



Contextualizing alternate dispute resolution: an agile approach to resolve disputes in infrastructure projects

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ARTICLE INFO

Article history:

Received September 2020

Received in revised form

15 September 2020

Accepted 15 October 2020

Available online

30 October 2020

Keywords:

ADR

Canada

Common Law

Infrastructure Projects

ABSTRACT

This paper examines the potential disputes in infrastructure projects' environment, critiques the available Alternate Dispute Resolution options in practice both in local and international jurisdictions and proposes a diagnostic approach to resolve the disputes prevalent in infrastructure projects

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Контекстуализация альтернативного урегулирования споров: подробный подход к урегулированию споров в инфраструктурных проектах

АННОТАЦИЯ

Ключевые слова:

Альтернативное

урегулирование споров

Канада

Общее право

Инфраструктурные

проекты

В этом документе рассматриваются потенциальные споры в среде инфраструктурных проектов, также анализируются имеющиеся варианты альтернативного урегулирования споров на практике как в местных, так и в международных юрисдикциях, а также предлагается диагностический подход для разрешения споров распространенных в инфраструктурных проектах.

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INTRODUCTION

"I consider a negotiated agreement infinitely superior to arbitration.

"President John F. Kennedy on July 9, 1963[19]

Over half a century ago, President Kennedy famously quoted this in a statement while urging Railroad Management and Union Leaders to arbitrate their dispute. His proposed approach to dispute resolution remains equally applicable today in the project's unique environment. A project, by virtue of its nature, is unique in that "it is not a routine operation, but a specific set of operations designed to accomplish a singular goal. It is a temporary endeavor undertaken to create a unique product, service or result"[20]. Consequently, the challenges that a project faces are unique too and due to this nature of uniqueness, every project needs an agile and tailored approach when it comes to its management from inception to completion. It goes without saying that a well-managed project delivers an expected asset, to its given specification, that goes into operation. But in reality, managing a project is not without its risks and thus prone to disputes amongst the stakeholders on matters such as scope, cost and time to name a few. An efficient project management strategy should include mechanisms that can tackle a project by taking an agile approach, which can help resolve disputes as they arise while keeping the project stable during its course. This can be done by increasing the exercise and focus on negotiation and mediation rather than relying primarily on traditional arbitration and litigation.

Although the United States has pioneered the initiative of Alternative Dispute Resolution (ADR) with regards to managing infrastructure projects, application of the same in Canada have also been on the rise. Industry participants in many jurisdictions around the world are also finding it useful to resolve disputes through more agile and innovative fashion[13]. Outside of the United States, disputes resolutions through alternative ways are also prevalent in UK and British Commonwealth nations as well as throughout the Far East[13].

It is prudent for stakeholders in a project environment to take advantage of tailored ADR approaches such as partnering, dispute resolution panels, project neutrals as such to significantly reduce the time consuming and costly impact of traditional dispute resolution. Some of these approaches have gained familiarity with industry practitioners lately but widespread conceptualization of these ideas and implementation of the same are yet to gain acceptance with project stakeholders in the dispute resolution process[13]. In addition, for projects in international jurisdictions, there remain further risks of working in a new environment due to the lack of availability of dispute resolution forum and enforcement options. Dispute resolution mechanism should thus form an integral part of the international contract that gets signed by the parties. There are jurisdictions where local customs are preferred over international norms as are observed in some of the Middle Eastern countries where Dispute Adjudication Boards are commonly removed from the standard FIDIC (International Federation of Consulting Engineers) terms and instead, local resolution practices are imposed[11].

This paper examines the potentials of disputes in the environment of infrastructure projects, critiques the available ADR options in practice both in local and international jurisdictions and proposes a diagnostic approach to resolve the disputes prevalent in infrastructure projects. The paper will conduct a short case study of one of the major infrastructure projects in Canada; it will analyze whether the current dispute resolution

processes and techniques have been effective in the resolution of disputes to the satisfaction of the parties and to the ultimate success of the project.

