

ICC COMMISSION REPORT

Construction Industry Arbitrations
Recommended Tools and Techniques
for Effective Management

2019 Update

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Construction Industry Arbitrations: Recommended Tools and Techniques for Effective Management

Report of the ICC Commission on Arbitration and ADR

PREFACE TO THE 2019 UPDATE

The first edition of the *Final Report on Construction Industry Arbitrations*, published in 2001, provided guidance on a range of tools and techniques for use in successfully managing construction arbitrations. Since its publication, the report has been positively received by the construction arbitration community and the tools and techniques set out in the report have been deployed successfully in institutional and *ad hoc* construction arbitrations all over the world. They have also been beneficial in other types of complex arbitrations.

In 2016, the ICC Commission's Steering Committee gave a narrow mandate for the update of the report. The purpose of the update was twofold: 1) to reflect the various modifications made by the ICC Rules of Arbitration (hereinafter the "ICC Rules") as revised in 2017 and 2) to reflect recent developments in the practice of arbitration in construction disputes. This update is meant to cover specifically construction arbitrations and is therefore meant to complement, rather than reiterate for construction arbitrations, the contents of the report of the ICC Commission on Arbitration and ADR Task Force on Controlling Time and Costs in Arbitration.¹

PRELIMINARY REMARKS

This Report is intended primarily for arbitrators who do not have much experience in construction arbitrations conducted under the ICC Rules or who wish to be reminded of the options available or of the practice of others. Since some appointed arbitrators do not have much, or even any, knowledge of construction arbitrations, it is important that this report should be seen by them to be reasonably authoritative. For that reason alone, the guidance given in this report is not always hedged with a lot of qualifications. Some of the proposals also concern the parties.

However, it should not be thought that there is any single 'right' way in which a construction arbitration should be conducted. The report sets out certain commendable courses and the factors that arbitrators and parties may bear in mind when considering them. It is therefore unnecessary to repeat throughout the report that any recommendation is general or usual. Every case is different (although many construction arbitrations have familiar patterns) and everyone should carefully consider whether a standard or common technique is appropriate.

The proposals set out in this report are thus not intended to be used to override the wishes of the parties. Party autonomy is the kernel of international commercial arbitration. Nothing in this report is intended to suggest that arbitrators should decline to follow the joint wishes or agreements of the parties (even if they could do so), especially if both are represented by lawyers familiar with ICC Arbitration. Nevertheless, from time to time parties may not have appreciated all the courses open to them or the position of the tribunal. Arbitrators are not only entitled but bound to inform the parties if they consider that a proposed course is not the best and to propose an alternative or alternatives. Depending on the nature of the case and bearing in mind the sensitivity of the subject; arbitrators should take account of the financial position of each party and the resources likely to be available to them.

The recommendations set out in this report try to accommodate the approaches of different national jurisdictions. Although many of those who have been consulted for this report come from common law backgrounds, to the Report aims to adopt a balanced course, since many construction cases are governed by civil law and/or managed by persons from civil law backgrounds. The Report does not therefore attempt to provide fixed solutions of universal application. That so many of the responses received had much in common suggests that harmonisation is achievable provided that attention is directed to substance and not to the form of procedures and techniques. Most of

¹ The ICC Report Controlling Time and Costs in Arbitration is available at <https://iccwbo.org/publication/icc-arbitration-commission-report-on-techniques-for-controlling-time-and-costs-in-arbitration/>.

our suggestions should therefore be easily understood and implemented either by direct action on the part of the tribunal or by the parties acting upon the tribunal's direction.

Above all, procedures in construction arbitrations must be expeditious and cost-effective. For example, some (especially common law lawyers) contend that traditional common law procedures, if correctly employed, usually result in a high degree of precision in fact finding and, arguably, may enable a tribunal to reach decisions in which it has greater confidence. However, such procedures are costly and time-consuming. Others argue, with justification, that other systems and the practice of civil law proceedings in litigation and arbitration can lead to comparable degrees of precision in fact finding and confidence in the result, and that they can do so at lower cost and in a shorter time. It is firmly believed that arbitrators in ICC arbitrations should themselves decide on the procedures appropriate to the dispute in question which will enable them to discharge their duties without unnecessary delay or expense.

SUMMARY OF MAIN RECOMMENDATIONS AND SUGGESTIONS

(Cross references are made to the principal paragraphs of the Report)

Composition of the tribunal

Parties should consider the following key qualities when selecting the arbitrators (**para. 2.1**):

- familiarity with the industry, construction contracts (and their interpretation) and cultural nuances;
- familiarity with relevant law and/or main legal traditions;
- strong case management skills, proven experience in seeing how an international arbitration about a construction dispute is carried through from start and enough familiarity with computers to be able to handle case files that are stored and accessed electronically;
- availability; and
- “balanced” tribunal, including diversity

The arbitration clause should provide for flexibility in the number of arbitrators (“one or more arbitrators”), and parties should consider nominating a sole arbitrator where the amount in dispute is not high. In deciding whether to have one or three arbitrators, in addition to the amount in dispute, the parties should, among other things, consider the complexity of the matter, from a procedural and substantive standpoint, as well as cultural factors (**para. 2.2**).

Steps prior to the Terms of Reference

The tribunal might consider requesting amplification of submissions where, for example, a party has not anticipated a point raised by the other party or which the tribunal sees as likely to arise, but the tribunal should avoid making such a request if compliance might delay the production of the Terms of Reference. Examples of such points are (**para. 3.3**):

- the jurisdiction of the tribunal, e.g. the identification of a contracting party;
- whether or not any required notice has been given or other submission made;
- whether or not a claim or defence is barred in law (by prescription or limitation);
- whether or not a claim has been referred to, considered or decided by an engineer, Dispute Adjudication Board (DAB) or Dispute Review Board (DRB), or whether notice of dissatisfaction has been given (for instance under the relevant FIDIC conditions); and
- the amount of the claim, where unclear.

However, a tribunal should be wary of asking a party to clarify the legal basis of a claim or defence, as this may be a matter for the tribunal to determine or for the other party to refute (**para. 3.4**).

Terms of Reference

As envisaged by Article 23 of the ICC Rules, the tribunal should produce a first draft of the Terms of Reference (“ToR”), as this helps the tribunal to get to grips with the case, but it may invite each party to draft a summary of its claims and/or the relief for inclusion in the ToR (**paras. 4.1 to 4.3**).

The summary of each party's claims should be set out accurately but need not be too precise given Article 23(4) of the ICC Rules. Consideration can be given to allowing each party to include in the ToR the claims it may wish to submit in the future into the same arbitration (e.g. claims which are pending before a DAB or DRB, along with a time limit for the submission of such additional claims (**para. 5.1**).

It may be helpful for the tribunal at the outset of an arbitration to invite each party to submit a provisional list of issues, so that the tribunal may consider whether it is appropriate to include such a list in the ToR for the purpose of Article 23(1)(d). The list might then be refined at the case management conference under Article 24 of the ICC Rules, once the ToR has been signed, and at any further meeting(s) thereafter (**para. 6.1**).

Procedural rules are better included in a separate procedural order rather than in the ToR (**paras. 4.3 and 7.1**).

Case management conference

The first procedural order and the procedural timetable should be the natural result of the first case management conference (“CMC”), it is thus recommended that the tribunal ensures that all subjects that have to be accounted for in the procedural timetable are on the agenda for the CMC and that the tribunal does not give directions unless it is satisfied that they are practicable in terms of time, among other things (paras. 8.1 to 9.2). The following topics, among others, might be included in the CMC agenda:

- desirability (or not) for each party to present submissions accompanied by the evidence it considers necessary to establish its case (in light of what is then known about the opposing case), both documentary and in the form of verified and signed statements from witnesses (para. 10.5);
- need for expert evidence (paras. 18.1 and 18.2);
- need, if any, to split the case and the possibility of resolving certain issues by way of partial awards or procedural decisions (para. 15.4);
- need, if any, for tests and a site visit (paras. 8.2 and 12.1);
- document management (paras. 16.1 and 16.2);
- translation and interpretation issues (para. 22.1); and
- settlement discussions and sealed offer procedures, if applicable (paras. 8.2 and 21.1).

Ideally, the CMC should follow immediately after the meeting at which the Terms of Reference are finalised and signed (or at least initialled) (para. 8.1).

Consider setting dates for subsequent CMCs, possibly by conference call, as they may be useful in regard to, among others (para. 8.3):

- narrowing issues;
- defining need for further evidence;
- isolating preliminary issues; and
- dealing with pre-hearing issues.

Timetable, practicability of steps and hearing date

In establishing a timetable, the need for expedition must be balanced with the need to allow each party sufficient time to set out properly its case, taking into consideration issues such as (para. 9.1):

- whether the Expedited Procedure Rules (Appendix VI) may apply;
- whether preliminary determinations/partial awards will be needed on issues of jurisdiction or admissibility;
- whether one or more rounds of written submissions are needed;
- whether a separate stage for production of documents is needed;
- whether multi-party or multi-contract proceedings would impact the timetable; and
- whether one or more hearings may be required.

It may not be possible to draw up the procedural timetable until the steps in the future procedure and the time for each have been determined. In that case, it may be desirable merely to outline a timetable, leaving future steps to be dependent on progress. More recently, in larger cases, tribunals have limited the first procedural order to include up to the end of the presentation of the evidence and reserved all other matters to a later date (albeit with windows for the main evidentiary hearing blocked out and a set date for planning the remainder of the arbitration) (para. 9.2).

Although in most typical construction arbitrations it may be difficult or impossible to devise a timetable that comes close to respecting the six-month time limit in Article 31(1) of the ICC Rules, ICC arbitrations are required to proceed expeditiously and that period should not be entirely disregarded. At the same time, in settling a date (and also the procedure), the tribunal should take into account the financial position of each party (or those financially supporting it), insofar as this is known or can be inferred, and the resources likely to be available to it (para. 9.3).

When scheduling dates, whether for the merits hearing or any other part of the procedural timetable, the tribunal should ensure that there is leeway in case of slippage and should bear in mind that a timetable agreed by the parties is always to be preferred to one imposed on them (para. 9.4).

Time must also be allowed for the parties to hold discussions, should they wish to do so (e.g. after the submission of evidence), and for the tribunal to be able to read all relevant material before any merits hearing (or any subsequent procedural meeting) (paras. 9.4 and 9.5).

The merits hearing date(s) should be included in the procedural timetable. If the date(s) cannot be agreed and have to be decided by the tribunal, then they should be the earliest date(s) practicable for the parties. It is also recommended that tribunal members block out a day or so immediately following a hearing to take advantage of their being together so as to allow for preliminary deliberations before they go their separate ways (para. 9.6).

Splitting the case

Considerations to be kept in mind in deciding whether to split a case (i.e. bifurcate the proceeding) include: 1) the likelihood that the separated issue(s)/claim(s)/defence(s) can be determined without considering or affecting the overall merits of the whole case; 2) the specific reasons for splitting the case and the parties’ expectations as to the effect of doing so; 3) whether the split would delay or expedite the arbitral proceedings; 4) whether the split will increase or decrease the costs of the arbitral proceedings; 5) whether any proposal to split the case is a mere tactical device to delay the proceeding or not; 6) the *prima facie* likelihood of success of the party seeking the split, if the parties are in disagreement as to splitting the case; and 7) whether isolating decisions specific to issue(s)/claim(s)/defence(s) necessitate expeditious determinations for factual or legal

purposes (e.g., if there are parallel proceedings and the arbitral tribunal is required to determine its jurisdiction over certain issues/claims/defences to avert overlap or conflicting awards) **(para. 15.2)**.

Decisions about splitting a case into parts should be left until it is clear that it will be sensible and cost-effective to do so. In practice, it often makes sense to see the parties' statements of case before addressing any such decision **(para. 15.3)**.

Dividing a case into issues of liability followed by issues relating to quantum should only be done after a discussion on causation, since in many instances causation could fall into either part. Expert evidence ostensibly on quantum, for example in relation to the rectification of alleged defects, may in fact be relevant to liability. Thus, before a decision is made about splitting a case, the parties' cases on both causation and quantification should be known, so that it is clear how the costs and losses are purported to have arisen. Equally, a tribunal must be satisfied that, if a decision were taken to examine the apparent basis of a claim in fact or law and if that basis were rejected, the claimant would not be able to present an alternative fall-back case **(para. 15.3)**.

Procedures

The tribunal must ascertain whether there are any mandatory requirements of the *lex fori* as regards the procedure of the arbitration. In addition, the tribunal should enquire about the parties' expectations as regards the procedure **(paras. 10.1 and 10.2)**.

The tribunal should maintain a dialogue regarding the procedure with the parties throughout the arbitration and should seek to accommodate, whenever possible, the procedural preferences of the parties **(para. 10.4)**.

At least where there has been a previous pre-arbitral dispute resolution process, there is no reason why parties should not be required to present submissions accompanied by the evidence that each considers necessary to establish its case (in the light of what is then known about the opposing case), both documentary and in the form of verified and signed witness statements. Unless the arbitration is 'fast-track', these submissions should not be submitted simultaneously but consecutively, with the claimant presenting its case first so that the respondent can reply to it and submit its case as to its counterclaims, if any. The tribunal may then permit parties to submit further submissions or evidence either of their own volition or in response to the tribunal's requests or directions. Submissions should be numbered and arranged so as to match those of the other party **(para. 10.5)**.

Further working documents and schedules

After the signing of the Terms of Reference (though it can also be of assistance before then), parties should normally be expected to accompany their pleadings or memorials with (as may be appropriate) **(para. 11.1)**:

- a list of key persons involved in the project;
- a chronology of relevant events, and
- a glossary of terms.

The tribunal might ask the parties to form an agreed composite of the documents listed above and to notify the tribunal of any differences or disagreements. The tribunal may thereafter maintain these composite documents, amending them as the case develops, circulating revisions, and asking the parties to complete any gaps in them **(para. 11.2)**.

