# Use of technology: The virtual reality

The use of technology to support the practice of international arbitration has become increasingly commonplace. In particular, the arbitration community has shown a desire to embrace technology that boosts efficiency, identifying the wish for 'increased efficiency, including through technology' as the factor most expected to influence the future evolution of international arbitration.[35] The COVID-19 pandemic has presented challenges for the international arbitration community, but information technology tools have allowed practices to be adapted to new circumstances. We explored the impact of the use of technology in arbitration: how it has changed in recent years; which technology-supported changes may continue to be favoured by users in the future; and whether adaptations in practice highlighted during the pandemic represent a natural, continuing evolution rather than a crisis-driven revolution.

**Increased use of IT, but AI remains science fiction**

Firstly, we set out to investigate current usage of certain forms of information technology (IT) and measure this against the level of usage reported by respondents to our 2018 survey.[36] Respondents were asked to indicate how often they have used the following forms of IT in international arbitrations: 'videoconferencing', 'hearing room technologies (e.g., multimedia presentations, real-time electronic transcripts)', 'cloud-based storage (e.g., FTP sites, cloud-based storage)', 'artificial intelligence (e.g., data analytics, technology-assisted document review)' (AI) and 'virtual hearing rooms'.

'Videoconferencing' and 'hearing room technologies' were the most commonly used forms of

**72%**

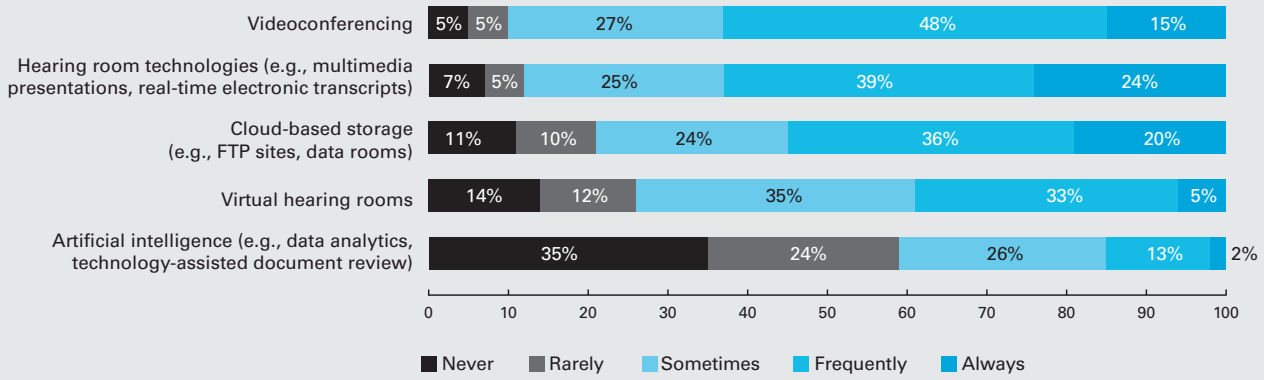
of respondents sometimes, frequently or always use **virtual hearing rooms**

## Summary

- Technology continues to be widely used in international arbitration, particularly 'videoconferencing' and 'hearing room technologies', but the adoption of AI still lags behind other forms of IT.
- The increase in the use of virtual hearing rooms appears to be the result of how the practice of arbitration has adapted in response to the COVID-19 pandemic, as users have been forced to explore alternatives to in-person hearings.
- If a hearing could no longer be held in person, 79% of respondents would choose to 'proceed at the scheduled time as a virtual hearing'. Only 16% would 'postpone the hearing until it could be held in person', while 4% would proceed with a documents-only award.
- Recent (and, in many cases, new) experience of virtual hearings has offered an opportunity to gauge users' perception of this procedural adaptation. The 'potential for greater availability of dates for hearings' is seen as the greatest benefit of virtual hearings, followed closely by 'greater efficiency through use of technology' and 'greater procedural and logistical flexibility'. Aspects that gave respondents most cause for concern included the 'difficulty of accommodating multiple or disparate time zones', the impression that it is 'harder for counsel teams and clients to confer during hearing sessions' and concerns that it might be 'more difficult to control witnesses and assess their credibility.' The fallibility of technology and the phenomenon of 'screen fatigue' were also cited.
- Going forward, respondents would prefer a 'mix of in-person and virtual' formats for almost all types of interactions, including meetings and conferences. Wholly virtual formats are narrowly preferred for procedural hearings, but respondents would keep the option of in-person hearings open for substantive hearings rather than purely remote participation.