This paper uses the terminology 'infrastructure' and 'construction' interchangeably to use the type of projects and thus excludes the other type of projects of virtual nature, namely Information system and/or Information technology. In the end, the paper recommends that parties in the project environment need to proactively accept adapt and practice the emerging processes and techniques of alternative dispute resolution in order to prevail the risks of disputes from ballooning into major conflicts and steer the project towards its final delivery to its specification on budget and on schedule. This paper posits that dispute resolution professionals have opportunities to play important roles in the implementation, administration, and application of evolving dispute resolution techniques that parties to project regard as necessary to avoid or at least minimize exorbitant and prolonged litigation.

POTENTIALS FOR DISPUTES IN INFRASTRUCTURE PROJECTS

"Discourage litigation. Persuade your neighbors to compromise whenever you can. Point out to them how the nominal winner is often a real loser, in fees, expenses and waste of time."

Abraham Lincoln

Most disputes arise when the scope, cost, and schedule do not add up. If one of these three is changed, the other two get affected. When there are changes in baseline plan and the changes are not tackled in an effective way, disputes are bound to surface. "Disputes come out of change, where people have differences of opinion about the impact of the change on the project," says Anthony Morgan, PwC UK Capital Projects Dispute Resolution Leader. "There can be differences in the interpretation of requirements or just a pure mistake around the interpretation"[21].

A global study by ARCADIS found five main causes of disputes which differ by region. The study on construction disputes found errors and/or omissions in the contract the leading cause in North America in 2015, while failing to properly administer the contract was the dominant cause both in Asia and in the Middle East[22]. The causes of disputes in the UK maintained the pattern similar to previous years. Failure to properly administer the contract remained the most prevalent cause, as it was the case in most regions of the world. In Continental Europe, conflicting party interests were the most common cause of disputes[22]. On a micro level, there are more than one factors that could cause disputes. It could sound as simple a request from project owner to make a minor alteration to a plan that could give rise to an increase in cost and time and hence cause disputes. According to Richard Foley, an expert on project disputes in Western Europe and Asia, "It's very often a huge number of relatively minor things which have just built up and built up and divided the parties quite significantly".

Concerns with project disputes are also prevalent in various jurisdictions across Canada and elsewhere around the world. Project stakeholders have suffered from litigation which has resulted in building up of time delay and cost overrun of their projects. It is observed that a variety of factors affects the potential for disputes in projects, which are not limited to the types that involve a large number of participants. The factors include contractual inter and intra relationships amongst those participants and the tendency for "blame gaming" when problems surface and, obviously, the stakes remain high on projects which are of infrastructure in nature. Tendencies of aggressive contracting approaches with little or no

reasonableness have the potential to shift risks from one party to another and thus could fuel disputes. Other factors might as well include project sponsors/owners, contractors/subcontractors failing to comprehend and/or conform with its contractual obligations, insufficient financing, inadequate and poor communication, poor management of scores of contractors and vendors, poor change management, litigious "mind-sets", a lack of willingness on the part of some contract managers/administrators being indecisive to tackle problems as they arise and last, but certainly not least, a lack of team spirit amongst project participants[12].

CRITIQUE OF ADR OPTIONS IN CANADA

"Claims should not be regarded as either inevitable or unpalatable, and complying with claims procedures should not be regarded as being an aggressive act."

...The FIDIC Contracts Guide[26]

Industry participants in the Canadian infrastructure sector have realized the need of ADR provisions in contracts and have since attempted to address this with Canadian Construction Documents Committee ("CCDC")[7] upon consultation with representations across the industry. The CCDC provides that differences between the parties relating to

i) "an interpretation, application or administration of the contract or a failure to agree where the contract requires such agreement, which has not been resolved by a finding of the consultant (or, in the subcontract agreement, the contractor) ... or

ii). a matter in which the consultant has no authority to make a finding", are to be resolved through stepped ADR provisions, starting with amicable negotiation followed by mediation and finally, by way of binding arbitration[7]. The burden of invoking these provisions resides in the aggrieved party issuing a notice in writing to the other parties within fifteen (15) working days for the standard contract, and ten(10)working days in the standard subcontract. If the binding arbitration option is not an option to either party, the CCDC standard of engaging available dispute resolution mechanisms enshrined in the contract dissolves, and parties are free to seek resolution in other adjudicated forums, such as litigation or even a form of arbitration outside the bounds of the CCDC 40 Rules[7].

