

LITIGATION EPISODE 1 – ALL IN! IS THE CONSTRUCTION SECTOR HOOKED ON THE GAME?



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The construction sector is not the only one to witness it, but it is a striking example of it: its market has a false bottom. For several decades, large international construction companies have been playing a singular game, which often recompenses not necessarily the best builder but the most audacious.

1. DEALING THE CARDS

Let's take an example: an international call for tenders that would pit five major players in the construction industry against each other to build a new airport. Because of fierce global competition, it's highly likely that the winning company would be chosen as much for its creativity and technical expertise as for its audacity to take risks and offer a price that would give it a low margin, if not nil. It then falls on the company to make a profit thanks to another type of project: claims, be they through amicable negotiations or before a court. The company's result will be built in two stages and according to two distinct processes.

It's an odd situation where construction companies hope to run into difficulties or see certain risks materialise outside of their control in order to have as many opportunities as possible to revise their contracts and prices. These can include delays in obtaining technical instructions, soil quality issues, the bankruptcy of business partners, social upheaval, strikes, archaeological discoveries, land releases, technical changes, and so on.

They represent just as many opportunities to call into question the contract price and open negotiations with the aim of recovering the original stake. But during levelling work, not everybody stumbles upon Roman ruins. First round in the game of chance.

2. SECOND TURN

It's unlikely to see the market curb the chaotic nature of its workings by itself, even though construction prices have reached levels that considerably reduce any hopes of making a profit. On the contrary, all signs seem to show that this activity model is here to stay, pushing value creation towards areas other than those of the operational and engineering departments.

The different players assisting these businesses – in analysing the facts, establishing the causes, explaining the law and quantifying the damages – must be delighted with the multiplication of claims. They are creating a veritable construction dispute market, with many forms from classic negotiation to international arbitration. However, it's reasonable to believe that the construction market deserves better than the frequent and very costly use of dispute settlement procedures, which seem to succeed one another without benefitting from any learning curve.

The observations often remain the same. At the end of a large project, construction companies struggle to be able to revisit the execution of it with the benefit of hindsight to demonstrate the logical sequence of events that can explain delays and additional costs. It is, in principle, extremely difficult to take the necessary step back during the execution of a project to measure all the consequences of a given event on three key variables: quality, time and cost. As a result, it's necessary to make the best of the various types of information collected in order to later reconstitute the succession of events that tells the story of the project: accounting data, planning data, active personnel, weather data, and materials used are all essential to reconstruct, sometimes day by day and work item by work item, the progress of major construction sites.

Construction companies are rarely experts at this game, and it's striking to note how wide the gap is between their technical expertise deployed to serve their clients and their reticence to apply the same demanding nature to their management practices. Experts and their clients therefore strive to conduct a real investigation, albeit late in the day, where the clues left by the parties are often incomplete, disparate or even non-existent. The scavenger hunt can only be longer, is sometimes hazardous, and gives rise to estimations, or even bluffs, which can sully the credibility of negotiations or hearings.

All these inaccuracies, for want of a better alternative, lead to unbalanced transactional protocols or push the courts to disappointing Solomonic judgements. After gambling on reconstituting its margin, a construction company must add the uncertainty of a poorly argued negotiation. Second round in the game of chance.

3. FROM CLUEDO TO MASTERMIND

It would be a dream to easily read a project summary that had been written as the construction work progressed thanks to efficient procedures for collecting and processing the information. This type of exercise, whose fundamental objective is to measure and explain the difference between what was forecast and what actually happened, always requires a cold review and in-depth analyses. However, between the advent of an artificial intelligence able to perform this task in real time and the current state of the art, the gap is wide. When it comes to using new management tools, the construction sector is at the bottom of the class. This delay compared with other sectors is all the more significant given the veritable digital revolution on the horizon.

The construction sphere became aware of the benefits of modelling tools several years ago. What we call BIM, for Building Information Modelling, corresponds to assistance in works management applied to construction according to several axes: 3D view of works, ability to navigate the entirety of past plans and budgets, tracking of responsibilities in obtaining authorisations, possibilities to see time spent per work zone, etc. In its most advanced versions, the BIM would become a complete library of data, able to be read, be it from a technical, financial or legal perspective. We might imagine in the long term a real-time monitoring tool for equipment and teams that would be able to immediately reconstitute the resources mobilised, quickly identify productivity losses and quantify their consequences. This would serve to determine the optimal construction and team deployment solutions that best respond to the most important constraint (respecting the planning timeline, minimising additional costs, etc.).