**Arbitration users should be forward-looking and prepared to deal with transformative technologies**

**Chart 13: How often have you used the following forms of information technology in an international arbitration?**




technology, with 63% of users claiming that they 'always' or 'frequently' use these aids, and a further 27% and 25% respectively saying they 'sometimes' utilise them. More than half of respondents 'always' or 'frequently' use 'cloud-based storage' (56%), with another quarter of respondents (24%) 'sometimes' using this form of IT. Respondents also avail themselves of 'virtual hearing rooms'—38% of respondents 'always' or 'frequently' use this aid, while a further 35% 'sometimes' make use of these platforms. Again, proportionately fewer respondents have 'never' or 'rarely' made use of these aids.[37]

When compared to the results of the same enquiry posed in our 2018 survey, the use of hearing room technologies, videoconferencing and cloud-based storage has remained relatively consistent.[38] This is perhaps surprising, given the expectations articulated by respondents to our 2018 survey, an overwhelming majority of whom expressed the view that 'videoconferencing' (89%), 'cloud-based storage' (91%) and 'hearing room technologies' (98%) are tools that arbitration users should make use of more often.[39] One might have also expected the changing circumstances resulting from the COVID-19 pandemic to have hastened the adoption of these tools.

One possible explanation for the lack of movement in this regard may be that those who were already using those forms of IT previously have continued to do so. However, those who were infrequent or occasional users have not since had sufficient reason to significantly change their practices, notwithstanding the effect of the pandemic. For example, if hearing room technology is thought to be unnecessary or disproportionately expensive for a given dispute, this cost-benefit analysis might not automatically be affected by the pandemic. It may even be that parties would be under greater pressure than before to reduce costs or logistical complexity. Nor would a switch from an in-person to a virtual hearing necessarily in and of itself impact the decision whether to use tools such as real-time transcription or multimedia presentations. In a similar vein, interviewees pointed out that arbitrations in particular sectors are frequently determined without oral hearings. The pandemic would have comparatively less effect on the practical conduct of documents-only arbitrations, so those involved in them would be correspondingly unlikely to have significantly increased their usage of certain forms of IT.

By contrast, there appears to have been an explosion in the use of virtual hearing rooms: 72% of respondents report using virtual hearing rooms at least 'sometimes', if not 'frequently' or 'always',[40] in stark contrast to our 2018 survey, when 64% of respondents said that they had 'never' utilised virtual hearing rooms and a further 14% said they had used them 'rarely'.[41]

> **The pandemic has served as a catalyst to hasten the wider awareness and acceptance of virtual hearing rooms**

Unlike many of the other forms of IT we considered, this wholesale shift in use of virtual hearing rooms would logically appear to be the result of how the practice of arbitration has adapted in response to the COVID-19 pandemic, as users have been forced to explore alternatives to in-person hearings. The signals that the arbitration community was willing to embrace greater use of technology have been there for some time; even in 2018, the use of virtual hearing rooms was not wholly unknown. In this regard, it could be said that the pandemic has served as a catalyst to hasten the wider awareness and acceptance of an adaptation that some users of arbitration had

already begun to adopt. Whether this increased recourse to virtual hearing rooms will be sustained after the pandemic remains to be seen, as we explore further below.

On the other side of the spectrum, even though there has been a noticeable increase in the use of AI since 2018, adoption of AI continues to lag behind other forms of IT.[42] 35% of the respondent group stated that they have 'never' used AI, while 24% stated that they have used AI rarely. Only 15% declared that they used AI 'frequently' or 'always'. Interviews reveal that this use of AI refers almost exclusively to technology-assisted document review. As one interviewee described it, AI has been a 'brilliant revolution for e-discovery',thereby enhancing procedural efficiency.