Some construction arbitrators favour the creation of a working document briefly recording the essential elements of each party's case, established from exchanges between them. These "schedules" may be best used for typical claims for changes, for disputes about the value of work and for claims for work done improperly or not at all. They may have the advantage of being able to be created by computer and conveyed on disk or by e-mail, which makes for ease of handling. If fully and properly completed, schedules identify points that are not in dispute or are irrelevant and thus expose those that have to be decided. Schedules may also be used to extract the parties' cases on claims for delay (prolongation) and disruption, but they require special care to be effective. Schedules may be of particular value where claims are of a "global" nature **(paras. 11.3 to 11.6)**.

In general, if a schedule is to be used, it is recommended that it be prepared (by the parties or the tribunal, or both) after the first exchange of evidence or before the merits hearing takes place, so as to find out what needs investigating and deciding. If the tribunal requires or sanctions the preparation of any such schedule, the tribunal should define its status in advance: e.g. is it just an aide-memoire or does it replace or supplement any existing pleading or and, if so, what effect does it have on the issues to be determined and the amount of any claim (for example, for the purposes of calculating an advance on costs) **(para. 11.11)?**

Tests and site visits

Where a claim is about the unsuitability or malfunction of a plant, equipment or work, the tribunal may need to ascertain what tests have already been carried out and whether the results are agreed or sufficient for the purposes of the arbitration **(para. 12.1)**.

The tribunal may authorise any required tests that have not already been carried out. The tribunal should seek to persuade a party of the value of any required test. Any test made without the consent of the party whose property is affected should be non-destructive. Once an arbitration has started, tests performed by

an independent expert appointed by a party should be carried out jointly with any other expert and under the tribunal's direction. Similar constraints apply to site inspections (**para. 12.1**).

It may be helpful to combine joint tests with a visit to the plant by the tribunal, provided there have been no material alterations since completion and that the operating conditions are representative of those contemplated when the contract was made (**para. 12.2**).

While often useful, site visits must be justified by their benefits and cost-savings (**para. 12.2**).

Programmes and critical path networks

The United Kingdom Society of Construction Law's *Delay and Disruption Protocol* (2017), the American Society of Civil Engineers' *Standard ASCE 67-17 Schedule Delay Analysis* (2017) and the Association for the Advancement of Cost Engineering (AACE) *International Recommended Practice No. 29R-03 Forensic Schedule Analysis* (2011) are helpful guides and sources of information (**para. 13.1**).

Where each of the parties has appointed an expert on a particular subject, it is often desirable for them to meet at an early stage to identify to each other the facts and documents which each believes to be relevant so as to establish an agreed baseline and methodology (**para. 13.2**).

Proper project time programming and planning is necessary for good project management and the critical path networks ("CPN") are today commonly used on projects. Where the CPN have been used, it would be reasonable to expect the parties to make use of the CPN in the presentation of their cases. On the other hand, where the CPN have not been used, it can be difficult, risky and expensive to construct a CPN programme retrospectively. The underlying data and logic must comply with the contract and applicable law as regards the legal effect of delaying events and must also be fully disclosed and open to argument and possible challenge (**para. 13.3**).

Computation and quantification of claims

If no evidence has been provided in the statement of case (or prior to the proceedings) to justify the amount of a claim, a claimant ought to be required to produce the primary documents in support of the amounts claimed, cross-referenced to its statement of case, and in a form that will readily enable the respondent to know where the amounts come from and why they were allegedly incurred. The respondent will then have no excuse for not stating the reasons why, in its view, liability does not exist or, if it does, why the amounts claimed are nevertheless not due (because they were not caused by the events, were not incurred or not reasonably incurred). In each case reasons should be given (**para. 14.1**).

Documents and document control

Documents produced by a party should be directly relevant to the issues as defined by the tribunal and should be confined to those documents which a party considers necessary to prove its case or dispose of that of the other party, or which help to make the principal documents comprehensible (**paras. 16.4 and 16.6**).

A party should, when producing a document (or at least in any pre-hearing submissions), be instructed to state what it is intended to prove, given that the parties are required to produce all the documents needed to prove their respective cases in relation to the points at issue (**para. 16.6**).

The tribunal may call for further documents at any time in order to enable it to fulfil its duty to ascertain the facts. The procedural rules ought also to allow a party to request additional documents from the other party and, if these are not provided, to seek an order from the tribunal, which will consider the legitimacy or reasonableness of the request and any refusal (**para. 16.7**).

The tribunal should set a cut-off date after which no further documents may be produced by any party, unless required by the tribunal, or permitted by it in exceptional circumstances following a reasoned justification for late submission (**para. 16.8**).

Witnesses

Subject to legal requirements and the wishes of the parties, evidence that is not contained in a document and which is necessary in order to prove or disprove a point at issue must be presented by means of a written statement from a witness, in that witness's own words, as far as reasonably practicable, verified and signed by that witness. A certified translation must be provided if the evidence is not in the language of the arbitration (**paras. 17.1 and 22.1**).

Reply or additional witness statements may be exchanged after the initial statements, so that all the evidence is in writing. All witness statements should be provided in good time before the preparation of any pre-hearing submissions (**para. 17.1**).

Complex cases may involve situations where many fact witnesses have information on the same subject. In such cases, fact witness panels may permit particularly effective use of hearing time. Use of fact witness panels may provide special focus on the examination of key facts and documents, thus reducing repetitive evidence and can serve to bring out the key facts better than by a single-witness-at-a-time approach. It also may permit concentrated attention on the issues by individual theme or topic (**para. 17.2**).

Experts

It is prudent for the tribunal to clarify at the outset of a case whether or not expertise (technical, legal or other) is required, why it is required, by whom it will be provided and when (**para. 18.1**).

If the parties wish to present evidence from experts, then the matter should be discussed and the tribunal should check the scope of the evidence so as to ensure that it is confined to the issues and does not deal with matters capable readily of being proved in other ways. The tribunal ought to require the parties to agree on a statement of the issues and facts (both agreed and assumed, e.g. as set out in the witness statements) upon which expert evidence is required. If the tribunal does not take this course, it should be provided with the Terms of Reference or instructions which the parties have given to their experts (subject to privilege), so as to ascertain they have been given proper directions and explanations and can give useful opinions **(para. 18.2)**.

Where one or more members of the tribunal have been nominated or appointed for their expertise, there may be less need for the tribunal to duplicate that expertise by appointing its own expert, unless the assessment of part of the case might take a considerable time. In any event, such a decision must be discussed with the parties beforehand **(para. 18.7)**.

In some cases, it will be cost-effective for the tribunal to appoint its own expert, for the opinion of that expert might render unnecessary any further expertise or may identify the points upon which evidence or reports from witnesses or other experts may be required **(para. 18.5)**.

As it is now common for parties to use experts as consultants (quantity surveyors, claims consultants, etc.) in the preparation of their claims, the tribunal will need to differentiate between the testimony from truly independent experts and that from such consultants **(para. 18.3)**.

Experts should discuss their views with each other either ideally before or otherwise after preparing their reports, as most independent experts eventually see eye-to-eye on many things. This could be done at a meeting possibly chaired by the tribunal or a designated member, if the parties agree **(para. 18.4)**.

It must be made clear whether or not agreements between experts bind the parties. Expert reports should be confined to discussing questions or issues on which the parties and their experts do not agree **(para. 18.4)**.

Expert conferencing is also seen to be a useful tool, but careful consideration should be given to the existing evidence if such procedure is entirely to supplant cross-examination in a given case **(para. 18.4)**.

Hearing(s) on the merits

The tribunal should either require the parties to decide how the time available during the hearing should be allocated (in which case the parties will be held to their decision), or the tribunal should itself draw up and abide by a strict timetable, unless to do so would be unjust. Each party must be treated fairly, but this does not mean that the tribunal necessarily has to accord each equal witness time, as it is required to do for statements or submissions **(para. 19.3)**.

Factual witnesses should be heard ordinarily before the experts' reports are considered, since the questioning of a factual witness may require an expert to modify or withdraw an opinion or provisional conclusion. Legal experts may best be heard only after any technical, delay and disruption and quantum experts, that is, at the conclusion of witness testimony **(para. 19.5)**.

Time available at a hearing on the merits need not be used for closing submissions, which are often best presented in writing shortly after the conclusion of the hearing. The time within which written closing submissions are to be delivered should be set by the tribunal well before the merits hearing (e.g. in the procedural timetable) and certainly in good time prior to its conclusion **(para. 19.6)**.

The tribunal should make it clear that no new evidence or opinions will be admitted after the hearing has taken place, unless specifically requested or authorised by it **(para. 19.6)**.

Interim measures

The power to order interim measures under Article 28 of the ICC Rules may be particularly relevant to construction arbitration. For example, a party may wish the tribunal to order compliance with (or relief from) the decision of a Dispute Board (DB) or wish to restrain the disposition of spare parts. In general, the tribunal will need to be satisfied that there is good reason for the measure. Decisions on costs during the proceeding fall, however, under Article 38(3) of the ICC Rules **(para. 20.1)**.

Settlement in arbitration

The tribunal should consider reminding the parties that they are, of course, free to settle all or part of their dispute at any time, either through direct negotiations or through any form of ADR proceedings. The arbitral tribunal should also consider consulting the parties at an early stage (for instance at the first case management conference pursuant to Article 24 of the ICC Rules) and inviting them to agree on a procedure for the possible use of sealed offer(s) in the arbitration **(para. 21.1)**.

Translations

When documentation needs to be submitted as evidence in an arbitration, in a language other than the language of arbitration, as is common in international construction projects, consideration needs to be given by the tribunal to the question of who is to bear the cost of translation. The tribunal is strongly advised to deal with this matter and its implications in the first procedural order **(para. 22.1)**.

Tools and Techniques for Effective Management of Construction Arbitrations

1. Particularities of construction industry disputes

1.1 There is or should be no mystique about arbitrations concerning international construction disputes. They are in many respects no different from other international commercial arbitrations, except that they are frequently more complex (both factually and technically); they can generate difficult points of law and procedure relating to specialised forms of contract unknown to those not involved in construction; and they still seem to require many more documents to be examined than other types of disputes. Often disputes that cannot be resolved by pre-arbitral methods will encompass a multitude of issues of fact and opinion, not to mention questions of law, each of which merits consideration and a decision as if it were a separate arbitration.²

1.2 The complexity of construction projects, as well as other factors, such as shifts in approaches to management and the allocation of risk and responsibility between the parties, as well as economic and political factors (e.g. Private-Public-Partnership (PPP)) have led to customary methods of procurement of construction projects being supplemented. These new forms of procurement include, but are not limited to, Design-Build: Engineer, Procure and Construct (EPC); Design, Build, Operate (DBO); Engineer, Procure, Construct, Manage (EPCM); Integrated Project Delivery (IPD); and Alliance Contracting. Some place greater emphasis on the responsibility of the contractor, who in turn is now less of an executant and more of a manager and facilitator. At the same time contractors (and subcontractors) combine increasingly in joint ventures to offer a range of skills and services and to share risk. Nowadays disputes concerning large sums are no longer confined to those between client(s) and contractor(s) but increasingly occur between contractor(s) and sub-contractor(s). In addition, some disputes will involve governments and governmental agencies, private capital and development banks, and will generate disputes that call for consideration of public, social and environmental issues. Throughout the world, traditional Design-Bid-Build arrangements have not of course died out, nor have habitual disputes, bred of strained relationships and mutual suspicion, and familiar claims, such as those for change orders and for the consequences of the unforeseen and perhaps also the unforeseeable. They continue throughout the world, still generating complicated and intriguing problems.

1.3 Additionally, layers of protection are being introduced for the contracting parties and for those who stand behind them. There may be a project manager, a construction manager, as well as a host of specialist advisers and consultants appointed to look after the interests of sponsors, nominal owners, operators, suppliers or consumers. In recent years, there has been a trend for construction projects (including standard forms of international construction contract) to place a greater emphasis on contract management. In very large projects, the core project team may include 1) contract managers, who perform the overall day-to-day contractual monitoring of the project execution, 2) site contract managers, who focus on dedicated contractual activities at the construction site, 3) sourcing contract managers, who are in charge of the supervision of major purchase orders with subcontractors and suppliers, 4) claims managers, who provide the expertise on building or defending project claims as well as pursuing the recovery of entitlements, and 5) contract administrators, who support data collection and document management activities. Since they are fully integrated within the project teams and follow closely the evolution of all key project milestones, contract and claims managers play a crucial role in the keeping of proper project records. Such persons have an increasingly important role in fact-finding tasks and the production of documentary evidence in construction disputes.

1.4 Advances in design systems, including Building Information Modelling (BIM), in modularization, and in global and lean procurement systems mean that certain disputes are ever more technical and complex, and that construction contracts may not properly deal with the allocation of risk associated with these advances. Thus, an arbitral tribunal may need experience of such systems and, to have, in certain cases, the ability to operate the computerised systems used on the project (such as the programmes used for scheduling or for BIM). Equally, the parties will need in some cases to have obtained any consent required to permit outsiders such as arbitrators to be able to use such applications on their own computers.

1.5 In addition, there is a greater choice of standard forms of contract published by international or national professional organisations available, including: the International Federation of Consulting Engineers (FIDIC), Institution of Civil Engineers (ICE), American Institute of Architects (AIA), Engineering Advancement Association of Japan (ENAA), Joint Contracts Tribunal (JCT), Institution of Chemical Engineers (IChemE) and the International Chamber of Commerce (ICC). Many

² For a work by an English lawyer on international construction arbitration generally, see J. Jenkins, *International Construction Arbitration Law*, 2nd revised edition (Wolters Kluwer, 2014) and for a work by two U.S. lawyers on the same subject, see J.W. Hinchey and T.L. Harris, *International Construction Arbitration Handbook*, Vol. 1 and 2 (Thomson Reuters, 2017).

of these contain developed mechanisms for dispute avoidance and resolution aimed at preventing disputes from occurring and avoiding arbitration. The role of the engineer in the majority of contracts is no longer what it once was, with the engineer's traditional role as the decision-maker in relation to disputes being replaced by that of an independent initial decision-maker or dispute resolver. Most standard forms now provide that, even where an engineer is appointed to oversee the implementation of the design, it will not be appropriate for the engineer to decide disputes that may concern his or her own performance and judgement. Since 1987, the FIDIC conditions have expressly provided that the parties should attempt amicable settlement before commencing arbitration and since 1995 for the appointment of a Dispute Adjudication Board (DAB).³ Others provide for a Dispute Review Board (DRB) or mediation as a condition precedent to arbitration. In addition to DABs and DRBs, the ICC Dispute Board Rules provide for the possibility of a Combined Dispute Board (CDB). In a case where the parties have not agreed to any pre-arbitral procedures that provide for the granting of conservatory or interim measures, an emergency arbitrator may intervene (Article 29 of the ICC Rules).⁴

1.6 The following five main observations may be made about the relationship between dispute resolution structures such as DABs, DRBs, CDBs and mediation on the one hand and arbitration on the other.