These systems exist and are used, but still in preliminary versions. Their development and their actual application in projects would revolutionise construction methods and monitoring projects because their implications are innumerable. There is no reason why this should not be the case, since a construction site is already a place where a plethora of information can be collected. It's a strange paradox that sees players in the construction sector hesitate to enter into a world that seems designed for them! Between the diversity of data to analyse (personnel, equipment and material) and the ability to monitor it on technical, temporal and geographical axes, digital tools are ideal for extracting extremely varied analyses. What would they be?

It's possible to anticipate two successive phases for using the data.

The first phase would be turned towards the business. It would use the mass of data available with the aim of improving how projects are conducted or better demonstrating the veracity of its difficulties. Knowing the situation in real time would improve the reactivity of construction companies, who would manage an integrated model of resources and costs with the objective of finding the optimum at a constant quality. Their interactions with their clients would be more rational, more responsive and more transparent to the great benefit of their legal departments, which would be better able to preserve their rights.

Moreover, collecting data would make it possible to better understand and demonstrate the mechanisms of general disruption of a project, which would result from observing the deformation of the model in extreme cases of numerous or repeated difficulties. There is a wealth of literature explaining the principle of cumulative impacts on the productivity of a construction site. It can be understood intuitively: after a certain amount of accumulated difficulties, the disorder reaches such a level that productivity collapses, even though each one of the difficulties taken in isolation would only have a small effect. In spite of this, the construction sector struggles to demonstrate the phenomenon and quantify it. The majority of claims for general disruption must be limited to illustrating it qualitatively and relying on the demonstrative nature of the events supposedly at its source. By systematically analysing the productivity data of a large number of projects whose execution environment would be saved and codified, the causal link between the coexistence of numerous disruptions and the exponential slowing down of work productivity could (finally) be established. The courts would then have real demonstrations to make an informed decision on the issues that currently give way to far too much intuition or, at best, inference.

4. TOWARDS A TEAM SPORT

The second phase for using data, which is even more ambitious, would see greater transparency of results between construction players, clients and suppliers, to the advantage of the market. The aeronautical sphere has long since incorporated this idea by sharing a large amount of data, particularly from aviation accidents or incidents, with the aim of improving security. Yet, technological advances and audacious contemporary structures that generate new risks should encourage construction players to establish greater transparency in the characteristics of projects: technical characteristics first and foremost, but also the reality of resources implemented. The data revolution will generate a major step forward in terms of managing large projects on a global scale. Similarly to other sectors, a global coordinating body could facilitate the systematic and anonymous collection of a project's characteristics according to its various components (technical, costs, and delays), all with a great deal of detail. The project would be registered and characterised by taking into account its entire execution up to its dispute phase. It would be incumbent on this coordinating body to share the data freely, analyse it, encourage studies and research based on its databases, or even issue independent opinions on the coherence of proposals during tender phases.

Making this anonymous data available on an open market with diverse free players would accelerate innovation, promote the transfer of best practices from sector to sector, and strengthen the links between large companies, start-ups and researchers. This flow of free information would make it possible to decompartmentalise the construction world, benefit from new expertise, and encourage breakthrough innovations by pooling the sometimes significant investment costs that the sector's profitability does not allow.

We wager that this international 'control tower' would contribute to re-establishing more rational rules for the game to the advantage of all stakeholders, clients, project managers and builders. It would help to correct the race to the bottom for prices by showing and quantifying the systematic nature of financial claims issued by construction companies during their final negotiations, as well as the resulting costs.

It would also be easier, by using the available references, to banish 'suicidal behaviours' and supervise negotiations during a call for tenders or at the end of a project. Interactions would be clarified thanks to an arsenal of comparable situations, which would reduce the field of uncertainties and would make it possible to set off a virtuous circle to establish fair prices. In the long term, the circulation of information and the sharing of rational data would lead to a convergence of project economics. These exchanges would standardise margins for comparable work and would make resorting to cumbersome dispute practices more episodic. This would further enhance technological breakthroughs.

5. CONCLUSION

So what now? Companies are struggling to take the first, and undoubtedly the most difficult, step by training a new generation of builders on the ground to use these tools. Of course, they have to start with a reasonable ambition, by creating step by step their own knowledge bases, grouping tools and best practices that are fully accepted by their users. These users will be the key players in the daily collection of data; they will enrich it through analyses; and they will be the primary beneficiaries of their work. The power of the tools suggests a major change in the tasks entrusted to construction managers. First adopters will have a major competitive advantage when optimising their costs and defending their profitability, as well as disrupting the market by drastically modernising their relationship with their clients through a transparent and reasoned dialogue.

The company that succeeds in doing so will have broken the mould of the market.