Several interviewees mentioned occasional use of other AI tools, such as data analytics. A recurring theme in these discussions was that AI tools are still considered to be relatively expensive and thus not affordable for all arbitration users. It was also noted that, even where clients are able to undertake the expense, they are not always persuaded that these tools will have an added value that will justify the high costs they entail. This is particularly the case for lower value or less complex or data-intensive disputes.

Interviews further revealed that there is a general lack of familiarity with new technologies, coupled, in some cases, with a continuing sense of mistrust. Interviewees from all groups expressed a degree of scepticism towards the potential use of AI tools and algorithms for predictive justice. They raised ethical considerations and doubts as to how much such tools can or should interfere with the adjudicative function. The vast majority of interviewees felt that AI cannot substitute for human arbitrators and counsel.

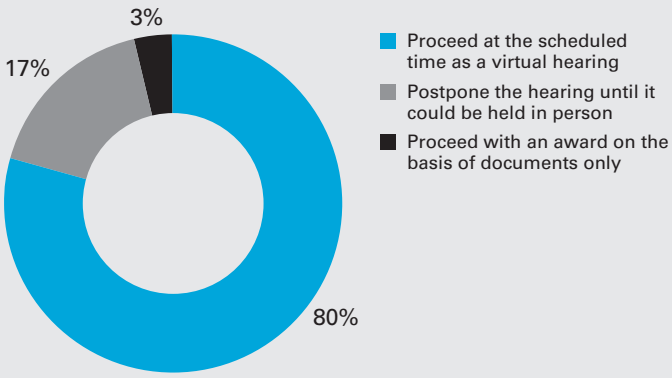
Other interviewees felt that the potential benefits of the evolving use of IT aids should not be held back by this lack of familiarity and the fear that it can engender. They emphasised that all stakeholders should adapt. This includes through training to familiarise themselves with technology and new tools that can impact the arbitration process. This would also assist stakeholders in assessing potential related risks (for example, concerns as to whether use of some IT tools may lead to claims of due process violations). One interviewee noted that arbitration users not only need to be quicker to adapt to technology in the future, but must also guard against complacency or 'self-congratulation' for having adapted thus far to existing technologies. They urged users to be forward-looking and prepared to deal with 'transformative technologies'. Nor did interviewees feel that use of advanced technologies is the province only of those with deep pockets. One interviewee, for example, predicted that adjudication by AI could have a potential role in the future for lower-value disputes.

Overall, interviewees are keen for progress in technology and its use in international arbitration to continue. The 'big picture' view, as espoused by one respondent, is that 'arbitration should (and could) always be at the forefront of innovation [in] dispute resolution'.

**87%**

of arbitrators would prefer to hold a scheduled hearing **virtually** if it can't be held in person

**Chart 14: In general, if you had a scheduled in-person hearing that could no longer be held in person at that time, would you rather:**




**The vast majority of interviewees felt that AI cannot substitute for human arbitrators and counsel**

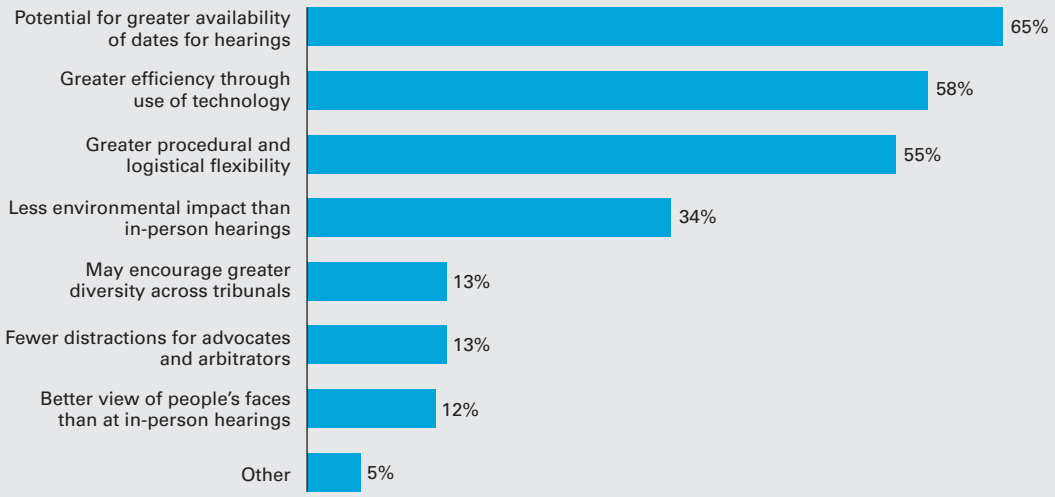
**Hearings: Virtual now or in-person later?**