However, the critics and observers are not convinced that ADR provisions act as timely and cost-effective resolution as CCDC suggests. John Davies, a renowned ADR critic, made the following observation;

"Although the wording of the ADR provisions in this context was intended to function as a Scott Avery clause (condition precedent to further action) there remains some doubt as to whether it achieves this status with regard to the negotiation and mediation components"[7].

A careful monitoring during the administration of a construction contract therefore remains necessary not to lose sights and opportunities to bring the disputes to the fore as the CCDC form requires that a party avoid "being deemed to have accepted a consultant's decision with which it disagrees and loses an opportunity to require mediation or to require arbitration if desired"[12]. Furthermore, CCDC provides that the termination of mediation is subject to mediator's decision as opposed to the traditional practice of the parties' control in making the decision to withdraw from the mediation. In this case, mediator seems to play more of an arbitral role rather than assisting the parties. Critics observed, "on one hand, this maybe a powerful incentive to the parties to reach a settlement early in the mediation proceedings, on

the other, this approach is unorthodox and contrary to what one normally expects of a mediator”. [7] The weakness of this non-essential provision has a risk of escalation of dispute towards binding arbitration, the only other recourse of resolution available within the rules of the contract.

In North America and elsewhere, there have been immense criticisms directed at lengthy and costly arbitration cases. Although there are world bodies advocating arbitration, this paper strongly favors emerging dispute resolutions through pre-arbitral processes and against arbitration. Arbitration should be the last recourse, only if all other efforts fail, in disputes of infrastructure projects. This should be the case for disputes in international projects too; if all other resolution mechanisms fail, the disputes should then go through international arbitration as per UNCITRAL Arbitration Rules, rules established by the United Nations Commission on International Trade Law in the late seventies and ratified by a majority of the countries including Canada [12].

EARLY DETECTION AND ANALYSIS -KEY TO DISPUTE RESOLUTION

An infrastructure project is always unique with regards to scale, complexities, risks, and uncertainties and so issues need to be diagnosed and addressed project specific. A disciplined and rigorous analysis of changes that occur in a project environment certainly helps parties understand the implications in terms of scope, cost and time of the project. Understanding the effects in advance, owners and contractors should be able to assess the costs and benefits of an efficient and speedy resolution versus more prolonged arbitration or litigation. This, in turn, will help them assess the likelihoods for success and the potential liability, and estimate duration, costs and other risks of various approaches to resolving disputes.

Owners, contractors, and other parties will do justice to their projects if they look at the issues from business perspectives. A business case analysis of disputes should help them make informed decisions based on the objective and quantitative outcome. They should be aware that if the disputes prolonged for not resolving in advance, they could penalize them in terms of time and money. A good example of that issue was a project to construct 17-story high-rise condominium. The contractor entered into a subcontract with a subcontractor for labor and supplies to “complete portion of the project — completion of the project was delayed — as result of delays, developer, subcontractor and contractor brought actions seeking damages against each other for delay” [2]. The dispute went into litigation and dragged on for two years. Ultimately, the contractor succeeded, with the judge awarding delay damages for the lost duration in the claim and the contractor was entitled to payment from owner/developer for unpaid invoices as determined by the court [2]. This case was a perfect example where the Court preferred contractor's subject matter expert's evidence-based determination on construction schedule which most accurately reflected the general contractor's construction plans at that time. [14] The case showed that issues like schedule could characteristically be contentious in an infrastructure project and best be resolved with objective analysis by an expert determination rather than resorting to litigation route in the court.

Further, business reputation and relationships play a significant part in the party's willingness to resolve disputes speedily and amicably rather than take an aggressive approach. As for instance, parties are often concerned about their reputation in the industry and on their relationship that is at stake with the other party involved in the dispute. “Some companies say we have a reputation we have to uphold and if anyone tries to mess with us,

we're going to litigate every time and we will never give up," says Erik Skramstad, PwC US Forensic Services Leader, "Other clients say, 'No, no, we don't want to litigate. Let's just resolve this in a good manner. We want to have a reputation as being reasonable'"[14].

