ARTICLE

Did you notice the iceberg?

Four key tips from a forensic expert

Typically, construction arbitrations are fact-heavy since the evidence accompanying construction and engineering projects is enormous. As a result, communication in these projects generally involves a mix of thousands of irrelevant and relevant documents and emails, including attachments on hard drives or data transfer of documents. On top of that, in recent years, emails, direct messaging, video conferences and chats have been added to traditional formats of communication.

The "iceberg" refers to the enormous amount of information generated by the construction project, including communication, visual, cost progress, and anecdotal information.

The experts base their assessment on team knowledge and data analysis. After the project team shares their views and project data is received, the challenging analysis task begins. As the number of documents in construction and engineering projects can easily exceed thousands or even tens of thousands of items, the first objective is to eliminate irrelevant data and reduce the number of files for review.

In the process, various visualization techniques are used to portray the duration of issues based on contemporaneous records and correspondence. In addition, one of the aims of visualization is to allocate the criticality of issues.

Lastly, delay analyses are conducted to understand progress compared to logic changes. We will cover each concept in four detailed tips below.

Tip #1: Reducing the number of documents

The starting point with digging into the huge pile of data and documents will be to remove duplicate information in the data set, as in the process of communication, many documents and data are duplicated and are irrelevant for arbitral proceedings.

Python coding helps to substantially reduce the data and to facilitate manual review. For external purposes, the same is enabled by exporting Excel spreadsheets that include filtering options. We will further investigate a real-life example of how deduplication and data reduction play out with voluminous evidence.

EXAMPLE:

— Data at start: ~7200 documents

— Data reduction: ~6500 documents

— Data for review: ~700 documents

Out of a total of 7200 received documents, deduplication removes around a fourth of these, whereas defining what file types are more important reduces around 2000 documents (around 27% of the initial pile). Lastly, defining the specific folders to be excluded, like templates and archives, allows for an additional reduction of 3000 documents, leaving us with only 700 documents to review.

STEPS FOR REDUCING ITEMS FOR REVIEW:

— Exclude duplicate files (reduction of ~1500 documents)

— Define time periods (this step is not applied following first review)

— Define file types of importance (reduction of ~2000 docs)

— Define specific folders to be included / excluded such as templates and archives (reduction of ~3000 docs)

As can be observed, after the reduction, only around 10% of the initial volume is left for further investigation.

Tip #2: Visualizing the data

This step includes visualizing the duration of issues based on contemporaneous records and correspondence so you can concentrate on identifying issues based on the available data. Possible identifiable examples of issues are client or third-party interference with engineering such as design changes, late approvals by clients, clashes between work plans of different contractors, and unplanned levels of resources.

THE TASK REQUIRES AN UNDERSTANDING OF:

— Client or third-party interference with engineering such as design changes

— Late approval by clients

— Clashes between work plans of different contractors

— Unplanned level of resources

Tip #3: Weighting data

The weighting approach is split into three steps:

— Identify event/topic of interest

— Assessment of impact in the period and the criticality of the period

— Scoring of critical events (also referred to as evidence impact score).

The occurrence of an issue doesn't necessarily mean that this issue causes a problem. Before incorporating issues into the project assessment, the issues must be weighted based on the expert's expertise.

Tip #4: Delay analysis – Progress vs. logic changes

The progress vs. logic analysis allows us to understand and visualize if logic changes between two schedule updates led to overstated delays or hidden delays. Based on this information the expert may ascertain whether the project was already delayed, which is an essential indicator for delay claims in construction arbitration. The rather detailed and data-heavy analysis compares the reported project completion milestone and the actually calculated project completion milestone based on achieved progress.

FIVE KEY TAKEAWAYS

1. You cannot avoid data. If you don't look at it, the other party will.
2. Reducing data helps to focus review efforts.
3. Structuring data will separate relevant from irrelevant information.
4. Analyze data with appropriate IT tools.
5. Take advantage by visualizing data.

The tips in this article were originally shared by Thomas at the Baltic Arbitration Days 2021 conference during a panel on the topic of "IT in Arbitration".

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