Hearings are the key stage for many arbitrations. We asked what the preferred course of action would generally be for participants faced with what has recently become a commonplace dilemma: a scheduled in-person hearing that can no longer be held in person at that time because of the COVID-19 pandemic. Would they rather 'postpone the hearing until it could be held in person', 'proceed at the scheduled time as a virtual hearing' or 'proceed with an award rendered on the basis of documents only'?

A clear majority (79%) said they would rather 'proceed at the scheduled time as a virtual hearing', while 16% would 'postpone the hearing until it could be held in person' and 4% would proceed with a documents-only award.

Two key points emerged from interviews. First, and as noted above, although virtual hearings were not widely seen prior to the pandemic, the idea was not new and the technology was available.[43] This means arbitration users were already equipped with the available tools, and so were able to adapt

## Chart 15: What are the main advantages of virtual hearings?




Respondents were able to select up to three options

easily and relatively quickly to the remote environment. Second, this readiness to switch to virtual hearings was not instant. Despite this availability of technology, the majority of interviewees confessed that their initial reaction at the start of the pandemic was a sense of procedural paralysis or a preference to 'wait and see'. They reported that in the first months of the pandemic, they generally preferred to postpone any scheduled hearings in the expectation that the consequent delays would be of relatively short duration. As it became clear that the exceptional circumstances of the pandemic could continue for some time, there was a shift in attitude towards proceeding at the scheduled time using a virtual format. Interviewees explained that this shift was motivated by the practical need to limit the time and costs consequences of indefinite procedural delay. Those who were familiar with forms of remote participation even before the pandemic cited this familiarity as another reason that led them to lean towards a remote hearing instead of postponing.

Interestingly, breaking down the results by respondents' primary role revealed that arbitrators overwhelmingly leant towards holding the hearing as scheduled but in a virtual format (87% of arbitrators selected this option). As interviews revealed, arbitrators were acutely conscious of the difficulty in accommodating multiple postponed hearings in already full diaries. They feared that the need to find multiple fresh sets of hearing dates might lead to even more extensive delays.

It is also interesting to note that some interviewees who said they would opt for a documents-only procedure disclosed that this is a basis on which they routinely practice in any event. For example, arbitrations involving the trade and maritime sectors are commonly conducted without the need for hearings. Interviewees explained they would likely be more comfortable with the idea of forsaking an oral hearing in favour of a documents-only process than users who are more familiar with, or expect, oral hearings to be part of the process—whether in person or virtual.

### Not a black or white picture: The pros and cons

By and large, the arbitration community's reaction after the initial procedural paralysis due to the pandemic was pragmatic. In essence, that the show must go on.

**65%**

of respondents think a key advantage of virtual hearings is '**potential for greater availability of dates**'

The resulting (and, in many cases, new) experience of virtual hearings has offered an opportunity to gauge users' perception of this procedural innovation. We asked respondents what they deemed to be the main advantages and disadvantages of virtual hearings. In each case, respondents were able to choose up to three options from a list of suggested features, and could also include their own suggestions.

The 'potential for greater availability of dates for hearings' was seen as the greatest benefit of virtual hearings (65%), followed closely by 'greater efficiency through use of technology' (58%) and 'greater procedural and logistical flexibility' (55%). One-third (34%) of respondents included 'less environmental impact than in-person hearings'. 'Fewer distractions for advocates and arbitrators' and the potential to 'encourage greater diversity across tribunals' were each chosen by 13% of respondents, closely followed by 'better view of people's faces than at in-person hearings' (12%).