A business case analysis, if carried out early in the dispute, with the help of industry experts such as third-party advisors or expert witnesses, can result in an early and amicable resolution. Equipped with facts and reasoning, the analysis can be done fairly quickly and thus helps avoid arbitration and/or litigation which are much more time consuming and costly for parties. For example, Wembley National Stadium Limited (WNSL) reached with Contractor Multiplex an out of court settlement to the relief of the parties ending fears of a prolonged and expensive battle at the High Court[23]. The settlement covers all outstanding disputes between the parties, including the impact of design changes made by WNSL and delay caused by Multiplex. WNSL retained PwC in 2006 to do a detailed analysis when the Australian contractor made a claim for additional compensation because it blamed project delays on design changes by the owner. PwC carried out an "as built delay analysis," assessing its client's liability for "more than 80 changes and reviewing the impact of such factors as delays to the structural steelwork"[23]. Based on the findings from the analysis, PwC advised a negotiated settlement to the much relief of the parties. Therefore, lawyers, adjudicators or arbitrators can provide guidance in the business case analysis in terms of contentious issues such as scope, cost and schedule from their experiences of similar past cases[1] in infrastructure or construction projects.

A quantitative risk analysis to assess dispute claims and the potential costs involved in different resolution scenarios hold another important key to motivate the parties to adopt less confrontational dispute resolution techniques. The so-called 'transactional costs' in traditional litigation involve not only direct costs such as payments to lawyers, accountants, claims consultants, and other professionals; the parties also need to incur indirect costs such as salaries and overhead to the in house legal team and other employees who work to gather the facts, serve as witnesses and administer the dispute; there are also hidden costs owing to the inefficiencies, delays, loss of quality that disputes cause to the construction process itself, and the costs of strained business relations between the contracting parties[10]. When a party contemplates negotiating the resolution of a dispute, one of the factors that may affect the decision is these transactional costs to pursue the dispute further. The parties also need to factor in the cost of intangibles such as reputation damage. To assess the probability and the order of magnitude of winning, a business case analysis would take into account the contractual agreement and legal arguments backed up by strong supporting documents for each claim. This analysis will then help simulate the risks in terms of both threats and opportunities and thus help parties make informed and objective decisions. As PwC, a leading consultant of the industry, opined, "there might be a 50% chance of getting 70% of a claim, and a contractor with an appetite for risk might decide to litigate. But it might settle if an offer is on the table for 50% of the claim".

ISSUES AT STAKE AND CURRENT TRENDS IN INTERNATIONAL JURISDICTIONS

Projects in international jurisdictions have additional risks to be considered compared to those of domestic jurisdictions. To international firms, contracts may look similar to their domestic contracts, but should still include some major additional or modified clauses in order to address international issues. So the documentation of arbitration/dispute resolution clause remains critical to the effect of success or failure of the projects in offshore jurisdictions.

Studies found that disputes in international construction typically are caused due to a multitude of reasons such as parties' lack of expertise and experience in conflicts of laws and jurisdictional problems, non-standard project management practices, and hence differences in parties' expectations of cost, duration, scope, and risk.[9]

The FIDIC mandates arbitration of disputes under the International Court of Arbitration (ICA) and pursuant to the institutional rules of the International Chamber of Commerce (ICC). According to ICC, construction disputes in international jurisdictions "represent a significant number of disputes arbitrated in the international commercial arbitration system, accounting for almost 20% of all disputes referred to the said body"[16].

Although arbitration remains to be the ultimate method of dispute resolution under the FIDIC conditions of the contract, however, the FIDIC mandates the Dispute Adjudication Board (DAB) as a primary form of dispute resolution before project disputes can be escalated to arbitration[6]. The international industry and practitioners have long realized that arbitration can no longer be an effective means of resolving international project disputes as time delays and costs associated with arbitration have escalated to an unbearable degree and complexity for being an excessively formal process, overly judicialized, and oddly arduous[6]. The FIDIC has recognized the commercial inefficiency of arbitration and has phased out the use of its arbitrator's list, and currently maintains a list of dispute adjudicators for use in DABs.