- a) A key philosophy that underpins the use of pre-arbitral mechanisms such as Dispute Boards is the enhanced possibility of early issue identification and dispute avoidance. This is a key feature which, being now enshrined in Article 16 of the 2015 ICC Dispute Board Rules for example, empowers Dispute Board (DB) members to intervene at any time, in particular during meetings or sites visits, if they consider that there is a potential disagreement between the parties. Therefore, the DB members may raise this with the parties with a view to encouraging them to avoid a disagreement, and to assist them by suggesting, or nudging them towards, a procedure that the parties could follow, including informal assistance from the DB members.
- b) Another reason parties turn to DABs or DRBs during the performance of a contract is time and expense. Using DBs as a means of avoiding and/or resolving a disagreement or a dispute is less time consuming and less expensive than arbitration. However, if the costs of arbitration are, with reason, considered to be high, it is important to keep in mind that 1) in an arbitration proceeding, unlike a DAB or DRB proceeding, factual and legal matters are dealt with exhaustively, and 2) due to the 1958 New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards, unlike the decisions of a DAB, arbitral awards are internationally enforceable.

³ FIDIC now uses the term DAAB (Dispute Avoidance and Adjudication Board) in an effort to highlight the dispute avoidance function of the DB.

⁴ For parties seeking urgent interim or conservatory measures before an arbitral tribunal can be constituted, the emergency arbitrator offers an important new alternative to state courts.

- c) Significantly, under Article 15 of the 2015 ICC Dispute Board Rules and the FIDIC forms of contract, DB members are empowered to grant provisional relief in the form of interim or conservatory measures. This added power that was typically available in the context of an arbitration enhances the efficiency of DB procedures, particularly in circumstances where measures are required on an urgent basis (which is often the case in construction projects). Parties should keep in mind that such power will prevent access to ICC emergency arbitration, notwithstanding the potential enforcement limitations of interim or conservatory measures issued by a DB as compared to those issued by a national court or an arbitral tribunal.
- d) Furthermore, disputes, such as those arising out of the termination of a contract, that withstand the filter of a DB (or any unsuccessful attempt to achieve a settlement), are often intractable. Not that intractability is the only reason for failing to achieve a settlement through a DB: the Board may have been unable to deal with the dispute as it would have wished and to make a satisfactory recommendation or decision; the parties may have been unwilling or unable to face up to the problem that gave rise to the dispute and unwilling or unable to accept the financial or human consequences of a decision or recommendation from the DB; or, as sometimes happens, a party may simply have been unable to meet its obligations or may have been unreasonable or may have resorted to dilatory tactics.
- e) Finally, by acting as a filter, pre-arbitral steps help to refine disputes, leaving the points at issue clearer than they would otherwise be, or in other respects reduce their magnitude, and thereby make them less costly to resolve.

1.7 With the introduction of pre-arbitral methods of dispute resolution such as DBs, construction arbitrations now tend to deal with disputes that cannot be resolved except by arbitral award, either because they raise issues that go to the heart of the parties' relationships or raise important questions of principle or, in the case of a main or principal contract, are too complex to be resolved satisfactorily by a DB in the short period of time allocated to that process. Almost certainly the amounts at stake will be large.

1.8 DB mechanisms are typically part of a multi-tiered dispute resolution clause where arbitration (or, in some instances, litigation) is generally envisaged as the final step. The enforceability of these pre-arbitral steps will generally depend on whether the parties have agreed for the pre-arbitral mechanism(s) to be mandatory, as is the case in the FIDIC forms of contract, as well as on the law applicable to the contract and at the place of arbitration. An arbitral tribunal faced with a dispute, before the initial steps set out in a mandatory multi-tiered dispute resolution clause have been exhausted, may, at the request of

a party and at the tribunal's discretion, dismiss the arbitration or suspend it until the mandatory pre-arbitral steps have been completed. Many ICC awards published to date serve to underline the importance of understanding and complying strictly with the pre-arbitral procedures set out in any construction contract where such procedures are mandatory pre-arbitral steps.⁵

2. Selection of arbitrators

2.1 Careful consideration needs to be given to the selection of arbitrators, since not only will they decide the merits (without usually the possibility of any appeal on the merits) but they will have broad power to determine the procedure of the arbitration, including the manner in which evidence is to be presented and dealt with. Thus, it is vital that the tribunal knows which are the right procedural tools and how and when to implement them. The tribunal's judgement will be crucial to securing a cost-effective arbitration and to retaining the confidence and co-operation of the parties. Complex cases require sensitive handling and require that the tribunal maintains a dialogue with the parties throughout. Set out below are a number of key qualities (though not the only ones) that parties should consider when selecting arbitrators in the context of a construction arbitration. Parties may consider interviewing prospective arbitrators prior to the appointment, provided these interviews are conducted properly, otherwise the process might not be acceptable. The *International Arbitration Practice Guideline on Interviews for Prospective Arbitrators* published by the Chartered Institute of Arbitrators (CIArb) may serve as a useful guide in this regard.

a) **Familiarity with the industry and cultural nuances.** Whilst there may be advantages in having a member of the tribunal who only has general knowledge of international commercial arbitration, it is suggested that it is now highly desirable that a tribunal comprises members who are familiar with construction contracts (and their interpretation), with relevant regional and national cultural nuances, with how construction disputes evolve and with how they are best resolved. In the construction sector, it is still possible to adhere to one of the features that originally distinguished arbitration from litigation – that is, the referral of disputes to persons from the relevant trade, industry or profession (which has, of course, been necessarily extended for the purposes of international arbitration to lawyers who have acquired the equivalent knowledge). Technical issues need to be properly understood in order to be correctly decided. This does not mean

that an arbitrator has to be a technical specialist. Indeed, the wide range of technical issues that are likely to arise in construction arbitrations would make it difficult, if not impossible, to find suitable polymaths. However, he or she must be a cross-functional “construction professional” and possess the ability to grasp – and, ideally the intellectual curiosity to want to understand – technical issues (if a lawyer) and legal issues (if not), as both are required for successful determination of a construction arbitration. While a tribunal may engage an expert to advise it on how best to assess conflicts between the technical opinions of experts it may receive, the tribunal must ultimately resolve the technical issue itself and cannot delegate the making of the decision to an expert or experts. However, explicit attributes of expertise and specialisation should not be included in an arbitration agreement or clause as it is impossible to foresee in advance what type of dispute may arise and, doing so, may restrict unnecessarily the pool of potential qualified arbitrators.

- b) **Familiarity with relevant law and/or main legal traditions.** Familiarity with both the civil and common law legal systems will be an advantage. On the other hand, a party is not precluded from selecting an otherwise competent individual who does not satisfy this ideal. Similarly, a party wishing to nominate an engineer or architect should not feel disadvantaged because that person is not as knowledgeable about the applicable law as a lawyer might be.
- c) **Strong case management skills.** An arbitrator in a complex arbitration (as most construction arbitrations tend to be) should also be proactive and must be able to manage an arbitration and devise an effective management framework. Also, familiarity with computers is also required, sufficient to manage submissions, documents and other evidence (witness statements and expert reports, etc.), trial bundles and transcripts that are stored and accessed electronically. It is recommended, therefore, that at least two of the members of the tribunal have proven experience in seeing how an international arbitration relating to a construction dispute is carried through from start to finish.⁶
- d) **“Balanced” tribunal.** In a tribunal comprising more than one arbitrator, if the co-arbitrators do not have all the ideal attributes between them, then the president of the tribunal should certainly possess the attributes they do not have. It goes without saying that in the case of a sole arbitrator, he or she should possess all of the required attributes. In a case where there is a three-member tribunal, consideration should be given as to whether one or more of the tribunal members should be an engineer, architect or other design or construction professional.

5 A series of extracts from ICC awards dealing with construction contracts referring to the FIDIC Conditions was published in the *ICC International Court of Arbitration Bulletin*: Vol. 2, No.1 (1991), Vol. 9 Nos. 1 and 2 (1998), Vol. 19 No.2 (2008), Vol. 23 No. 2 (2012), and a series of extracts from ICC awards dealing with DABs in *ICC Dispute Resolution Bulletin* 2015 (issue 1), with accompanying commentaries of Chris Seppälä, all available in the ICC Digital Library (<http://library.iccwbo.org/>). For other ICC awards dealing with the FIDIC Conditions, see *Collection of ICC Arbitral Awards, 1974-85* (Vol. I), 1986-90 (Vol. II), 1991-95 (Vol. III), 1996-2000 (Vol. IV), 2001-2007 (Vol. V) and 2008-2011 (Vol. VI), (ICC, Wolters Kluwer); *The International Construction Law Review*, Vols. 1 to 3 (1983-86) and Vol. 6 (1989), Lloyds of London Press (now Informa UK Ltd); *Yearbook Commercial Arbitration*, published annually (Wolters Kluwer).

6 This would allow the third member of the tribunal to be a person less experienced in international construction arbitration which in time would help to increase the numbers of suitably qualified arbitrators.

- e) **Availability.** An arbitrator's availability is critical in dealing with "heavy" construction cases. Although Article 11(2) of the ICC Rules requires any prospective arbitrator to sign a statement confirming his availability for the case before being appointed, unfortunately this requirement has not fully solved the problem. As such, whether selecting a sole arbitrator or a three-member tribunal, it is highly advisable to make sufficient enquiries to ensure that the individuals selected have sufficient time to devote to the case. For example, the ICC website offers a tool that lists all arbitral appointments since 1 January 2016, thus allowing any party to check the availability of a potential appointee.⁷
- f) **Diversity.** Given the emphasis on diversity being made by the various arbitral institutions around the world, including ICC, diversity should be considered in tribunal selection. Diversity includes consideration of gender, race, and ethnicity. Diversity can help to broaden and enrich the field of selection. There are a number of platforms which may assist parties and counsel to identify lesser-known arbitrators who might be suitable for nomination. For example, the Equal Representation in Arbitration (ERA) Pledge provides assistance with searching for female arbitrator profiles.⁸

2.2 In regard to the number of arbitrators, costs are saved if there is only one arbitrator rather than three. For example, a visit to a site by one arbitrator is easier and cheaper than a visit by a tribunal of three (although, obviously, if the parties agree, a single member of a tribunal of three could carry out an inspection). Use of a sole arbitrator is understood to be common and to work well in England and certain other common law jurisdictions even for large disputes (US\$ 50 million or more), just as a single judge at first instance may decide large disputes in those countries. However, this practice is not generally accepted in civil law countries which are more accustomed in their judicial system to having a panel of judges decide disputes. Parties from civil law countries may find a sole arbitrator to be acceptable only in cases where the amount in dispute does not exceed US\$ 5 to 10 million. Accordingly, unless parties would prefer a solution in accordance with English legal culture, the practice of the ICC Court is generally endorsed, that being that the Court rarely departs from a sole arbitrator when the amount in dispute is below US\$ 5 million, and would rarely appoint a sole arbitrator if the amount in dispute is above US\$ 30 million, meaning that when the value of the dispute is between US\$ 5 and 30 million, the parties should give consideration to whether they appoint one or three arbitrators.⁹ The amount in dispute is, of course, only one criterion especially where the issues at stake may be other than financial. Where the parties are from different cultural or legal backgrounds, the opportunity for each to nominate an arbitrator from its own culture or legal system may enhance the confidence each party has in the arbitral process. In addition to cultural elements, the complexity of the matter, both from a procedural

and substantive standpoint, and other factors may also be relevant when deciding the number of arbitrators. To ensure maximum flexibility, any arbitration clause should provide (like the ICC standard arbitration clause does) for "one or more arbitrators". It is important to note that when an expedited procedure is applicable under Article 30 of the ICC Rules (where, among other things, the amount in dispute does not exceed US\$ 2 million), the ICC Court may appoint a sole arbitrator, irrespective of any contrary term in the arbitration agreement, unless the parties confirm their agreement to three arbitrators.

3. Initial stages

3.1 This section considers the steps that can and should be taken prior to and in preparation for the signing of the Terms of Reference ("ToR"), and the ensuing procedural directions which interact with them. In particular, this section covers the practical steps after the filing of a Request for Arbitration (the "Request") (in accordance with Article 4 of the ICC Rules), the Answer to the Request (the "Answer") including any potential counterclaims and Reply to them (in accordance with Article 5 of the ICC Rules) and the transmission of the file to the tribunal once constituted. It should be noted that it deals only with matters of practical relevance to construction arbitrations and that the ToR are not required under the Expedited Procedure Rules (Article 30 and Appendix VI to the ICC Rules).

3.2 Once the file has been transmitted to the tribunal, it should examine the Request, the Answer (including any counterclaims) and the reply to any counterclaim, if any, to determine whether there are any issues which require further input or clarification from the parties so that the ToR can be properly drawn up.

3.3 Where submissions by the parties lack clarity or where misunderstandings become apparent due to inconsistent translations of legal concepts or otherwise, the tribunal should not hesitate to request information to enable it to create organisational charts, layouts and glossaries or to obtain other clarifications, where needed, for defining a claim or an issue (as opposed to the amplification of a party's case, which should be left until after the ToR have been signed). The tribunal should, of course, be careful not to make such a request if compliance with it would delay the production of the ToR. Amplification may be needed where, for example, a party has not anticipated a point raised by the other party or which the tribunal sees as likely to arise, concerning for example:

- a) the jurisdiction of the tribunal, e.g. the identification of a contracting party, such as a joint venture (for example, does it necessarily comprise one party or more than one?);
- b) whether or not any required notice has been given or other required submission been made;
- c) whether or not a claim or defence is barred in law (by prescription or limitation);

⁷ <https://iccwbo.org/dispute-resolution-services/arbitration/icc-arbitral-tribunals/>

⁸ <http://www.arbitrationpledge.com/arbitration-search>

⁹ Approximately EUR 4.2 to 25 million.

