
PERSPECTIVES

INTEGRATING INDEPENDENT
FORENSIC ANALYSES IN
INTERNATIONAL CONSTRUCTION
ARBITRATIONS



Our perspectives feature the viewpoints of our subject matter experts on current topics and emerging trends.

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Introduction

This article discusses the various independent analyses that separate subject matter experts perform and how these analyses should be integrated when involved in a construction dispute that has progressed to international arbitration. While experts are not advocates and do not provide legal advice, early involvement of independent experts can help form case strategies and identify the need for other specific expert analyses and opinions to be integrated to develop the strongest possible case. The goal of the article is to provide perspective into the various types of forensic analyses to better understand the influence that each could have on the various analyses typically performed in a claim and on which experts often rely.

The Role of Dispute Resolution Experts

Dispute resolution experts are typically engaged in construction arbitration proceedings to provide expert forensic analysis of and opinions on schedule delay, disruption, and damages quantification. These forensic analyses typically lead to assessments of entitlement, causation, and responsibility and thus come in direct contact with a variety of other subject matters that may require additional expert forensic analyses to be performed and incorporated or

relied upon. These related subject matters can include, for example, estimating, standard of care (for project management, construction management, engineering, etc.), quality, safety, and forensic architecture and engineering.

Self-Decided vs Adjudication Dispute Resolution Processes

Most contracts define a process for initiating and resolving disputes and typically allow for a combination of both a self-decided and/or an adjudication process to resolve a dispute. The self-decided group of dispute resolution processes are typically resolved at the project level in which the parties have a say in the decision and includes negotiation, mediation, or a Dispute Review Board (DRB). The adjudication group of dispute resolution processes are those in which someone else decides the fate of the matter. They are more formal and include arbitration and litigation. It is not uncommon for a contract to require the parties involved in a dispute to attempt to resolve the dispute using one or more self-decided methods of dispute resolution before proceeding to an adjudicated method. As such, regardless of the dispute resolution process method, early involvement of independent claims experts is important as the effort and methodologies to perform the forensic analysis for the claim should be consistent throughout the life of the claim and can be used in the various venues. In addition, the observations can focus discovery efforts, document production, the need for fact witnesses, and the need to integrate other subject matter experts to assist the triers of fact in the arbitration.

Expert Analysis & Claims

Claims and disputes can be caused by numerous reasons, but regardless, it is generally the claimant's responsibility to prove a claim. Independent expert analyses can be an important component to help analyze a claim to either help prepare the submission or to respond to the claim. There are two perspectives of a disputed issue to consider: legal and technical. From the legal perspective, counsel should be consulted to frame the context of the contract, applicable laws and regulations, notice provisions, and the dispute resolution process. Counsel typically then seeks subject matter expert technical forensic analyses of relevant issues. The technical perspective of a dispute considers the contract scope and the required technical forensic analyses associated with a claim submission (i.e., delay analyses, loss of productivity, quantum, failure, and standard of care). Forensic claims experts should understand the legal context under which the disputed issue exists, while the legal practitioners should understand the technical context and results of independent analyses which can help frame their case management.

There exists a variety of industry recommended practices, guidelines, and publications that are used by independent experts as technical resources. These resources provide principles for the sound application of forensic analysis methodologies to promote competent analyses and consistent information as a basis to evaluate and compare varying methodologies and forensic work product.¹ A recent publication also addresses various elements that should be considered by independent experts when preparing forensic analyses associated with a claim.² Some of the key elements identified to

demonstrate entitlement include: occurrence of the casual event ("Did the alleged event actually happen?"); adherence to contract notice requirements ("Did the parties adhere to the contract?"); and contractual entitlement to make a claim.

Another key element is to demonstrate causation and responsibility. This element should be the most technically focused effort that often requires specialized skills and knowledge from one or more independent experts to develop various cause and effect analyses to establish the causal linkage (nexus) between facts and events and the impacts in dispute. These analyses can include forensic schedule delay, loss of productivity, damages quantification, and other technical demonstrative analyses. Each of these analyses requires a specific set of subject matter skills and knowledge to perform, and, while these can be performed independently, often the cause and effect determined through the various analyses are related to the same issue(s).