The World Bank (WB) has also institutionalized its standard bidding procedure which is modeled after the FIDIC dispute resolution mechanisms. In the dispute resolution framework of both the institutions, arbitration as the primary form of dispute resolution has been replaced by dispute resolution forums such as Dispute Boards (DB) or Dispute Adjudication Boards (DAB). The notable difference is that the DB's decision under the World Bank conditions is nonbinding and serves as a recommendation; whereas, a DAB's decision under the FIDIC conditions is binding[17]. However, it has been observed that both the WB Contract and FIDIC fail to insist on a neutral body to appoint as the DB/DAB. FIDIC provides that the arbitration shall be settled under the rules of the ICC whereas the World Bank prescribes that the arbitral proceedings for contracts with foreign contractors are overseen by the institution appointed in the contract[8]. In the event that such an institution was not stated in the contract, the WB Contract does not specify an alter native board or forum. Furthermore, under the World Bank, "for contracts with domestic contractors, the arbitration shall be conducted with proceedings in accordance with the laws of the employer's country"[8].

'THE CONFEDERATION BRIDGE' PROJECT – A CASE STUDY

The Development Contract for the PEI bridge megaproject, the Northumberland Strait Crossing Project, known as 'The Confederation Bridge' is one of the major Canadian projects where ADR approach to dispute resolution has been adopted. In a special edition of Lexpert published in Nov 2016, George MacDonald, QC, a Partner with Pink Larkin in Halifax, fondly recalled a call that he received decades ago, regarding a contractor in France that had a dispute with a Calgary company called 'SLG Stanley' contracted for building the Confederation Bridge, the 12.9-kilometer link between PEI and mainland New Brunswick[24]. What could have been the beginning of expensive and lengthy litigation, MacDonald had recommended that the parties agree to an arbitration hearing which they followed. "We had a decision one year to the day after the process began," says MacDonald. "If we had gone to court, I doubt we would even have had an exchange of pleadings in a year"[24].

What MacDonald referred to above was a dispute between the main contractor and its subcontractor. But a development agreement was already put in place between the Government and the prime developer of the project. The Development Agreement envisaged use of a single arbitrator for disputes unless the selection of a particular arbitrator was objected to by either of the party provided that such objection was made in writing within five days of receipt of the notice of dispute, or the parties were for reason(s) whatsoever otherwise unable to agree upon a suitable arbitrator[12]. In the event that an objection was made to the use of a single arbitrator, there was a provision in the contract for the dispute to be referred to an appropriate panel of the Dispute Resolution Board. The application of some binding arbitration decisions of Dispute Resolution Boards in this project environment, where a range of local and international parties was involved, was indicative of the interest of participants in the construction industry to finally resolve disputes at the earliest possible stage in order to avoid time-consuming and costly recourse to litigation.

EMERGING ADR TECHNIQUES - A WAY FORWARD

“There is nothing more marvelous than thinking of a new idea. There is nothing more magnificent than seeing a new idea of working. There is nothing more useful than a new idea that serves your purpose.”

Edward de Bono, Serious Creativity[27]

The standard contracts[7] as laid out in Canadian Construction Document Committee (CCDC) offers a potentially less expensive and more pragmatic solution to construction disputes than the more traditional route of pursuing litigation through the courts. However, ADR provisions have not always been able to accomplish these goals in practice. John Davies, an authority in construction ADR, observed the arbitrariness of arbitration that still remains a part of the stepped ADR in Canada, and commented “the process of arbitration is, in many ways, becoming just as expensive and time-consuming as litigation, with the added impediment of an inability to appeal the final and binding award, except under very narrow circumstances”[7].

The current stepped ADR method promulgated by CCDC in Canada, by its very structure, lags behind in advanced thinking and does not have provisions for some of the following dispute resolution techniques that are emerging and could work out effective for infrastructure projects;

PARTNERING

‘Partnering’ in a dispute resolution context, can best be defined as a concept of collaboration amongst industry participants and stakeholders to the importance of teamwork on projects. In realms of ADR, partnering can be defined as the following:

“Partnering is an emerging alternative management process designed to help interdependent organizations identify common goals and objectives and manage conflict in joint undertakings such as large-scale construction projects, and facilities services contracts”[18].