- d) whether or not a claim or dispute has been referred to, considered or decided by an engineer, DAB or DRB, or whether a notice of dissatisfaction has been given (for instance under the relevant FIDIC conditions of contract); and
- e) the amount of the claim, where unclear.

3.4 The tribunal is under no obligation, however, to seek clarifications when drawing up the ToR.¹⁰ Moreover, arbitrators should make note of the competing interests between counsel and arbitrators at the early stage of the arbitration, where counsel wants flexibility. Points of the kind mentioned in paragraph 3.3 above could, in some cases, be left until later, especially if they relate to the legal basis of a claim or defence. A party may consider that it is for the tribunal to raise such a matter or for the other party to submit that no such basis exists.

4. Terms of Reference

4.1 As described in further detail below, the tribunal should, as soon as it has received the file from the Secretariat, draw up the Terms of Reference ("ToR"). When doing so, the tribunal and the parties should ensure that the dispute or disputes are clearly described. The ToR should set out the scope and limits of the duties of the tribunal and, as required by the ICC Rules, include the full names and description of the parties and arbitrators in addition to the place of arbitration. They should also provide a summary of the parties' respective claims and the relief sought in addition to the particulars concerning the applicable procedural rules. The ToR may also contain a list of issues to be determined by the tribunal.¹¹

4.2 As foreseen by Article 23 of the ICC Rules, the tribunal should produce a first draft of the ToR, mainly because this helps the tribunal to get to grips with the case. Under Article 23(2) of the ICC Rules, the tribunal should finalise the ToR within 30 days of the date on which the file has been transmitted to it. As noted in paragraph 3.1 above, ToR are not required under the Expedited Procedure Provisions (Article 30 and Appendix VI to the ICC Rules).

4.3 The arbitral tribunal should consider whether it is appropriate for it to draft the summary of claims and/or the relief sought itself, or whether it would assist if each party were requested to provide a draft summary for inclusion in the ToR. In the latter case, the tribunal should consider directing the parties to limit their summaries to an appropriate fixed number of words or pages. However, tribunals which make the effort to draft the summary of the parties' cases, and identify the main issues in dispute, will find this exercise helpful towards a better understanding of the case as a whole. The tribunal may wish to invite the parties not only to list the issues which they consider to arise but also to put forward any other matters that might be useful to be included in the ToR. On the other hand, the procedural rules are better included in a separate

procedural order as, unlike a procedural order, the ToR cannot be easily changed. The ToR must meet the requirements of Article 23(1) of the ICC Rules.

4.4 The tribunal's attention is particularly drawn to the items in Sections 5 ("Summary of the claims"), 6 ("The issues"), and 7 ("Procedural rules"), which deal with matters that should be included in the ToR in accordance with Article 23(1) of the ICC Rules.

5. Summary of the claims

5.1 Paragraph (c) of Article 23(1) of the ICC Rules calls for a summary of the parties' respective claims and the relief sought. It may be tempting to describe a party's claims in broad terms, but this may place the other party at a disadvantage given that under Article 23(4) of the ICC Rules, no party may make new claims which fall outside the limits of the Terms of Reference unless authorised to do so by the arbitral tribunal. Thus, a balance must be struck and a summary should be devised that sets out the claims accurately without being too precise. For example, it should not be possible for a party to shift from claiming that there had been changes in the work instructed by the engineer and needing to be valued in accordance with the contract to claiming that the changes had been brought about by unforeseeable conditions or ought to be seen as consequences of default or breach of contract by the owner. A summary permitting this without authorisation from the tribunal would be unfair to the respondent party as such new claims would almost certainly require inquiries and evidence of a very different nature. On the other hand, a summary should not necessarily tie a party to a particular legal basis for a claim or defence, as the true basis may not be immediately apparent. One way of achieving a suitable summary would be to define an issue by reference to, amongst other things, the amount claimed (although not so as to make an increase in an amount into a "new claim"). A party ought usually to know, at least approximately, how much it has lost or what it expects by way of compensation, even if the proof is not readily forthcoming. Regrettably, however, it is not uncommon for a party either to profess not to know the amount of its claim except in unrealistically round numbers, or to decide not to reveal the true amount for tactical or commercial reasons. A tribunal should therefore insist on being presented with good reasons why it is not possible to establish the approximate value of a particular claim. That would prevent parties from drastically changing positions when making subsequent submissions, which is inconsistent with effective case management and not within the spirit of the ICC Rules. In addition, in the case of large construction projects which may extend over a considerable period of time and give rise to numerous disputes, a party may not be in a position to refer all its claims to arbitration at one and the same time. In such cases, it should be acceptable to allow the party to include in the Terms of Reference a list of the claims which it would have the right to submit into the arbitration in future, for example those

¹⁰ Article 23(1) of the ICC Rules requires the arbitral to take account of the parties' "most recent submissions".

¹¹ For forms used in international arbitration see S. Jarvin, C. Nguyen, *Compendium of International Commercial Arbitration Forms* (Wolters Kluwer, 2017).

which are proposed to be, or have been, submitted to a DB. This would allow the tribunal and the other party to be aware of, and to prepare for, claims that may still be introduced into the arbitration. A time limit for the submission of additional claims could also be included, as ICC arbitrations may not be completely open-ended.

6. The issues

6.1 Paragraph (d) of Article 23(1) calls for a list of the issues to be determined, unless the tribunal considers it inappropriate. While establishing a list of issues at the outset is desirable, and possible at least in simpler cases, in many major engineering and construction cases, the parties' positions may not be sufficiently developed at the outset of the case to allow a useful list of issues to be prepared. Lists can also lead to later jurisdictional arguments about whether certain issues fall within the limits of the Terms of Reference. Some see benefit in counsel building up a list of issues as a case progresses – albeit, within the context of their own written advocacy (and thus appended to their submissions) – rather than being actively required by direction of the tribunal from the outset of the arbitration. However, the tribunal should manage this process so as to ensure that detailed submissions are made early on and to avoid the situation in which the true issues only emerge at the hearing or immediately before it. In some smaller cases where the parties' representatives do not have the requisite experience, the tribunal can, by requiring a list of issues, contribute to educating the parties as to what is required in an ICC Arbitration. The tribunal may thus invite the parties, insofar as possible at the outset of the arbitration, to submit provisional lists of issues, so that the tribunal may consider whether it is appropriate to include a list of issues, and the content of any such list, for the purpose of Article 23(1)(d). The list would then be refined at the case management conference, required under Article 24 of the ICC Rules to take place once the Terms of Reference have been signed, and at any further meeting(s). Moreover, Appendix IV to the ICC Rules indicates in items (b) and (c) that the following can be useful tools in controlling the time and cost of proceedings: 1) identifying issues that can be resolved by agreement between the parties or their experts, and 2) identifying issues to be decided solely on the basis of documents rather than through oral evidence or legal argument at a hearing.

7. Procedural rules

7.1 Paragraph (g) of Article 23(1) of the ICC Rules provides for the Terms of Reference to contain particulars of the applicable procedural rules. Unless the parties have already agreed on specific rules,¹² or on what they do not want the tribunal to do, it is recommended that, in order to avoid prolonged (and

probably unhelpful) discussions, no attempt should be made to do more than describe the framework in the usual general terms, and to leave them to be worked out at the case management conference that must follow the signing of the Terms of Reference and that all substantive procedural matters, together with the timetable, be set out separately in a procedural order.

8. Case management conference and procedural timetable

8.1 The nature of construction disputes puts a premium on effective procedural management and the importance of the first case management conference (“CMC”) cannot be over-emphasised. This is vital to the creation of a sound working relationship which will, naturally, facilitate the establishment of the first procedural order and the procedural timetable. The ICC Rules give valuable guidance and authority in Article 24. The CMC establishes a formal process to organise the arbitral proceedings in a manner consistent with the duties under Article 22(2) of the ICC Rules and offers possible case management techniques in Appendix IV to the ICC Rules. However, the conduct of the first CMC and the establishment of the procedural timetable, both provided for in Article 24, are to be distinguished from the drawing-up of the Terms of Reference. The Terms of Reference should be finalised and signed (or at least initialled) before the CMC begins.¹³

8.2 In general, matters which require the consent of the parties will be included in the Terms of Reference (such as whether the tribunal may engage an administrative secretary and the application of any so-called “soft law” such as the IBA Rules on the Taking of Evidence in International Arbitration, 2010 (the “IBA Rules”). There are also some subjects that depend on the consent of a party, which will have to be part of the procedural timetable. For example, a visit to the project site or any other place to assist the tribunal (as it can in most cases) is generally only feasible with the permission and co-operation of the owner. In addition, the decision as to what should take place on a site visit is to be made by agreement and not by a decision of the tribunal (see further in paragraph 12.1 below). Regardless of whether there is to be a site visit, the arbitral tribunal will need to discuss what means are available to see or learn what would have been seen or learned on a site visit during the execution of works, e.g. by the use of videos or other presentations made by one or both of the parties. Where such material was produced for a party's own purposes, the parties will have to agree on how it is to be used, e.g. along with the parties' comments on what is or is not to be seen. It is therefore strongly recommended that such steps be taken as early as possible since the tribunal will need to gain a general view of the project as it may affect, for example, the overall timetable, the practicability of certain procedural steps, and decision on the production of documents. Additionally,

¹² Such as the IBA Rules on the Taking of Evidence in International Arbitration 2010 (IBA Rules).

¹³ See Article 24(1) of the ICC Rules.

the arbitral tribunal should consider during the first CMC inviting the parties to agree on a procedure for the possible use of sealed offer(s) (for settlement purposes) in the arbitration.¹⁴ The sealed offer is an especially important tool in a construction arbitration because 1) construction claims are often inflated and 2) as often “costs follow the event”, the successful party may be able to recover all or a large portion of its costs, including but not limited to its legal fees and expenses.¹⁵

8.3 Subsequent CMCs can be convened in order to take stock as the arbitration progresses, e.g. 1) to narrow the issues; 2) to define further evidence (such as expert evidence) or further written submissions; 3) to isolate any preliminary issues which should be heard or decided prior to the main hearing; and 4) to deal with matters that cannot be resolved by correspondence. A pre-hearing CMC may also be useful and can be organised with the parties to focus on outstanding aspects of the hearing. The time and cost spent on such subsequent meetings can be worthwhile, but naturally they should only be held if needed, and are frequently best held by a conference call or video conference. It is also a good practice to fix dates for such CMCs at the first CMC as it is usually easier to do so at the outset than during the proceedings. Such further scheduled CMCs can always be cancelled if not required.

9. Timetable, practicability of steps and hearing date

9.1 Article 24(2) of the ICC Rules provides that during or following the case management conference, the arbitral tribunal shall establish the procedural timetable that it intends to follow for the conduct of the arbitration. It is imperative to balance the need for expedition against the detriment of not providing sufficient time for a party to set out properly its case and establish a sensible way forward. Issues such as whether the Expedited Procedure Rules may apply, whether preliminary determinations/partial awards will be needed on issues of jurisdiction or admissibility, whether one or more rounds of written submissions are needed, whether a separate stage for production of documents is needed, whether multi-party or multi-contract proceedings would impact the timetable, and whether one or more hearings may be required, may affect the timetable and should be taken into consideration.

9.2 In practice, it is not always possible (or desirable) to discuss procedure without knowing how much time will be allocated for each step. Thus, it may not be possible to draw up the procedural timetable until the steps required have been settled. The need to establish and maintain a strict timetable suggests that the tribunal should not give directions unless satisfied that they are practicable in terms of time. In complex cases it may be sensible to hold at least one further case management conference at which the timetable would be reviewed and difficulties discussed. Sometimes it may be desirable merely to outline a timetable, leaving future steps to be dependent on progress, e.g. the report of a tribunal-appointed expert, obtaining documents from a third party, or the result of an award. More recently, in larger cases tribunals may limit the first procedural order to include up to the end of the presentation of evidence (i.e. submissions, document production, fact and expert evidence), and reserve all other (effectively pre-hearing, hearing and post-hearing) matters to a later date (albeit with windows for the main evidentiary hearing blocked out and a set date for planning the remainder of the arbitration).

9.3 Although Article 31(1) of the ICC Rules sets a six-month time limit from the Terms of Reference for the arbitral tribunal to render its final award, as a practical matter, in most construction arbitrations it is difficult or impossible to devise a timetable that comes close to respecting that limit. For a dispute of average or above-average complexity, not to mention those requiring more than one award, the six-month period is clearly insufficient. On the other hand, like other ICC cases, construction cases are required to proceed expeditiously and the ICC Court has indicated its intent to adjust arbitrators' fees to take into account the speed, or lack thereof, by which the arbitrators deal with a case.¹⁶ When deciding dates, the tribunal must take into account the financial position of each party (or those financially supporting it), so far as this can be ascertained, and the resources likely to be available to it. Many construction arbitrations require considerable resources to be harnessed if certain dates are to be respected. The tribunal must be sure that they are not beyond a party's means. Conversely, the timetable cannot be dictated by an impoverished party, nor should the tribunal be dissuaded from a feasible timetable by a plea that a party is having to answer for another, e.g. an employer for a now estranged engineer or a contractor for a sub-contractor.