The biggest disadvantages of virtual hearings were found to be 'difficulty of accommodating multiple or disparate time zones' and the impression that it is 'harder for counsel teams and clients to confer during hearing sessions,

i.e., other than in breaks', each chosen by 40% of respondents. Almost as many respondents thought it might be 'more difficult to control witnesses and assess their credibility' (38%). Issues relating to technology were also of concern: 'Technical malfunctions and/or limitations (including inequality of access to particular and/or reliable technology)' and 'more difficult for participants to maintain concentration due to 'screen fatigue' were each chosen by 35% of respondents. Between a quarter and a third of respondents selected 'confidentiality and cybersecurity concerns' (30%) and the view that it is 'more difficult to 'read' arbitrators and other remote participants' (27%).

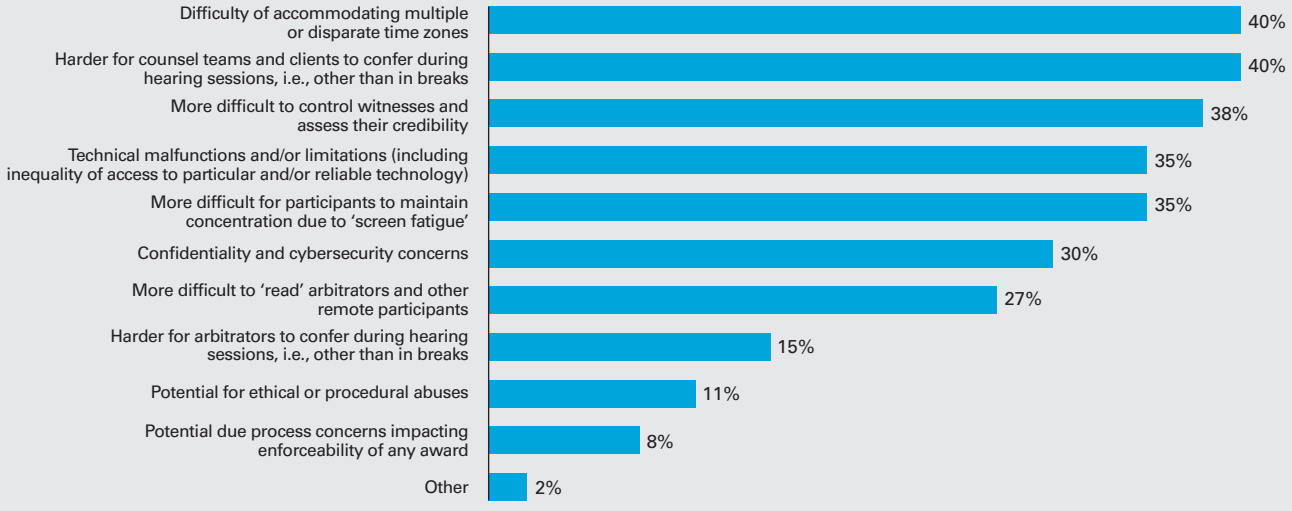
Views expressed in interviews were diametrically opposed. This may not seem remarkable in the context of questions asking respondents to turn their attention separately to the pros and cons rather than considering issues in the round. However, notwithstanding the way in which the questions were phrased, interviewees tended to come down on one side or another: either very positive towards virtual hearings, or very sceptical of them.

This general opposition of views is exemplified by the fact that the main advantage and main disadvantage identified by the respondents both related to scheduling issues: the perceived ease of finding more available dates to schedule virtual as opposed to in-person hearings on the one hand, and the challenge of accommodating disparate time zones on the other. Interviewees highlighted that the truly global nature of international arbitral practice means that the various stakeholders in any given case (e.g., party representatives, counsel, arbitrators, witnesses and experts) may be located in different places and, critically, different time zones all over the world. This makes it particularly challenging to find a given set of hours in the course of a day that would be equally convenient and fair for all participants.

