, former police officers and deploy sophisticated forensic technology techniques to investigate technical, business and financial causes of cost overruns incurred in the construction of infrastructure assets.

Our professionals investigate and identify the different factors that may have caused the cost overruns and classify them into parts that can be submitted to the clients as claims and into others that may have emanated from fraud, misconduct or operational inefficiencies. We can help you:

- Investigate the books of accounts of the concerned entity
- · Identify red flags indicating any misuse of funds
- Investigate and identify instances of inflated rates agreed with suppliers
- Examine the contract document with respect to the bill of quantities (BoQ) and rates
- Establish instances of favouritism towards certain sub-contractors
- Investigate and identify instances of over-payments to contractors, vendors, sub-contractors or suppliers
- Reconcile quantities and compare them with budgeted ones
- Use quantity surveying techniques while estimating the cost overrun
- · Identify and investigate related party transactions



Delay Analysis and Compensation Claims

When engineering and construction projects get delayed, the contractors and employers not only lose out on profits waiting for the project's completion but on new projects as well. Consequently, at the end of every dispute, each party is either interested in receiving or avoiding payment of money damages. This is why, in any construction project, a detailed analysis of the source documents is needed more than conducting a shorthand analysis of summary documents.

Why you need Delay Analysis

- For quantification and apportionment of delay for the extension of time claim
- For quantification and apportionment of cost for prolongation, disruption, acceleration and variation cost claims

Challenges faced in the construction sector

- Projects not getting completed within timelines due to reasons such as:
 - Delay in land acquisition
 - Delays in approvals by the consultant, client and local authorities
 - Failure to provide drawings on time
 - Unexpected variations in design
 - Changes in dimension, scope, etc., being notified too late

- Delays and interruptions in interconnecting contracts or packages
- Delays caused by difficulties in import or customs clearance
- Poor procurement planning
- Suppliers beginning behind schedule or the planned date
- Coordination failures
- Suspension of the work
- Cash flow issues
- Unanticipated requirements by client's supervisors
- Disputes between the parties due to delay in project completion
- Substantial funds getting locked up in disputes resulting in stalling of the project
- · Projects left unfinished till issues are resolved

We can help you with

- The forensic review of documents and other underlying information
- Delay and disruption analysis of the project in order to arrive at an extension of time and cost overruns attributable to delay
- Quantification of disruption or prolongation cost due to idling resources or extended stay
- Quantification of damage or loss claims due to the breach of contract, negligence or misrepresentation

Programme Impact Analysis Services

- Disciplined and rigorous critical evaluation and factual analysis of schedules to identify the causes of delay as well as apportion delays between the client and contractor
- Analysis of time-related issues covering variations, disruption and acceleration, concurrency, float and pacing arguments

Financial Impact, Loss and Damages Quantification Services

- Quantification of the financial impact of delay and loss of profits claims
- Quantification of the loss resulting from termination of contract
- · Quantification of acceleration, variation and disruption claims

Technology Services

 Implementation of schedule analytics tools to extract, organise and analyse high volumes of data from a variety of scheduling tools

Why PwC?

We understand the importance of construction schedules, baseline programmes, control mechanisms as well as cost variations and can assist you through the various phases of a dispute process. Our team offers:

- Deep industry knowledge and operational experience on complex projects
- An independent perspective on construction and infrastructure disputes
- An ability to combine technical, contractual, financial and economic solutions
- · Seamless global reach across geographies
- Relevant professional experience including engineering, construction management, valuation, accountancy experience as well as technology specialisation





Expert Testimony Services

We provide concise and proportional expert testimony on delay, disruption, loss and expense as well as other quantum issues for organisations involved in complex capital project disputes that are prone to financial and reputational loss. This enables you to concentrate on mitigating effects of the dispute rather than dwelling on what the outcome might be. We do this by providing our recognised industry expertise, wherever necessary. We have a team of experienced capital project professionals and a global network across geographies that not only significantly reduce the time taken to resolve disputes but also save you money.

As the pace of business intensifies, the possibility of disputes and other difficulties arises more frequently. Also, when rules are broken, unintentionally or otherwise, organisations are often exposed to risks and issues that they are not used to dealing with. Whether these challenges involve cross-border dealings with customers, joint venture partners and foreign governments, or are localised in India; they may involve different business

cultures and legal systems, as well as unfamiliar regulatory and accountability requirements.