9.4 When drawing up the timetable the tribunal should bear in mind that there must be latitude or “float” in case there is slippage. A step which has to be completed before a holiday period should be timed to be done well in advance. Extension of the procedural timetable may require a party to commit disproportionate resources to an arbitration which it could otherwise be utilising on other current or prospective new contracts, impairing its profitability

14 See ICC Note to Parties and Arbitral Tribunals on the Conduct of the Arbitration under the ICC Rules of Arbitration (1 January 2019, paras. 227-230) available at <https://iccwbo.org/publication/note-parties-arbitral-tribunals-conduct-arbitration/>. For further information about this procedure, see C. Seppälä, P. Brumpton and M. Coulet-Diaz, “The New Assistance ICC Provides to Protect the Confidentiality of a ‘Sealed Offer’”, ICC Dispute Resolution Bulletin 2017 (issue 1), p. 84. The latter article describes the sealed offer procedure and its use in ICC Arbitration and includes as an Appendix a model form of sealed offer letter.

15 See Article 38(5) of the ICC Rules and ICC Commission Report “Decisions on Costs in international Arbitration”, available at <https://iccwbo.org/publication/decisions-on-costs-in-international-arbitration-icc-arbitration-and-adr-commission-report/>.

16 See ICC Note to Parties and Arbitral Tribunals on the Conduct of the Arbitration under the ICC Rules of Arbitration (1 January 2019, paras. 120-121) available at <https://iccwbo.org/publication/note-parties-arbitral-tribunals-conduct-arbitration/>.

and ongoing business. When fixing dates or any part of the procedural timetable, the tribunal should ensure that the parties have an opportunity to take stock and to negotiate, should they wish to do so, and some latitude must be allowed for human frailty.¹⁷ A timetable agreed by the parties and the tribunal is always to be preferred to one imposed on the parties, not least because a party that has agreed to a timetable will get scant sympathy from the tribunal if it fails to comply with it for a reason which was or ought to have been known to it.

9.5 Further, the timetable might also include time to permit the parties to consider the possibility of settlement. A tribunal should therefore consider asking the parties if, for instance, the timetable should allow for discussions, e.g. after the exchange of evidence. Time must also be set aside for the tribunal to be able to read all the material before any hearing. If the material is voluminous, the tribunal should consider asking the parties: 1) which parts are absolutely necessary to be read before the hearing, 2) which parts should preferably be read and 3) which parts need not be read beforehand. In construction arbitrations, time spent by the tribunal in pre-hearing internal discussions is usually time well spent; hence the timetable must allow for this, as it must also allow for post-hearing discussions. An arbitrator who allows other engagements to shorten or interrupt pre- or post-hearing discussions does not provide a proper service to the parties or to the other members of the tribunal.

9.6 Even in larger construction cases, the procedural timetable should include the dates of hearing(s) on the merits, or at least an indication of when the merits hearing(s) will probably be held. If feasible, this is psychologically satisfying for a party that wants to know when an award might be rendered. If a date or dates cannot be agreed upon and have to be decided by the tribunal, then they should be the earliest date(s) practicable *for the parties* (including their agents such as legal representatives, witnesses or experts). However, the tribunal is not obliged to accept a date claimed by one of the parties to be the earliest practicable if, for example, it is satisfied that, with the deployment of reasonable resources, an earlier date acceptable to the other party and itself is feasible. Likewise, a tribunal should check the validity of an assertion that a proposed date or period is unacceptable to a party. To avoid delays due to unavailability of an expert or a lawyer, bearing in mind that replacing an expert or a lawyer in an international case may be costly and time-consuming, the parties should ascertain before engaging them that their experts and counsel will have the necessary availability. Another useful technique for accelerating the arbitrators' deliberations is for the arbitrators to block out a day or so immediately following a hearing to take advantage of their being together so as to allow them an opportunity to exchange their views and to arrive at initial or possibly definitive conclusions about matters before they leave and go their separate ways.

10. Procedures

10.1 In construction arbitrations, there is still an appreciable divergence between those used to the common law or 'adversarial' approach and those used to other approaches. This is typically illustrated by differing views on the role of the tribunal, although changes in national practices may help to narrow the gap. There may also be significant differences in law and practice within common law and civil law jurisdictions. Thus, it is crucial that at the first case management conference the tribunal ascertain if there are any mandatory requirements of the law applicable to the proceedings (*lex fori*) and what the parties' common expectations are regarding the procedure of the arbitration.

10.2 As an example of the mandatory requirements, are witnesses required to take an oath administered by the tribunal (or solemnly affirm) before giving evidence at a hearing; or can witnesses be present during the proceedings? If witnesses are to be excluded, are expert witnesses (giving opinions only and not evidence of fact) also to be excluded? Are the contents of a document relied on by a party admissible evidence of what it records without the need to be *proved*, e.g. by being made an *exhibit*? If so, how are the contents to be rebutted? These questions arise in construction arbitration where there can be many relevant documents. It is also recommended that the tribunal establish whether, for example, pleadings and submissions have to be delivered sequentially (i.e. the claimant before the respondent) or whether simultaneous delivery is permissible. Similarly, it may be necessary to know if and when a party is entitled to more information about the opposing party's case (e.g. how an amount claimed as damages is said to have been caused and how it has been arrived at), and how that information is to be provided.

10.3 The tribunal's duty to establish the facts (Article 25(1) of the ICC Rules) may need to be clarified. For example, although the practice is now very common, it may be prudent to ensure that the parties be required to provide in advance verified and signed statements from any witness that is relied on, and to find out if at the hearing the tribunal is to initiate the questioning of each witness or whether the parties are to conduct primary questioning. Equally the tribunal should see if it is agreed that a witness or expert may be questioned by the tribunal or by an opposing party (cross-examined) about any issue in the case, even if the witness is not presented to deal with that issue. These examples (and there are many others) illustrate why it is recommended that the tribunal find out if there are differences between the parties about law or practice that may affect the tribunal's duty to devise a procedure and timetable that is acceptable to the parties and permit the issuance of valid orders.

10.4 In international commercial arbitration, people from differing business and legal backgrounds and cultures are brought together to deal with a series of events that will rarely be so similar to the experience of all so that everyone can agree on a common means of dealing with such events. It is more likely that a

¹⁷ See *The Secretariat's Guide to ICC Arbitration* (ICC, 2012) paras. 3-924 to 3-929.

compromise will be needed, and therefore it is more fruitful if this Report offers guidance as to viable options. It has already been made clear that, whatever courses are adopted, they must, as required by Article 22(1) of the ICC Rules, be cost-effective and be seen as such. Furthermore, a procedure may well be efficient in the hands of those used to it, but not so effective when handled by those unfamiliar with it. For this reason, while proactive case management by the tribunal is required, the tribunal must take into account party autonomy and how a party chooses to present its case. The tribunal should maintain a dialogue with the parties throughout, so as to agree whenever possible, on the steps to be taken by the parties or the tribunal. For arbitrations under the Expedited Procedure Rules, pursuant to Article 3(4) of Appendix VI to the ICC Rules, the arbitral tribunal has discretion to adopt such procedural measures as it considers appropriate and, pursuant to Article 5 of that Appendix, in all matters concerning the expedited procedure not expressly provided for in the Appendix, the ICC Court and the tribunal are required to act in the spirit of the Rules and the Appendix.

10.5 Where there has been a previous contractual dispute resolution process, or where the parties are apparently represented by competent lawyers familiar with construction disputes, or where the amounts in dispute are not large, there is no reason why parties should not be required to present submissions accompanied by the evidence each considers necessary to establish its case (in light of what is then known about the opposing case), both documentary and in the form of verified and signed statements from witnesses. Unless the arbitration is to be of the “fast-track” type, it is recommended that these submissions should not be submitted simultaneously but consecutively, with the claimant presenting its case first so that the respondent can reply to it and submit its case including its counterclaims, if any (to which the claimant will have to reply). The timetable will therefore have to be fixed by the tribunal. The tribunal may then permit the parties to make further submissions or submit further evidence either of their own volition or to meet requests or instructions from the tribunal. All evidence must of course be furnished to the tribunal and to the other party at the same time and the parties must be treated equally as regards their submissions. As a general point, submissions should be numbered or arranged to match those of the other party.

10.6 Once these stages are complete, the tribunal may be better able to draw up a list of the issues it identifies (or improve on an existing list) and to guide the parties as to what is then required.

11. Further working documents and schedules

11.1 After the signing of the Terms of Reference, or even before then, the parties' further pleadings or memorials should usually be accompanied by 1) a list of the key persons involved, 2) a chronology of relevant events, and 3) a glossary of terms. Such documents, which may have already been included in the Request and Answer, are extremely useful since most construction arbitrations are about the performance of a relatively long-term contract, involve

numerous persons, companies or other entities as well as a specialised technical or other vocabulary.

11.2 After each party has submitted such documents, the tribunal might ask the parties to “merge” their respective documents (list of persons involved, chronology of events and glossary of terms), so as to form agreed composite documents and to notify the tribunal of any differences or disagreements in this regard between them. The tribunal may thereafter maintain these documents, amending them as the case develops, circulating any revisions, and asking the parties to complete any gaps in them. This way, a database will be built up which, for example, should readily identify the date when a decision or instruction was sought, the date by which it was required, the date on which it was given and, where appropriate, the date on which the contractor received any drawings or further details referred to in this database or details necessary for its implementation.

11.3 Some specialists favour the creation of a working document briefly recording the essential elements of each party's case, established from exchanges between them. This is best exemplified by the “schedule” used in English practice for typical claims for changes, disputes about the value of work and claims for work done improperly or not at all. Such schedules are commonly used in construction arbitrations as a tool to present the key issues in dispute in a more streamlined format, especially in disputes which involve a large number of individual claims (as most construction disputes do). The essential elements of this approach may be seen from a sample extract of the schedules provided in Annex of this Report.

11.4 The preparation of a schedule would need to be undertaken by the parties in cooperation, with each side setting out their respective positions in respect of each item in dispute and the basis of their respective claims, including particulars.

11.5 A schedule can, for instance, be helpful in identifying which parts of individual claims are agreed by the parties and which parts of the claims are disputed. Such schedule can also assist the tribunal to focus on the issues that are crucial to individual claims by providing a convenient means to ensure that all key issues are addressed by the parties.

11.6 Although it must not be used to replace the parties' submissions, a properly prepared schedule is a useful tool in the right hands. It defines the positions of the parties and ultimately will or can be used by the tribunal to record its views and decisions. At the pre-hearing stage its main value is that, if properly compiled, it establishes the position of each party where the existing submissions or pleadings do not readily do so. The success of such a document depends in part on each party grappling and dealing positively with the principal allegations of the other party. For example, a respondent would be required to state specifically:

- which of the claimant's allegations are admitted;
- which of the claimant's allegations are denied (and why); and

- which of the claimant's allegations cannot be admitted or denied (together with a brief explanation of the reasons) and which the claimant is required to prove.

11.7 Each party would also set out the quantum claimed, including particulars.

11.8. In addition, a constructive approach must be adopted. If a respondent denies an allegation, the reasons for doing so must be given, and if it asserts a different version of events from that given by the claimant, then its alternative must be stated. Otherwise the claimant and the tribunal will not know the real nature of the respondent's case.

11.9 Where the claim is for numerous changes or variations and the statement of case and defence do not indicate where all the differences lie, the tribunal should consider ordering the claimant to state how each change came about, the extent of the work involved and any delay or disruption caused, why the respondent is liable, and how the amount claimed for each item (and for the consequent delay, etc.) is arrived at. The respondent will need to reply to each head in its answer, stating whether it is admitted or not and, if not, why, including any different version of events it may have. Such a schedule is of particular value where a "global" claim is involved, i.e. one where the claimant claims a period of time of delay or disruption and a sum said to be attributable to the overall effect of a series of events but maintains that a breakdown is impracticable. It is ultimately a question of substantive law whether and in what circumstances such a global claim is tenable. Even if the principle of such a claim can be upheld, a schedule may be of some help in determining whether, in the circumstances of the case, global delay or disruption did indeed occur and whether the causes for it can clearly be regarded as the contractual or legal responsibility of one of the parties to the dispute. A claimant should not be permitted to evade its responsibility to identify the causes of the delay or disruption and any likely identifiable effect. Global claims are easy to assert but difficult to examine, test and counter. Moreover, where a breakdown is provided, there will be less reason for a respondent to say that it does not understand the basis of the claim. Respondents sometimes profess ignorance despite knowing as much as claimants.

11.10 A schedule can also be very useful for the tribunal and the parties in case of complaints about faulty work, by listing each item complained of and the precise legal basis for the complaint, e.g. non-compliance with a specified provision of the contract or of the relevant governing law, the work required to put right the fault (and whether it has or has not been done), and the cost (or estimated cost). The respondent has then to state its case in answer to every point. If fully and properly completed, these schedules show which points are not in dispute and thus irrelevant and which have to be decided. Schedules may also be used to extract the parties' cases on claims for delay (prolongation) and disruption, but they require special care to be effective.

11.11 In general, it may be useful for one to be prepared (by the parties or the tribunal, or both) after the first exchange of evidence or before the hearing takes place, so as to find out what needs investigating and deciding. It is particularly helpful on matters of valuation and quantification. Much time can be saved if the true gap between the parties can be revealed, without prejudice to the parties' other contentions, e.g. that a respondent is not liable. While these types of schedules can be very useful, it is important to remember that they remain management tools. Unless agreed upon by the parties, they will not supersede or modify the parties' submissions, nor will they relieve the tribunal of its duty to study and analyse all material presented to it, whether or not referred to in the schedules. Therefore, any tribunal requiring or sanctioning the preparation of any such schedule needs to define its status: e.g. is it just an aide-memoire, or does it replace or supplement any existing pleading or submission and, if so, what effect does it have on the issues to be determined and the amount of any claim (for example, for the purposes of calculating an advance on costs)?

12. Tests and site visits

12.1 If a claim concerns the unsuitability or malfunction of a plant, equipment or work, the tribunal will need to ascertain what tests have already been carried out and whether the results have been agreed or are sufficient for the purposes of the arbitration. It may be necessary to order new tests under conditions that are either agreed to be or are likely to be representative of the conditions of use.¹⁸ Sometimes the parties will have recognised the need for such tests and will have already made arrangements. In other cases, the parties will look to the tribunal to sanction such tests (so that, for example, a party's wishes can be endorsed by the tribunal or the basis for apportioning costs be fixed pending some further or final determination of liability for them).¹⁹ In the majority of cases, a tribunal will seek to persuade a party of the value of a test. However, if a test is made without the consent of the party whose property is affected, the test must be non-destructive. The tribunal cannot and should not order any tests of its own volition without consulting the parties. It should be noted that once an arbitration has started any test carried out by an independent expert appointed by a party should be carried out jointly with any other expert and under the direction of the tribunal. Similar constraints apply to site inspections.