On the issue of ease, or lack thereof, of team communications during virtual hearing sessions, interviewees recounted that they have used various means of communication within their teams. However, they have found that none of them compare to being in the same room physically. This extends to communications outside the strict confines of the hearing room. A number of interviewees, in particular arbitrators, explained that in-person hearings offer the merit of face-to-face deliberations and casual exchanges (for example, over shared meals or in scheduled breaks) that are not simply social encounters. They facilitate the arbitral process by encouraging

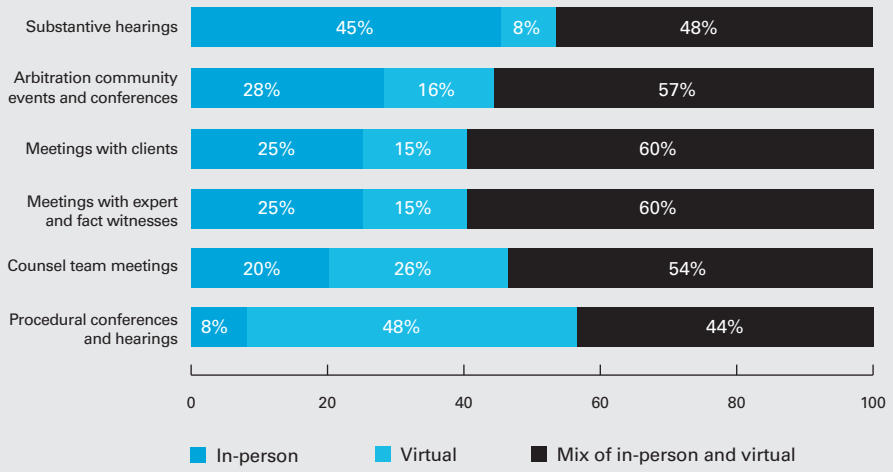
> **As far as virtual hearings are concerned, respondents tended to come down on one side or another: either very positive towards them, or very sceptical of them**

**Chart 16: What are the main disadvantages of virtual hearings?**




Respondents were able to select up to three options

**Chart 17: Post-COVID-19, what do you think your preferred format will be for the following interactions?**




a more collegial atmosphere, making it easier to come to agreements with co-arbitrators or other participants.[44] In the same vein, interviewees in the role of counsel mentioned finding it easier to resolve such things as minor procedural issues in face-to-face discussions in more casual environments, such as over the coffee machines in breaks or a quick knock on the door. In a virtual environment, dealing with the same kind of minor issues is more likely to be a more formal and time-consuming process.

However, respondents did not appear to be unduly concerned about the enforceability of awards when hearings were held virtually. Only 8% of respondents thought 'potential due process concerns impacting enforceability of any award' was one of the main disadvantages of virtual hearings. Only 11% pointed to 'potential for ethical or procedural abuses'. Interviewees revealed that any initial concerns they may have had were alleviated by the first positive messages coming from domestic courts considering enforceability questions arising from virtual hearings. They were also reassured by statements and guidance issued by arbitral institutions (in the context of administered arbitrations) confirming that virtual hearings were permitted under their rules.

Another set of concerns that were frequently mentioned in the interviews related to advocacy and the ability to 'read' other participants. Interviewees conceded that the view of other participants' faces can be better on screen than in person, but stressed that it is harder to capture body language over video, as well as the overall dynamics of a hearing that one can only feel if everyone is in the same room. For some, their misgivings come from a sense of counsel having less control of the process in a virtual setting. Several interviewees found that some aspects of advocacy are tougher when conducted remotely, such as cross-examination. Notwithstanding this, one common theme emerged: A good advocate is a good advocate in any environment, in-person or remote, and the decision whether to choose an in-person or a remote hearing should be made on one basis only—what is best for the client.

How, then, do the parties who are the ultimate stakeholders of the arbitral process feel about virtual hearings? Some interviewees in the role of counsel reported that their clients tended to be very resistant to the idea of a virtual hearing, even if it might lead to costs savings. This was sometimes seen in cases involving states or where the clients were personally invested in the issues at stake. This may be due in part to those clients wanting to have the arbitration equivalent of 'their day in court'. A remote hearing feels less like that. On the other hand, several counsel reported that the majority of their clients were delighted to be able to keep the resolution of their dispute on track and were largely satisfied with the virtual hearings in which they participated. It seems these clients would also be willing to entertain virtual settings as a preference in the future, as discussed further below. As one counsel commented, 'it will be hard to explain to certain clients in the future why an in-person hearing is needed'.