Partnering is to proactively mitigate the concerns in contractual relations. Partnering responds to the adversarial contract by providing a framework for team building, facilitating good communications, and forging a commitment to common goals, mutual respect, and

trust[3]. Partnering has proliferated in the United States since the 1990s with the Army Corps of Engineers becoming a leading proponent in this process[3].

In Canada, the level of interest in partnering has been markedly lower than in the United States. The Department of National Defense Canada, the Crown corporation involved in delivering the department's infrastructure program, have started partnering on a number of occasions with a structured approach developing training materials and providing logistics. However, the Canadian Construction Association, which describes itself as the "National Voice of the Construction Industry", does not appear to put partnering on its list of priorities, possibly because of a lack of interest. At the Construct Canada 2016 convention (Nov 30 to Dec 1, 2016), billed as Canada's largest gathering of industry professionals, the conference agenda, which was very detailed and comprehensive, covered only 'Powerful Persuasion and Successful Negotiation Tactics' in one of the seminars but did not deal with partnering in particular as an emerging technique of ADR[25].

It has been noted that partnering has been addressed as part of the specifications on the 'Boston Central Artery Project'. The statement from the specification introducing the partnering provisions provided, "The Department and the Management Consultant intend to encourage the foundation of a cohesive partnership with the Contractor and its Subcontractors. The partnership will be structured to draw on the strengths of each organization to identify and achieve reciprocal goals". Obviously, this project in the USA, from its outset, reflected advanced thinking and implementation of ADR procedures. As Anthony E. Batelle, the chief legal counsel to the Project during the time explained the partnering provisions that were instituted in the project,

"There are three tiers of filters prior to the DRB. These tiers include an initial "partnering" process that requires the parties, at closely spaced intervals, to refer a dispute to higher managers within the business entities where subordinates have been unable to resolve it. This process is aimed at preventing the problem from festering until attitudes become too hardened to achieve a resolution"[4].

THIRD-PARTY NEUTRAL EVALUATION

Another approach that has been implemented consistent with involving Dispute Boards throughout the planning and execution of a project involves the appointment of a project neutral[12]. The project neutral, ideally an independent professional experienced in the industry, is engaged to stay abreast of developments on the project with a view to offering advice and decisions on an unbiased basis. The trend in favor of a third party project neutral constitutes a rejection of the historic role of the design professional as the key party to whom disputes should be initially referred for a non-binding decision.[5] Sometimes, a rational assessment from a third party on a particular issue helps resolve the settlement of a dispute during the execution of a project. PwC cited a case where the tight specification of a material caused problems with the construction tolerances and a need for reworking and thus caused a dispute between the owner and contractor which was eventually resolved through a neutral evaluation by a third party.

Quantifying the impact has taken away the subjective notion of looking at the issue to affect the neutrality of the advisor in this case. In the Boston Central Artery project, there was a requirement in the scheme that panelists in DRB had no present or recent affiliation with a party and thus maintained the neutrality[4].

EXPERT DETERMINATION

Expert determination of disputes and recommendations thereafter could be one of the robust mechanisms for dispute resolution in the often charged environment of infrastructure projects. The parties can engage an independent third party who is an expert in the subject matter with a mandate “given to investigate all aspects of an individual dispute, and is able to assemble information gained from being permitted free access to project documents and participants, with or without the other party to the dispute being present”[7]. In this case, a person who offers expert determination services is performing a professional service and is subject to the regulations of his or her professional body and thus bound to bear the consequences of any negligent error, inconsistency or omission that may arise as a consequence of the performance of such services. In this case, the terms of reference may include the procedure to be followed, expert’s jurisdictions on the matters of dispute and whether the determination should be considered final and binding. Experts’ determination is highly sought after where the parties themselves lack the technical and professional expertise on issues such as determining causes of schedule delays and cost overruns etc. causing the disputes.