12.2 In some instances, it can be very helpful to combine joint tests at a plant with a visit by the tribunal, provided that there have been no material alterations since completion and that the operating conditions are representative of those contemplated when the contract was made. While often useful, site visits can be expensive and difficult to arrange at a time convenient to the parties and their advisers, especially if the tribunal comprises three members. They are nonetheless valuable, as they enable the tribunal to be better informed and to gather evidence, particularly if it observes the tests or receives other

¹⁸ See Article 28(1) of the ICC Rules which may be relevant.

¹⁹ The tribunal should be aware of the time required for such tests before requiring or authorising them.

evidence, e.g. from experts. A tribunal is often helped by being given in advance a non-contentious description of the site, working methods, and any processes involved, which the parties will have agreed as a neutral document. Videos or photographs – even if created for promotional or other historic or extraneous purposes – can also be useful, particularly where they show what can or can no longer be seen. The parties may agree that only one member of the tribunal might visit the site to obtain evidence, but suitable arrangements will need to be made so that the parties are aware of what is reported to the other members of the tribunal. As a general rule, all visits must be justifiable in terms of both their utility and savings in arbitrators' fees and parties' costs. If therefore a site visit is to be efficient, it should take place after the submission of written evidence (but perhaps not necessarily the final experts' reports) and certainly well before the hearing. Where the hearing is to take place in the country of the project it is sometimes possible to schedule the site visit to take place immediately before the hearing. However, whenever the site visit takes place, it must not be used as an opportunity for the parties to indulge in uncontrolled advocacy. Prior to the visit, a detailed protocol should ordinarily be drawn up to cover issues as to 1) who is to attend the visit, 2) who will be the party's representative to draw attention to the features to be observed on the visit, 3) to which extent there may be other communications between the tribunal and those in attendance, e.g. may the tribunal get the parties' experts together to discuss about features which prompt questions in the mind of the tribunal, 4) the overall timing and route, and 5) ensure that the tribunal sees everything that could feasibly be seen in the interest of both parties. All too frequently, site visits tend to be dominated by the owner since the owner controls the site. It is essential that the tribunal should also see whatever the contractor wishes it to see.

13. Programmes and critical path networks

13.1 Construction disputes often include claims for delay and disruption that involve large sums of money and require careful handling. To help the tribunal decide such claims, it is essential that the events which caused such delay and disruption be clearly identified. To this end, at an early stage of the proceedings, the tribunal should invite the party who claims an extension of time beyond the contractual date of completion to specify the method it has adopted or proposes to adopt to determine the causes of the delay or disruption. Whilst it is for the parties to determine the method they will use to present their cases, when analysis and quantification of delay and disruption is concerned, as it often is, arbitrators in construction cases should appreciate that the analyses, graphs and charts are only as accurate as the facts on which they are based. A very helpful guide to parties and arbitrators dealing with delay claims is the *Delay and Disruption Protocol* (Second Edition, 2017, United Kingdom Society of Construction Law). Other helpful guides used in the United States for schedule delay analyses include the *Standard ASCE 67-17 Schedule Delay Analysis* (2017, American Society of Civil

Engineers) and the *ACE International Recommended Practice No. 29R-03 Forensic Schedule Analysis* (2011, Association for the Advancement of Cost Engineering).

13.2 Where each of the parties has appointed an expert, it is likely to be beneficial for them to meet at a very early stage so as to identify to each other the facts and documents which each believes to be relevant and thus establish an agreed baseline and methodology.

13.3 Proper project time programming and planning is necessary for good project management and the critical path networks ("CPN") are today commonly used on projects to manage the construction process and monitor progress. Where the CPN have been used on a project, it would be reasonable to expect the parties to make use of the CPN in the presentation of their cases. On the other hand, where the CPN have not been used to produce the agreed construction programme, it can lead to difficulties.²⁰ Since a CPN has to be prepared based on certain assumptions, relating in particular to the logic of the network, it is particularly difficult and risky to construct a CPN construction programme retrospectively.²¹ The logic and all other data entered into the CPN software for a delay claim must, of course, comply with the contract and the applicable law as regards the legal effect of delaying events and must be fully disclosed and open to argument and possible challenge. It quite frequently happens that many of the numerous assumptions that have been made in the construction of such a network are in the end so controversial that the network cannot be accepted by the tribunal for the purposes for which it was created. Similarly, unless accepted by a respondent, a claimant who based its case on a non-agreed upon programme should be required to justify that its programme would have been achievable, but for the events complained of. The respondent should then be required to explain why the claimant's analysis is incorrect. In this way the points that truly require investigation will emerge. These are not matters to be left to experts, since they define the agenda and create the Terms of Reference for experts and for evidence. It is important to exclude irrelevancies as early as possible, in order to avoid spending time, money and energy on matters that are of no consequence and sometimes misleading.

14. Computation of claims

14.1 It is important to discover what needs to be investigated in the computation of a claim. In many cases reasonable pressure on both parties will elicit where there is real disagreement and, more importantly, why it exists. It is therefore suggested that, as early as possible, the tribunal invite the parties to jointly establish, if possible, an accurate computation of claims so that the respondent will have a clearer picture of what is allegedly recoverable, which may result in a possible settlement of some, or all, of the claims between the parties. In order to establish a clear computation of claims, evidence justifying the amount

²⁰ An as-planned CPN is of very limited value, or no value at all, unless it is compared with an as-constructed CPN.

²¹ The term "retrospectively" is used here in the technical sense and not as defined in the Oxford English dictionary.

of a claim, which has not already been provided in the statement of case (or prior to the proceedings), should be produced by the claimant, with cross-references to its statement of case and in a form that will readily enable the respondent, and the tribunal, to know where the amounts come from and why they were incurred. The respondent will then have no excuse for not stating the reasons why, in its view, liability does not exist or, if it does, why the amounts claimed are nevertheless not due, e.g. because they were not caused by the events alleged, were not incurred or not reasonably incurred, or because the terms of the contract or the provisions of the applicable law preclude their recovery. In each case, reasons should be given.

15. Splitting a case

15.1 As noted in Appendix IV to the ICC Rules, bifurcating the proceedings or rendering one or more partial awards on key issues is a case management technique that may be used in order to achieve a more efficient and cost-effective resolution of a case. Construction cases can involve parties having a matrix of claims and counterclaims by and against one another, so it may be desirable to split the case, not only between liability and quantum, and between jurisdiction and liability and quantum, but also between issues common to all parties involved and issues affecting only some parties. It also may be desirable to separate out core legal or factual issues so that they may be examined separately and preliminarily by the tribunal (for example, jurisdiction, admissibility, contractual allocation of liability, etc.). Decisions about splitting the case may be particularly pertinent in arbitrations involving mega-construction projects and may involve jurisdiction, preliminary issues, liability/quantum, dealing with multiple claims, and points of notice of claims.

15.2 When deciding whether to split a case (i.e. bifurcate, trifurcate, quadfurcate the proceeding), tribunals should be guided by the following considerations, in whole or in part: 1) the likelihood of whether the separated issue(s)/claim(s)/defence(s) can be determined without considering the overall merits of the whole case; 2) the specific reasons for splitting the case and the parties' expectations as to the effect of splitting the case; 3) whether the split would delay or expedite the arbitral proceedings; 4) whether the split will increase or decrease the costs of the arbitral proceedings; 5) whether splitting the specific issue(s)/claim(s)/defence(s) is a mere tactical device to delay the proceeding or not; 6) the *prima facie* likelihood of success of the party seeking the split, if the parties are in disagreement as to splitting the case; and 7) whether isolating specific issue(s)/claim(s)/defence(s) for decision necessitate expeditious determination for factual or legal purposes (e.g., if there are parallel proceedings and the arbitral tribunal is required to determine its jurisdiction over certain issues/claims/defences to avert overlap or conflicting awards).

15.3 Accordingly, unless the parties agree or there are obvious legal reasons for promptly proceeding with the split, decisions about splitting a case into parts should be left until it is clear that it will be sensible and cost-effective to do so. In practice, it often makes

sense to see the parties' statements of case before addressing any such decision. Proper management of many construction disputes requires them to be taken in stages, e.g. jurisdictional or quasi-jurisdictional issues such as the admissibility of claims, pivotal issues of liability and time-bars, and quantum to the extent that its investigation proves to be needed. However, such decisions regarding management must be based on a sound appreciation of the case and be taken at the right time. It might seem attractive to decide whether certain claims are admissible under the contract through alleged want of notice or are barred under the applicable substantive or procedural law by prescription or limitation, but that course is only worthwhile if a decision unfavourable to the party affected will inevitably dispose of a substantial part of that party's case. It is not so attractive if the claim resurfaces under an alternative head and the affected party's losses prove, on analysis, not to be attributable to the claims that have been waived or barred. It should be recognised that whilst a party may prevail on liability, it does not follow that that party will recover any money. It is incumbent upon the tribunal to ensure that both parties understand the need for their submissions to comprise just as much proof and evidence to support their damages claims as their liability claims and to be prepared to undertake the same procedures for the presentation of damages as in the liability phase, which may or may not reduce the costs or time to complete the arbitration. Similarly, dividing a case into issues of liability followed by issues relating to quantum should only be done after a discussion on causation, since in many instances causation could fall into either part. Expert evidence ostensibly on quantum, for example in relation to the rectification of alleged defects, may in fact be relevant to liability. Thus, before a decision is made about splitting a case, the parties' cases on both causation and quantification should be known, so that it is clear how the costs and losses are purported to have arisen. The tribunal should be sure that a decision favourable to the party affected on liability and causation will have considerable consequences. If it is not sure of this, then it need not split a case, as amongst the key reasons for a split are that a partial award: 1) is likely to lead to agreement on the remaining issues, 2) will likely lead to a more efficient and cost effective proceeding, 3) is consistent with the parties' legitimate expectations; and 4) is likely to lead to avoidance of significant harm of some sort to one of the parties. Equally, a tribunal must be satisfied that, if a decision were taken to decide the basis in fact or law of a claim and if that basis were rejected, the losing party would not be able to present an alternative fall-back case.

15.4 It is desirable for the tribunal to discuss with the parties from a very early stage the possibility of resolving certain issues by way of partial awards or procedural decisions.

16. Documents and document control

16.1 It is recommended that tribunals should raise issues relating to documents early on with counsel, ideally at the first case management conference and, after consultation with the parties about their preferences, issue directions relating to document control and communication. The tribunal should

consider directing the parties, from the very outset, to organise the documents appropriately as they emerge during the proceedings not only to avoid duplication but to allow them to be accessed easily electronically with a view to the compilation of working files with a common numbering system. Such a procedural direction will need to cover inter-party correspondence (including instructions, requests for instructions and the like), the agreed records of meetings, programmes, agreed summaries of measurements, agreed summaries of valuations, drawings, details and other technical documents, all of which ought to be contained in separate indexed files with the pages individually numbered so that additions can be made simply. Tribunals also commonly issue directions regarding the preferred means of communication of documents in the arbitration. For example, tribunals may direct that all communications with the tribunal should be electronic but that submissions, witness statements (but not the documents accompanying them if available electronically) and expert reports should be submitted by the parties in hard copies. Furthermore, the tribunal may also direct parties to provide access to supporting documents that accompany submissions by electronic means (hyperlinks, USB sticks, secure file sharing, etc.); all electronic material submitted should be searchable, if possible.

16.2 In some projects, it may be possible to use the project's existing databases, especially where they have been created to be shared by the parties, although it is not usual for the tribunal to be granted unrestricted access to such databases. This is partly because every arbitrator would be obliged to record and report what was read or retrieved, and also because of questions of relevance, confidentiality and third party rights. The tribunal may have to establish confidentiality protocols limiting access to documents to the parties' legal advisers or experts, especially if the contract works cover operating systems that are patented or are otherwise commercially sensitive.²²

16.3 Turning to requests for disclosure, the composition of the tribunal and their legal backgrounds are likely to influence how a tribunal will approach disclosure and its extent. Arbitrators with a civil law background (such as those from France, Germany and Switzerland, where there is typically very limited disclosure and where court procedures for disclosure as understood in common law countries do not exist) may be less inclined to order extensive disclosure than those with a common law background (such as those from England, Australia and the United States). Although, very few are still in favour of the wholesale and indiscriminate production of documents by means of the common law process of discovery, such a process must be justified if it is to be applied to an international arbitration. Otherwise, it has no place in ICC arbitrations. The tribunal should consider including in a first procedural order the procedure and format to be used with respect to the production of requested documents. In particular, it is recommended that the tribunal direct the parties to:

- produce the documents on which they rely with their submissions;
- avoid any requests for document production in order to control time and cost, when appropriate;
- in those cases where requests for document production are considered appropriate, limit such requests to documents or categories of documents that are relevant and material to the outcome of the case;
- comply with time limits for the production of documents; and
- use a schedule of document production to facilitate the resolution of issues by the parties and the tribunal in relation to the production of documents, e.g. a schedule which sets out all requests for production, objections and the tribunal's decision with respect to each request.

16.4 The tribunal should also remind the parties (by direction if needed) that only documents necessary to prove the case of a party²³ are to be submitted and that the same criterion will be applied in deciding any contested request for further documents.²⁴

16.5 Should the parties wish to require a more general production of electronic documents, then, because of the potential for additional burdens and costs associated with e-disclosure and as part of the tribunal's duties under Article 24 of the ICC Rules, the tribunal should ensure that 1) the parties have identified the issues involved, and 2) the parties will manage and control e-disclosure in a cost-effective manner. This may be achieved by limiting disclosure by category, date range or custodian, and by using means such as the *ICC Report on Managing E-Document Production* and the *CI Arb Protocol for E-disclosure in Arbitration*.