Another interviewee offered the most pragmatic summation of the virtual experience, particularly in the current context: 'Sometimes, good enough is good enough and we should accept that we cannot always operate in a perfect paradigm scenario'.

**Here to stay or a necessary stop-gap in extreme circumstances?**

Hearings are not the only type of interaction that arbitration users have been experiencing in a virtual environment. From meeting clients, colleagues and witnesses to attending seminars and conferences, the arbitration community has had to adapt to interacting online. Are virtual settings for hearings and other interactions here to stay even when the pandemic (or similar circumstances) does not form part of the equation? Or is the current prevalence of remote interactions tolerated as a necessary stop-gap until 'normal' service resumes?

Only **8%** of respondents would prefer **substantive hearings to be held virtually** or **procedural hearings to be held in-person**

**A good advocate is a good advocate in any environment—in-person or remote—and the decision whether to choose an in-person or a remote hearing should be made on one basis only: what is best for the client**

To explore this, we asked respondents what their preferred format for these kinds of interactions is likely to be post-COVID-19—i.e., in 'normal' circumstances, without factors such as social distancing and travel restrictions. A choice of three formats was offered for each category of interaction: 'in-person', 'virtual', and 'mix of in-person and virtual'.

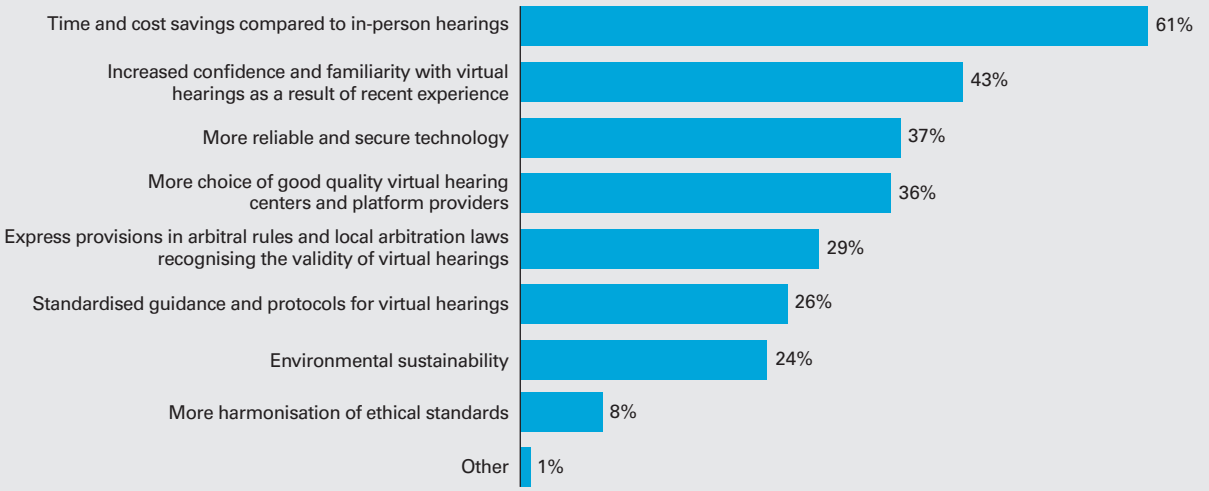
Interviewees confirmed they deemed the mixed option to be equivalent to every lawyer's favourite answer: 'it depends'. As such, it is unsurprising that a 'mix of in-person and virtual' was the most popular option for almost all types of interactions. Respondents expressed a strong preference for this mixed format for 'meetings with clients' (60%), 'meetings with expert and fact witnesses' (60%), 'arbitration community events and conferences' (57%), and 'counsel team meetings' (54%). The only type of interaction for which a different format was narrowly preferred was 'procedural hearings and conferences', where 48% of respondents would prefer a wholly 'virtual' format, compared to 45% preferring the mixed option. For 'substantive hearings', the mixed format was again the most popular choice (48%), but the 'in-person' format was a very close second (45%). Only 8% of respondents said they would prefer a purely virtual setting for 'substantive hearings'. That relative lack of enthusiasm may suggest that those who prefer the mixed approach might be more motivated by the wish to preserve the ability to hold an in-person hearing than by the desire to keep open the option of a virtual arrangement.