Why you need Expert Testimony Services

- · To reduce the time taken to resolve disputes and save money
- · To enable successful negotiations
- To provide a robust set of results and opinions to be used in the case

We can help you

- Enter negotiations with a clear view of the strengths and weaknesses of your case
- Structure your case strategy with respect to your strengths or weaknesses



- Be more confident of the range of results
- Direct your efforts towards other important areas of the case as the review will be taken care of by the experts

Expert Testimony Services

- Review of the opposing expert's delay and damages or loss report
- Review of financial and other business documents of the opposing party
- Determination of the documentation and information requirements
- Reporting on both the strengths and weaknesses of the positions taken
- Providing industry specialists, economists across all major industry sectors



- Assistance in multi-lingual and often cross-cultural environments requiring multi-national teams and expertise
- Provision of a concise and proportional expert testimony on delay, disruption, loss and expense as well as other quantum issues for organisations that are involved in complex capital project disputes and are prone to financial and reputational loss
- Response to the retainer requirements for jointly appointed experts, including setting out a fair and balanced process for resolution
- Assistance in negotiations and optimisation of such proceedings
- Preparation of a professional and coherent written expert report

Why PwC?

- We offer a set of internationally acclaimed experts with in-depth industry expertise and an understanding of the local business and economic conditions.
- We are pioneers in India and bring international expertise in construction disputes and claims to the table.
- We assist clients in domestic and international arbitrations as well as litigations by providing expert advice regarding delay and damages.
- We provide expert testimony before various international tribunals including delay analysis and damage quantification.



Schedule Management and Programme Control

Construction planning and scheduling is one of the most important tools in a construction project. Every construction project involves a lot of activities that need to be appropriately planned and monitored to ensure timely completion of the project.

Construction scheduling has come a long way over the last 25 years. However, in spite of the widespread use of computerised scheduling on construction projects today, there still exists a large disparity in the level of understanding of those involved in construction regarding the proper use of software. Too often, major projects suffer from missed milestones, schedule slippage and delays with no way of determining any recovery plans or forecasting realistic completion dates.

Why you need Schedule Management Services

- · For robust schedule management
- For a clear view of the progress and comparison with the baseline programme
- For gaining a professional approach and using technology to continually plan, schedule and monitor the project
- For using global best practices in schedule management and

- · programme control
- For proactive identification and assessment of delay events in construction projects

We can help you

- · Review schedule integrity
- Gain compliance with project schedule provisions as per the contract terms and conditions
- Include all project scope and appropriate activity sequencing for time and cost optimisation of project
- Monitor critical and near critical tasks and assess delays in the overall project schedule
- Model interface dates and milestones based on the type of project and client requirement
- Evaluate the progress achieved through various parameters such as earned value analysis, schedule analysis and budget variance
- Re-sequence activities to mitigate delays, identify areas where acceleration will most efficiently benefit the project
- · Prepare a resource and cost loaded schedule



About PwC

At PwC, our purpose is to build trust in society and solve important problems. We're a network of firms in 157 countries with over 276,000 people who are committed to delivering quality in assurance, advisory and tax services. Find out more and tell us what matters to you by visiting us at www.pwc.com.

In India, PwC has offices in these cities: Ahmedabad, Bengaluru, Bhopal, Chennai, Delhi NCR, Hyderabad, Kolkata, Mumbai, Pune and Raipur. For more information about PwC India's service offerings, visit www.pwc.in

PwC refers to the PwC network and/or one or more of its member firms, each of which is a separate legal entity. Please see www. pwc.com/structure for further details.

© 2019 PwC. All rights reserved.

Contact us

Puneet Garkhel

Partner and Leader, Forensic Services
M: +91 9820320181
E: puneet.garkhel@pwc.com

Geetu Singh

Partner, Forensic Services, and Leader, Construction Disputes and Claims Management Advisory Services M: +91 9619390060 E: geetu.singh@pwc.com

Data Classification: DC0

This document does not constitute professional advice. The information in this document has been obtained or derived from sources believed by PricewaterhouseCoopers Private Limited (PwCPL) to be reliable but PwCPL does not represent that this information is accurate or complete. Any opinions or estimates contained in this document represent the judgment of PwCPL at this time and are subject to change without notice. Readers of this publication are advised to seek their own professional advice before taking any course of action or decision, for which they are entirely responsible, based on the contents of this publication. PwCPL neither accepts or assumes any responsibility or liability to any reader of this publication in respect of the information contained within it or for any decisions readers may take or decide not to or fail to take.

© 2019 PricewaterhouseCoopers Private Limited. All rights reserved. In this document, "PwC" refers to PricewaterhouseCoopers Private Limited (a limited liability company in India having Corporate Identity Number or CIN: U74140WB1983PTC036093), which is a member firm of PricewaterhouseCoopers International Limited (PwCIL), each member firm of which is a separate legal entity.

PD/December 2019-M&C 3505