HOT TUBBING

This is a concept introduced in the Civil Judicial System in Australia in 1998 in response to issues with unitary expert witnesses (complexity, bias, and reliability) in common law jurisdictions[15]. Referred to as “concurrent evidence,” the hot tub approach allows both sides to “engage one another at a peer-to-peer level and to collectively negotiate a solution independent of, and beyond the influence of, the aggrieved parties. The parties to the dispute agree to be bound by the joint resolution offered by the experts”[7]. There are immense benefits of hot tubbing for resolution of disputes in a large infrastructure project environment where technical issues are of the complex in nature and expert determination would certainly help understand the issues. With this approach, “collective expert minds are brought to bear in dealing with complex matters free of commercial interests, findings are usually consensual and in many cases unanimous; and the process is quick, final and binding”.

TAILOR-MADE DISPUTE RESOLUTION PANEL

This is a body of professionals with a mix of pertinent expertise to bear in the evaluation of job controversies. As discussed in this paper earlier, the FIDIC and CCDC approach to dispute resolution in a different manner. While the Canadian standards include content addressing the role of the consultant/project engineer as an impartial administrator and arbiter in the first instance, FIDIC’s standard form contracts explicitly denies the neutral character of the role of the engineer who is engaged by the owner[7]. As has been discussed earlier, FIDIC makes use of an independent dispute resolution process employing a Dispute Adjudication Board (DAB). FIDIC and other Dispute Board professional organizations maintain and offer lists of independent prequalified professional members to employers to make use in DABs when procuring work from contractors.

‘Real-time’ dispute resolution is gaining momentum in the functioning of dispute resolution forums or panels of any type in the dynamic project environment. It means that a claim enters the dispute resolution process when it arises, i.e., during the progress of construction or design of the contract, not months or years later. Real-time dispute resolution raises new issues in designing a tailored dispute resolution process because the process is

agile and very much integrated with day to day change management of the project in terms of scope, time, cost, quality, and other tasks and deliverables. Battelle credited the real-time resolution with the following observation, "With real-time resolution (where the problem cannot be postponed to a distant courtroom setting), the facts are much fresher, the necessary people are still around, and the likelihood of reaching a settlement is much greater". The operating rules of a DRB are equally important as the make-up of the board. These rules should be customized to a level of informality where the parties are able to resolve disputes in an expedited manner avoiding the sluggish pace of arbitration or litigation. At the Boston Central Artery Project, it has been found that maximum attention was given to the DRB operating rules acceptable to the parties eliminating all relics of the legal hearing process and greatly increased responsibility upon the panelists to elicit facts. DRB is normally required to produce a recommendation to the parties detailing the reasons and decisions.

CONCLUSION

Any Infrastructure project can turn into a hotbed of disputes due to its scale and complexity and so a project of this type needs a tailored approach to meet the needs of that particular contract. As the key aspects such as engineering and construction technology of a project evolve, the processes for dispute resolution also need to be evolved to meet the dynamic nature of the industry and its disputes. Traditional dispute resolution mechanisms such as court based arbitration and litigation is markedly expensive and time-consuming for the categories and nature of disputes in infrastructure projects and thus is not at all suitable for project-based disputes. Emerging Alternative Dispute Resolution (ADR) processes and instruments are yet to gain widespread acceptance with the industry participants. The worldwide industry dealing with the execution of large infrastructure projects is in need of efficient, innovative and tailored ADR in all of its ever-growing varieties and also in need of promoting innovative ADR approaches such as competent peer involvement as in hot tubbing and partnering. The industry participants in project environment also need to accept and adapt carefully structured processes such as operating rules of a variety of DBs or DRBs. The industry also needs to learn efficient case administration such as modeling project risks in advance and keeping proper documentation which will ultimately help resolve disputes in projects through an objective business case approach. Innovative ADR also requires highly expert independent third parties to serve as dispute resolution professionals such as arbitrators, project neutrals, adjudicators and mediators in determining the causes of disputes and providing specialized expertise in the resolution of the same.

In Canada, the joint representative bodies such as CCDC and umbrella organization like Construct Canada are yet to institutionalize and adopt the emerging ADR approaches and thus still lag behind the USA and other international jurisdictions. In the case of infrastructure projects regardless of jurisdictions, the parties can and should take advantage of the emerging and innovative ADR approaches, make tailored dispute resolution strategy part of the planning process and establish proper control and oversight to manage issues as they arise. That will certainly reduce the risks of disputes ballooning into major conflicts, and thus help them prevail should they end up in arbitration or litigation.

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