» **Forensic Schedule Delay.** Disputes often include an element of prolongation or delay for which an independent forensic schedule delay analysis expert might be needed. A claim would be asserted for impacts that resulted in additional time that could increase the project duration, usually resulting in additional costs to both parties. Independent experts frequently reference two technical resources: the AACE International Recommended Practice No. 29R-03, Forensic Schedule Analysis, and the Society of Construction Law Delay and Disruption Protocol. These documents address the delay element of a claim and provide guidelines to the industry for the application of critical path method scheduling in forensic schedule analysis to measure delay (including disruption and

¹Examples of industry professional associations that publish technical material include: AACE International (Recommended Practices) and the Society of Construction Law (Protocol). Their publications address a variety of dispute and claim-related topics such as forensic schedule analysis, loss of productivity, delay and disruption.

²AACE International Recommended Practice ("RP") No. 120R-21, Demonstrating Entitlement for Contract Change Orders or Claims – As Applied in Engineering, Procurement, and Construction

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acceleration) and identify effected activities to focus on for establishing causation.

» **Loss of Productivity.** Another element of disputes for which independent forensic experts are often used is for an assertion for impacts resulting from loss of productivity (LoP). Claims for LoP can be a major source of disagreement and dispute, and the effect on cost and schedule can be difficult to identify and quantify. Often, LoP occurs as the result of a disruptive event or series of events and is tied to both schedule delay and quantum. There is a long list of technical resources that address various LoP factors and which independent experts often reference.³ The various technical resources provide guidelines to the industry regarding the application of analyses related to capturing the effect of LoP on cost and schedule. Additionally, they address key factors including the common causes, various analysis methods,⁴ and how to employ those methods.

» **Specific Technical Causal Analyses.** There are numerous specific demonstrative analyses that can be performed by the appropriate technical experts to establish causation of events to delay, disruption, and damages and thus need to be integrated with the core dispute. Depending on the type of data available in the project file, and the specifics of the matter, the following are example topics that can be analyzed to support a claim: change orders, shop drawings, Requests for Information (RFI), engineering and design, design standard of care, management standard of care, bid and estimate, quality, rework, and other scientific studies (i.e., geotechnical). These analyses should be fully integrated with and used to demonstrate the causal nexus to the impact events in dispute.

» **Quantification of Damages.** The culminating element in a claim for which independent experts are often used is the quantification of damages. The types of costs to be considered for analysis as damages can include remaining unpaid contract balance and change orders; direct project costs; time-related indirect project costs for general conditions; owner management costs; Home Office Overhead; interest; insurance; bonds; and markup for profit. The choice of a damage quantification methodology can be influenced by the available project records and data. Triers of fact have generally established that discrete approaches that prepare specific estimates are more accurate, effective, and persuasive than the more general cost-based methods.

» **Documentation.** The last underlying element to any independent claim analysis is factual documentation. Supporting documentation is vital to each of the aforementioned elements and to developing a comprehensive and unimpeachable independent expert report for arbitrations.

Conclusion

This article discussed the various forensic analyses that experts are engaged to prepare and provide independent expert opinions upon during construction arbitration proceedings. These analyses often influence and rely upon one another and should be integrated to confirm entitlement and demonstrate causation and responsibility through forensic schedule, loss or productivity, and other technical analyses; and to quantify damages. Early involvement of independent experts can help form case strategies. Part of the case strategy can also

³AACE International RP No. 25R-03, Estimating Lost Labor Productivity in Construction Claims.

⁴The various analysis methods include, including project specific analyses (i.e., Measured Mile, Earned Value Analysis, Direct Observation), specific industry studies (i.e., acceleration, overtime, cumulative impact, and weather), and general studies (i.e., MCAA, Construction Industry Institute, Leonard Study), and Cost-based methods.

include identification of the need for other specific expert analyses and opinions to be integrated in order to develop the strongest possible case throughout the life of the dispute, from self-decided/negotiated methods through adjudication in international arbitration.

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[John Ciccarelli](#) is a Director in J.S. Held's [Construction Advisory](#) practice. John has more than 25 years of experience performing expert consulting and project advisory services for clients in the engineering and construction industries globally. John's experience includes dispute resolution and litigation support, construction cost assessments and audits, risk management assessments, construction project controls and management, and construction oversight. He regularly focuses on schedule delay, loss of productivity, and cost damage quantification issues and participates in various phases of claims management and litigation, including change order review; discovery, mediation, and settlement discussions; preparing expert reports and briefs; and presenting expert witness testimony at formal legal proceedings.

John can be reached at
jciccarelli@jsheld.com or
+1 917 779 0131.



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