In a similar vein, while a mixed format was comfortably the preferred choice of respondents for arbitration community events and conferences, the vast majority of interviewees highlighted the importance of in-person contact. They appreciate the fact that offering access to an event online allows a wide audience to participate, including people who might not otherwise have been able to do so. However, attending an event in person enhances the sense of community and provides networking opportunities that cannot be fully replicated in a virtual setting. By contrast, with regard to client meetings and meetings with expert and fact witnesses, most interviewees agreed that an in-person meeting is rarely required beyond, perhaps, the first encounter. They also reported, however, that the choice of in-person or virtual meetings tended to be largely driven by the client's preference. Some counsel reported increased recourse to routine videoconferences with clients, rather than telephone calls, giving them a kind of face-to-face contact (even if virtual) that they would not otherwise have had.

When discussing virtual hearings, two key takeaways emerged from

> **From meetings with clients, colleagues and witnesses to attending seminars and conferences, a mix of in-person and virtual was the most popular option for almost all types of interactions**

**Chart 18: What would make you more likely to choose a virtual rather than in-person format for hearings post-COVID-19?**




Respondents were able to select up to three options

interviews. First, there appears to be a growing expectation that virtual hearings will become the default option in the future for procedural hearings and conferences. As several interviewees pointed out, it is difficult now to find a plausible explanation for travelling, sometimes to a different country, to attend a procedural hearing. Similarly, it is hard to say why telephone calls rather than video-conferences have been seen as the standard alternative. As one senior practitioner noted, it used to be common practice for early case management conferences to be held in person, as the first opportunity to 'put a face to the dispute' and evaluate the dynamics. They felt the advent of videoconferencing technologies could achieve largely the same result, a sentiment echoed by others. Second, as discussed further below, interviewees consider it is less probable that wholly virtual formats will become the prevalent choice for substantive hearings. In particular, they viewed the in-person format as the dominant arrangement for substantive hearings for cases with complex factual backgrounds. However, they predicted that 'hybrid' hearings (mix of virtual and in-person) would continue to grow in popularity as users gained increased familiarity with the relevant technology and the procedural and logistical demands of remote participation in a hearing.

We also asked what would make respondents more likely to choose a virtual rather than in-person format for hearings post-COVID-19. Respondents were again asked to select up to three options from a list of suggestions. 'Time and cost savings compared to in-person hearings' (61%) was the most popular choice, followed by 'increased confidence and familiarity with virtual hearings as a result of recent experience' (43%). Technical and practical factors, such as 'more reliable and secure technology' and 'more choice of good-quality virtual hearing centres and platform providers' ranked third and fourth with almost identical percentages (37% and 36% respectively). Almost a third of the respondents chose 'express provisions in arbitral rules and local arbitration laws recognising the validity of virtual hearings' (29%), while 'standardised guidance and protocols for virtual hearings' and 'environmental sustainability' were selected by almost a quarter (26% and 24% respectively).

These findings were reflected in interviewees' thoughts on the use of technology and their predictions for the future use of virtual hearings. A vast majority of interviewees emphasised the importance, going forward, of developing best practices and reliable technology. They also stressed the need for guidance from arbitral institutions in administered arbitrations.

Before the COVID-19 pandemic, the vast majority of users attending hearings would have considered the in-person format to be the norm, particularly for substantive hearings. The pandemic necessitated the switch for many users to virtual arrangements. Regardless of whether users may prefer to continue with remote forms of participation or revert to the in-person model where and when possible, the experiences we have now had with virtual hearings have presented an opportunity to evaluate and learn from their use. As interviewees optimistically hoped, perhaps this will also encourage accelerated acceptance by the arbitration community of technology-driven change in the future.

> **There appears to be a growing expectation that virtual hearings will become the default option for procedural hearings**

**61%**

**Time and cost savings** was cited by 61% of respondents as a reason to opt for virtual rather than in-person hearings