16.6 The tribunal should make it clear from the outset, that the documents should be directly relevant to the issues as defined by the tribunal and should be confined to those which a party considers necessary to prove its case (or to dispose of the case of the other party or which help to make the principal documents comprehensible. Deciding which documents are really relevant and necessary (as opposed to those which might possibly be needed) is important. A party should, when producing principal documents (or at least in any pre-hearing submissions), state what each document is intended to prove, as the parties should first be required to produce all the documents in their possession that are needed for proving the points at issue. Another helpful method is to create bundles of documents for each main issue. These can be added as the case proceeds. If the document is long or may be used for more than one purpose, then the relevant part(s) should be hyperlinked. The tribunal may also consider requiring each party to notify the other if it does not agree that a document provides the necessary proof, so that alternative means of proof can be found. The procedure described above precludes a party from relying on other documents, for instance for the purposes of confronting or challenging a witness or other evidence.

²² Document access is just one aspect, but confidentiality aspects of a general nature may also be raised by the parties and require the tribunal's involvement, which is a problem that is of course not only confined to construction arbitrations.

²³ Article 9 of the IBA Rules.

²⁴ Article 3 of the IBA Rules.

16.7 The tribunal is entitled to call for further documents at any time, in order to fulfil its duty to ascertain the facts (see Article 25(5) of the ICC Rules). The parties will obviously be given copies and the opportunity to respond. The procedural rules ought to allow a party to request additional documents from another party and, if not provided, to seek an order from the tribunal, at which stage the legitimacy or reasonableness of the request and the refusal will be decided. The IBA Rules provide helpful guidance. Most parties comply with an order if it is made clear that the sanction for failing to do so is the risk of an adverse inference being drawn.²⁵ However, the tribunal should remember that its requests for documents may sometimes convey the impression that it is inclined towards the party that may benefit from its seeing the documents, especially if its order directly or indirectly supports a prior request by that party.²⁶ Thus it is suggested that the tribunal make it clear that it remains completely impartial and that it is simply discharging its duty under Article 25(1) of the ICC Rules.

16.8 The tribunal must also provide guidelines for the hearing. If common working files have been created, as described above, there should be no need to isolate “core” documents. The primary letters and instructions central to the issues of liability and causation as well as other key documents, such as programmes, will already be accessible to all. The tribunal should fix a cut-off date by which no further documents may be produced by any party, unless required by the tribunal, or permitted by it in exceptional circumstances following a reasoned justification for late submission, as when a party discovers a material document which the other party has been withholding. Such a concept also plays into the idea of an agreed pre-hearing reading list, whereby the parties identify to the tribunal what must be read, what should be read and what does not need to be read before the hearing.

17. Witnesses

17.1 The rules governing the proceedings or the wishes of the parties may have an impact on the taking of oral evidence. Subject to these factors, evidence which is not contained in a document, but which is necessary to prove or disprove a point at issue must normally be presented through a written statement from the witness, verified and signed by that witness. Except in some jurisdictions, counsel may assist in the preparation of witness statements and there is much to be gained in time and cost thereby. However, the words used by witnesses should, as far as reasonably practicable, be their own in order to preserve credibility. If the evidence is not in the language of the arbitration, an accredited translation must be provided. If the statement deals with technical or legal matters, the tribunal should ensure that the translator is both qualified and familiar with the subject matter; otherwise the translation may not only be useless but, even worse, misleading. If it is not possible to tender a written statement, then the permission of the tribunal will be needed before evidence is heard from that

witness. Since it is desirable that the whole of a witness' evidence should be in writing and since evidence tendered by one party may cause another party to reconsider its proposed evidence and to submit additional evidence, perhaps from a person who has not already provided a statement, it is usually sensible to allow for supplementary or additional statements of evidence of fact to be submitted within a brief period following the principal statements, so that all the evidence is in writing. All witness statements should be provided in good time before the preparation of any pre-hearing submissions. Further, the timing or number of “rounds” of witness statements should be kept to a minimum. Also, culling and stipulating facts not in dispute, or at least allowing such facts to be stated “on the record” without necessity of witness testimony, can prove effective in time and cost management. Useful proactive case management techniques include: 1) achieving consensus on the role and content of witness statements; 2) defining the number of rounds and timing of witness statements; and 3) maintaining only relevant witness testimonials and statements.

17.2 A witness will only be heard if required by a party or by the tribunal to attend for questioning. The tribunal may however ask a party to state why a witness is required and to specify the areas in which questioning is to be conducted so as to ensure its relevance and necessity. In addition, it is advisable that 1) the tribunal provide in its first procedural order for the parties to notify each other well in advance of the hearing if a witness is not required for questioning and, if so, the status of the evidence of that witness, and 2) the tribunal warn the parties that in its decision under Article 38 of the ICC Rules on the allocation of costs it will take account of costs wasted by witnesses having to attend unnecessarily. The procedural order should also deal with the status of the evidence of a witness who does not appear with reasonable cause. In order to reduce costs, the evidence of witnesses, both factual and expert, may be by video link and without personal attendance. The tribunal may impose reasonable limits on the time available to a party for the questioning of witnesses but the techniques, approach and limits of questions (particularly by cross-examination) must be agreed with the parties beforehand to align potentially divergent expectations in advance of the hearing, e.g. whether questioning should be limited to matters within the witness's personal knowledge. In order to use hearing time effectively, some tribunals require each party to notify the other beforehand of the scope of the proposed questions, but such a course can lead to the witness becoming aware of the intended questioning and in any event adequate notice has to be given (e.g. 48 hours in advance, not the night before). Another tool that may be considered for the purpose of using hearing time effectively is fact witness panels. Guidance is provided in Article 8.3(f) of the IBA Rules. Fact witness panels can streamline the process in complex cases where there tend to be many fact witnesses who have complementary or supplementary information on the same subject. Fact witness panels can be questioned on the same topic without losing momentum and can consist of fact witnesses from one party or from both parties, similar to expert witness

25 The same sensitivity can also arise in relation to tests, inspections, visits and other procedures for gathering evidence.

26 Including expert evidence.

conferencing. Use of fact witness panels may provide particular focus on the examination of key facts and documents, thus reducing repetitive evidence and can serve to bring out the real facts better than by a single-witness-at-a-time approach. It also may permit concentrated attention on the issues by individual theme or topic.

18. Experts

18.1 In construction arbitrations there can be confusion about whether or not expertise is required. One party might indeed assume that expert evidence will be necessary to deal with a matter which another would regard as requiring proof from documents or a witness. It is also sometimes assumed that the tribunal will appoint an expert and that a party will be called upon to produce an expert only if dissatisfied with the tribunal expert's report or if further proof is required. To avoid any confusion, it is suggested that the tribunal consult the parties at the first case management conference to find out whether they are both intent on tendering evidence from experts (technical, legal and other) and why such expertise is required. For instance, it may be that the experts are being used as consultants and that proof should be provided in another way.

18.2 If the parties wish to present evidence from experts, then the matter must be discussed with the tribunal, which must check the scope of the evidence in order to ensure that it is confined to the issues and does not deal with matters capable of being proved in other ways. In the case of party-appointed experts, the tribunal should find out the names of the parties' proposed experts and require, in the first procedural order, that each expert make in his or her report a declaration of independence.²⁷ If the parties require assistance to meet these objectives, a solution would be for the tribunal to draw up the Terms of Reference of the experts (on the basis of the issues known to it) or to request the parties to agree a statement of the issues and facts (both agreed and assumed, for instance as set out in the witness statements) and the documents upon which expert evidence is required. Failing this, the experts should be transparent about the Terms of Reference or instructions they have received from their clients (subject to privilege), so as to enable the tribunal to ascertain that clear directions and explanations have been given, in order to obtain a useful opinion. Also, quite often, in construction cases one finds witnesses who combine both the features of a factual witness and those of an expert witness. In that case, the tribunal should decide from the witness's demeanour, to what extent the evidence which the witness is giving is truly independent and impartial and can therefore be accepted as expert evidence. Tribunals must think long and hard before accepting expert evidence, and expert witnesses should be subjected to the same scrutiny as factual witnesses.

18.3 It is now common in international construction arbitrations for parties to use experts as consultants (quantity surveyors, claims consultants, etc.) from a very early stage in the preparation of claims. Such

consultants often provide expert knowledge in certain aspects of the dispute, such as programming, quantification or special areas of engineering. Sometimes they also appear as the parties' experts, providing reports and giving evidence at the hearing. They should be distinguished from experts unconnected with the parties, such as specialists renowned for their expertise in a specific area, although the dividing line is not always clear. The tribunal will need to bear this distinction in mind when assessing the weight of the opinions presented to it. For example, it will need to be sure that any relevant information which a consultant expert of the former kind obtains from a party, and which is at all relevant to the evidence or any opinion, has been fully communicated to, and is known to, the other party or parties and to the tribunal. The proximity of such an expert to a party may be significant.

18.4 It is desirable that independent experts – whether acting as expert witnesses or as technical consultants – discuss their views with each other before preparing their reports, as they should eventually agree about most things if truly independent. After experts issue their reports, they often become more committed to their position and less likely to be open to changing their written views. If no discussions are held before the reports are presented, they should certainly be held afterwards. Again, the tribunal may perform a valuable role in determining to what extent the reports converge. There is normally no reason why a meeting between the experts need be attended by anyone else. The tribunal must ensure that it is clear whether or not agreements between the experts bind the parties. If the tribunal were to chair discussions between the experts, it could be difficult for a party to question such an agreement. Joint reports should then be drafted between the experts. The drafting of joint reports, in our view, forces constructive progress and generates intervention points that the tribunal can use to focus efforts on what they need from the experts. In any event, the reports must be confined to what is not agreed and the reasons for these differences. Too many reports are burdened with what is already known and accepted and do not concentrate on the reasons for differing opinions. Reports should be exchanged and, if necessary, supplementary reports drafted. Procedures for the joint expert meetings and the resultant reports should be agreed upfront. Typically, it is agreed that all discussions are privileged and are not to be disclosed until agreement is reached. Expert conferencing is also seen to be a useful tool, but careful consideration should be given to the existing evidence if it is entirely to supplant cross-examination in a given case.

18.5 There may also be cases where the parties will be saved considerable time and expense if the tribunal appoints its own expert, as the expert's opinion might render unnecessary any further expertise or identify points upon which evidence or reports from witnesses or experts may be required. Situations in which the tribunal may decide to appoint its own expert(s) may include: 1) if the parties have not provided adequate technical information (in their written submissions or through reports from their own experts); 2) where

²⁷ This should be done even if the order also requires compliance with Article 5 of the IBA Rules.

the assessment of part of the case might take a considerable amount of time, e.g. the examination of a complex network analysis, although the tribunal must keep in mind that it cannot delegate its authority in decision making or outsource the weighing of evidence before it to a tribunal appointed expert; and 3) where the opinions of experts are important and any differences are not attributable to different perceptions of the facts (here, the tribunal's own expert may only be needed once the points of disagreement between the parties or their experts have been clearly identified). A tribunal will not be bound by the opinion of the tribunal-appointed expert, and this should be made clear. Any report or other communication with such a tribunal-appointed expert must, of course, also be transmitted to the parties. Article 25(4) of the ICC Rules deals with the appointment of such experts and requires that parties are consulted before any such expert is appointed. No administrative charges are levied for the proposal of experts by the ICC to ICC arbitral tribunals, which is a unique service offered free of charge in all cases administered by the ICC International Court of Arbitration.

18.6 As to timing, the tribunal ought normally to decide whether it will appoint its own expert before it issues the procedural timetable under Article 24 of the ICC Rules, since the timetable will be affected by the work of the expert. In any case, the tribunal should seek and, if possible, obtain party consent before appointing a tribunal expert and agree with the parties on the Terms of Reference and the appointment procedure of the expert upfront, including a list of issues that the expert needs to deal with, the extent of the expert's participation in meetings and hearings, and his/her role in discussions and in deliberations, if any.

18.7 Where one or more members of the tribunal have been nominated or appointed for their expertise, there may be no need for the tribunal to duplicate that expertise by appointing its own expert in the same field. However, construction disputes often raise a wide variety of technical issues, some of which may be highly specialised and lie beyond the competence of an ordinary expert and others may necessitate a decision between two different schools of thought, towards one of which a tribunal member may have a leaning, as a result of training or experience. It is therefore important that, before the tribunal uses the expertise of one of its members, the other members are satisfied not only that any expert member is truly independent and free from any apparent or unconscious bias,²⁸ but also that the issues are likely to be within his or her competence. A tribunal should guard against giving an arbitrator with special qualifications undue influence in any discussions between its members. However, such an arbitrator is likely to be of considerable value in helping the tribunal to understand the points at issue and in communications with the parties and experts. Therefore, where the appropriate expertise is available within the tribunal, a decision not to appoint its own expert should normally be discussed with the parties since, for example, it might be thought that a

member of the arbitral tribunal nominated by one of the parties ought not to supplant a tribunal-appointed expert, although, in principle, no difficulties should arise if that member were truly independent.²⁹ He or she would then be able to assist the other members of the tribunal in understanding the technical aspects of the case and in drafting the relevant parts of the award. However, as pointed out, precautions must be taken to see that the technical knowledge and views of one of the arbitrators that may influence the tribunal have been communicated to the parties so that they have a proper opportunity of dealing with them by submissions or evidence.

19. Hearing(s) on the merits

19.1 It is recommended that the tribunal should decide as early as possible in which order the main issues should be heard and whether certain issues should be decided by a partial award before other issues are heard. It is also suggested that the tribunal persuade the parties to agree which issues, if any, can be decided on the basis of written submissions and evidence only. Whilst the tribunal may suggest such a course, the parties should be free to decline it. The tribunal is not always best placed to determine what issues have to be the subject of a hearing. In all events, the tribunal should inform the parties if it thinks that a witness or an expert need not attend the hearing to be questioned. It should also require the parties to state whether any witness or expert put forward by the other party is not required (in which case the evidence will be accepted subject to a decision as to its value) and to inform the tribunal why a person is required for questioning and the topics to be covered by such questioning.

19.2 There is general agreement, first, that all submissions prior to the commencement of a hearing should be in writing. In line with general practice in international arbitration, written submissions should be full and exhaustive, and should be delivered at the earliest possible occasion. They should be numbered or arranged to match the submissions of the other party. Much antipathy was shown to the common law practice of not presenting the best case in the best possible way and relying on oral submissions, accompanied by supporting notes. Members of the tribunal or the legal or other key representatives of the parties need to have written submissions in advance in order to read them carefully at their own pace. In addition, using written material, wherever practicable, reduces the time required at a hearing or meeting. Ideally, the merits hearing should be principally or entirely devoted to examination and cross-examination of witnesses and experts.

28 As required by the statement which all nominated arbitrators have to file, in accordance with Article 11(2) of the ICC Rules, available at <https://iccwbo.org/publication/icc-arbitrator-statement-acceptance-availability-impartiality-independence-form/>.

29 There can be no guarantee of cost savings, however. A party may call for an expert to assess the opinion of the tribunal's expert or be simply determined to exercise its right to present its own expert evidence.

19.3 It is also recommended that the tribunal require the parties to decide how the time available within the period of the merits hearing should be allocated (in which case the parties will then be held to their decision), or the tribunal should itself decide and adhere to a strict timetable (although not if to do so would be unjust – the tribunal must always be ready to be flexible). Pursuant to Article 22(4) of the ICC Rules, the tribunal must treat the parties fairly and impartially, and ensure that each party has a reasonable chance to present its case but that does not mean equality in terms of witness time, as opposed to the time for statements or submissions. In regard to allocation of time, parties generally accept that although the basis is parity, fairness may require adjustments, e.g. the factual or expert evidence of one party is much greater or will require more investigation than the evidence of the other party. It is therefore not uncommon for the split not to be 50/50 but, for instance, 70/30. If an agreement is not reached, the tribunal will decide the overall allocation (and make any fairly required adjustments as the hearing proceeds). It will then be up to the parties to decide how best to use their allocation and seek to agree a running timetable well in advance of the hearing. Under the “chess clock” method, the entire hearing time, exclusive of recesses and breaks for lunches, administrative time and time for tribunal’s purposes, is determined in terms of a number of hours, which are the split in accordance with the overall allocation agreed or decided. Then, during the time that a party is presenting evidence, or testimony (whether direct or cross-examination) or argument, that party’s “chess clock” would tick off the hours and minutes down to the allocated limit. The same would apply for the opposing party. In construction terms, the “chess clock” approach permits each party to determine how much time to devote to contesting the case of the other party, by cross-examination of factual or expert witnesses or submissions, etc. The tribunal’s questions, and the time for responding to them, should be allocated to tribunal time, provided that these questions and answers take no longer than the period of time specified. Overruns, whatever the cause, are usually dealt with by extending the daily hours of the hearing. A note of caution to parties is that it is not prudent to explicitly provide for the allocation time limits for the arbitration in the arbitration clause as doing so may deprive the tribunal of a full exploration of the issues and may encourage dilatory behaviour by the parties.

19.4 Prior to the hearing, the tribunal should remind the parties to try to agree on which documents will be needed at the hearing, the use of online platforms for the storage and exchange of documents, and access and demonstration of documents at the hearing. Pre-hearing submissions, witness statements and any reports from experts should be hyperlinked to the documents. In case testimony is related to matters involving drawings, the tribunal and the parties should be able to identify clearly in drawings the areas to which a witness statement, expert report or other discussion is related. Having the issues properly allocated in general drawings in the hearings could facilitate discussion. If proper presentation of the project has been done in the early stages, and

this presentation has been updated, the tribunal and the parties will be able to better focus on the evidence, thereby avoiding unnecessary testimony, interrogatories and expert evidence. Tribunals should also be aware that parties often attempt to bring in documents and new evidence shortly before the hearing. This risk may be handled by agreeing a cut-off date for the submission of evidence, except in extraordinary circumstances and with prior leave (as explained in paragraph 16.8 above). There will always be a balance to be drawn by the tribunal between a reasonable opportunity for a party to present its case and obtaining an unfair advantage.

19.5 There was much support for the view that factual witnesses should be heard before the experts formally present their reports and are questioned on them, since the questioning of a factual witness may lead an expert to a better understanding and to the modification or withdrawal of an opinion or provisional conclusion. It was also thought that, where the parties are to tender experts or witnesses on the same topic, they should be questioned together so as to clear up any misunderstandings that may have arisen between them. As observed in this Report, such time can be minimized if the experts contact each other well before the hearing to resolve any differences. As regards witnesses of fact, it may be expected that, as part of the continuing dialogue with the parties, the tribunal will study the statements as they are filed and raise differences with the parties so as to clear them up before the final experts’ reports and written submissions are presented prior to the hearing. An order of appearance might be: factual witnesses; technical experts; delay and disruption experts; quantum experts; and legal experts. On the other hand, it may sometimes be desirable for the tribunal-appointed expert to present his or her report and to be questioned on it before any other evidence is heard, even though this may give the impression that the conclusions of that expert will be accepted by the tribunal unless discounted. The tribunal must obviously ensure that the decisions it takes are its own and not those of any expert appointed by it.

19.6 The time available at a hearing need not be used for closing submissions as they are frequently best presented in writing within a short period after the conclusion of the hearing, usually exchanged simultaneously in one or two rounds. However, while some parties may have a valid reason for dispensing with post-hearing briefings and opting for closing arguments, post-hearing briefs are the norm and post-hearing submissions will in any case be required on the question of costs and how they are to be allocated (Article 38 of the ICC Rules). In any case, the tribunal should always coordinate these points with the parties early on, if possible. The tribunal should also allow itself time to raise questions and, unless otherwise agreed by the parties, give the parties an opportunity to address it on points which need to be emphasised. As an alternative, it may occasionally be helpful to the tribunal for a short hearing to be held after the closing submissions, for the purpose of obtaining clarifications. The deadline for the delivery of written closing submissions should preferably be set

by the tribunal well before the hearing on the merits (e.g. in the procedural timetable) and certainly in good time prior to its conclusion, so that the hearing is conducted on that basis and the parties can make the necessary arrangements. No further submissions will be considered once the deadline has passed. When declaring the proceedings closed, pursuant to Article 27 of the ICC Rules, the tribunal should make it quite clear that no new facts or opinions will be admitted thereafter, unless specifically requested or authorised by it. There is a tendency for parties to try to repair gaps in their cases by submitting new documents, statements and reports, on the pretext that their action was “authorised” by the tribunal (as may be permitted by Article 27). If this occurs, the tribunal should immediately send such submissions back to the parties. If the tribunal accepts (as it ordinarily should) to receive sealed offer(s), it should refrain from closing the proceedings pursuant to Article 27 to the extent necessary to allow the parties to make further submissions on costs.³⁰

20. Interim measures

20.1 Article 28 of the ICC Rules authorises the tribunal to order interim or conservatory measures, unless the parties agree otherwise.³¹ In addition to its general application (i.e. giving the respondent security for its costs of the arbitration where the claimant is insolvent or impecunious), this power can be particularly relevant in construction arbitrations. For example, a party may wish the tribunal to order compliance with, or relief from, the decision of a dispute adjudication board. The provision is intended to protect the *status quo* pending a decision on the merits of the dispute and could extend to situations where, following a contested contract termination, use might be made of plant or materials on site, or rights under a technology transfer provision need to be protected from threatened misuse. Similarly, the power could be used to restrain the disposition of spare parts that might be required pending expiration of a defects notification period or to require the owner to observe the contract in relation to the appointment of an engineer or other representative. In general, a tribunal will need to be satisfied that there is good reason for intervention including the likelihood that the applicant may suffer irreparable harm if the measure is not ordered. Article 28 does not apply to decisions on costs during the proceedings, which are the subject of Article 38(3) of the ICC Rules.

21. Settlement in arbitration

21.1 The tribunal should consider reminding the parties that, of course, they are free to settle all or part of the dispute at any time during the ongoing arbitration, either through direct negotiations or through any form of ADR proceedings. For example, mediation proceedings can be conducted under the ICC Mediation Rules. The arbitral tribunal should also

consider consulting the parties at an early stage (e.g. at the first case management conference pursuant to Article 24 of the ICC Rules) and inviting them to agree on a procedure for the possible use of sealed offer(s) in the arbitration. The Secretariat may assist the parties to put information relating to certain unaccepted settlement offers, and related correspondence, commonly referred to as “sealed offer(s)”, before an arbitral tribunal at the appropriate time (i.e. after the tribunal has decided the merits and is about to decide the issue of costs and how they are to be allocated). The Secretariat may also assist with any counter-offer(s) made as sealed offer(s) by the offeree.³²

22. Translations

22.1 The effective management of translation can affect beneficially the costs of an arbitration. The Terms of Reference or the procedural order made following the first case management conference will record the language (or languages) of the arbitration agreed upon by the parties or decided by the tribunal under Article 20 of the ICC Rules. This language may not be the ruling language of the contract or the language which the contract stipulates should apply to all communications under the contract. Given the different nationalities of parties involved in a construction project, it is not unusual for a party to continue to prepare internal and certain project documents or communications in a language other than the language for communications under the contract. When such documentation needs to be submitted as evidence in an arbitration, consideration needs to be given by the tribunal to the question of who is to bear the cost of translation. As such, the tribunal is strongly advised to deal in the first procedural order with these matters and their implications. All communications (including pleadings and submissions, both written and oral) have to be in the language of the arbitration. Unless otherwise agreed, a party will have to provide a certified translation or interpretation of any document or evidence relied on. The tribunal will need to establish that a properly qualified translator will be used who can deal with technical and legal words. Occasionally it may be possible to permit a party to arrange for a person within its own organisation to translate a document; however such a ruling should be provisional pending sight of the translation. However it may not be necessary to translate every document, especially if there is a large number to be translated. The tribunal may direct that a partial translation is sufficient, at least until the need for a full translation is necessary. The procedural order should require objections to a translation to be made promptly. The parties should be directed to provide an interpreter at any hearing with agreed translations of the special terms or vocabulary likely to be used.

³⁰ See ICC Note to Parties and Arbitral Tribunals on the Conduct of the Arbitration under the ICC Rules of Arbitration (1 January 2019, para. 230(e)) available at <https://iccwbo.org/publication/note-parties-arbitral-tribunals-conduct-arbitration/>.

³¹ For general guidance, see *The Secretariat's Guide to ICC Arbitration* (ICC, 2012) paras. 3-1032 to 3-1045.

³² For further information on the procedure required to be followed to obtain the Secretariat's assistance in this regard, see ICC Note to Parties and Arbitral Tribunals on the Conduct of the Arbitration under the ICC Rules of Arbitration (1 January 2019, paras. 227-230) available at <https://iccwbo.org/publication/note-parties-arbitral-tribunals-conduct-arbitration/>. See also C. Seppälä, P. Brumpton and M. Coulet-Diaz, *supra* note 14

Annex – Extracts from Typical Schedules

I. SCHEDULE FOR ADDITIONAL WORK AND DISPUTED VALUATION

(1) Item no.	(2) The items of extra work claimed	(3) Claimant's case: by whom ordered and when	(4) Claimant's valuation	(5) Respondent's case	(6) Price, if any, admitted by respondent	(7) For use by arbitral tribunal
1	On excavating the foundation trenches it was necessary to go below the depth on the drawings by 0.75 m over a length of 400 m between marker posts 4 and 5.	No specific order, except that on several occasions on ... and ... the claimant was directed by the engineer's representative to "go deeper". The claimant is entitled to have the work measured and valued. However the measurements were agreed at the time with the engineer's representative and included in the claimant's monthly statements. The claimant also wrote to the engineer on ... and received no rejection of the statement submitted following completion of the works.	0.75 x 400 @ US\$ 50 (contractual rate at item 5/A/7 of Bill of Quantities) = US\$ 1500	The item is not an extra; the claimant was obliged to include excavation to any depth in its rates and was merely instructed as to what it had to do. The measurements were made for record purposes only; the statements were interim; neither the engineer nor the respondent is bound to certify or to pay for the work which is in any event wrongly claimed.	Nil. In any event, the length was 300 m and the rate should be US\$ 30 - see item 5/A/8 of the Bill.	

II. SCHEDULE FOR COUNTERCLAIM FOR DEFECTIVE WORK

(1) Ref. No.	(2) Item of work	Respondent's case			Claimant's case			
		(3) Alleged defect	(4) Remedial work	(5) Amount claimed	(6) Liability	(7) Remedial work	(8) Amount	(9) Arbitral tribunal
1.	The joints between the pipes from marker 5.5 km to marker 6.5 km leak.	The welds do not conform to DIN 00000 as required by cause XXX of the specification.	The pipes will have to be removed and replaced with new materials as repairs cannot be carried out on-site.	US\$ 112,500. Each 20 m length costs US\$ 500; plant and labour costs estimated at 200% and costs of supervision etc. at a further 50%.	Denied. The pipes were installed five years ago. It is admitted that they leak because they fractured when the respondent re-laid them two years ago. The length of the pipes was 1.0 m ... so DIN 00000 did not apply; the pipes conformed to DIN 010101. By instruction of ... , the engineer authorized the supply of such pipes, and thereby approved conformity of welds to DIN 010101.	Denied. It is not necessary to replace the pipes. If necessary, the joints can be remade on the spot.	Denied. Remaking would cost approx. US\$ 250 per weld (=US\$ 12,500). Apart from the cost of the pipes, the claimant does not accept that the cost of the work proposed by the respondent is reasonable, and requires proof that the percentages of 200% and 50% represent the actual cost to the respondent: it should be reduced by 50% as the respondent will be replacing old pipes.	

ICC COMMISSION ON ARBITRATION AND ADR

The Commission on Arbitration and ADR brings together experts in the field of international dispute resolution from all over the globe and from numerous jurisdictions. In its research capacity, the Commission produces reports and guidelines on legal, procedural and practical aspects of dispute resolution. The Commission also discusses and contributes to the drafting of proposed revisions to the ICC Rules of Arbitration and other arbitration rules and drafts and approves the ICC Mediation Rules, Expert Rules and Dispute Board Rules.

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