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### Digital Readiness Index for arbitration institutions: Challenges and implications for dispute resolution under the Belt and Road Initiative

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## Digital Readiness Index for Arbitration Institutions: Challenges and Implications for Dispute Resolution under Under the Belt and Road Initiative

Allison Goh

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*Post-COVID-19, a paradigm shift has occurred in the adoption of technology in arbitration. Leading arbitral institutions have adapted quickly, highlighting the foresight of institutions who have existing technological infrastructure in place. This article proposes a 'Digital Readiness Index', which aims to evaluate arbitral institutions on their level of digital readiness based on five evaluative indicators. Cross-referenced against Institute for Management Development (IMD's) 2019 World Digital Competitiveness Rankings, the findings reveal synergies between an economy's digital competitiveness and the adoption of technology in dispute resolution. To further the development of dispute resolution processes under the Belt and Road Initiative, strategic cooperation is required under the Beijing Joint Declaration of the 'Belt and Road' Arbitration Institutions, to advance best practices and protocols in the use of technology in arbitration, and address challenges such as cybersecurity and data protection.*

### 1 INTRODUCTION

The global pandemic has thrown the world into high alert. With social distancing and isolation measures being implemented around the globe, the way arbitral institutions conduct and practitioners participate in international arbitration proceedings has had to change swiftly. The pandemic situation has accelerated, if not necessitated, the implementation of technology in arbitral proceedings. From the initiation of case proceedings to its culmination in a final merits hearing, arbitration institutions have taken the lead to encourage the use of technology to minimize disruptions to the dispute resolution process. Indeed, the distinct shift in attitudes and P 254

mindsets of arbitration users is palpable. Instead of treating technology as a back-up or secondary measure in the dispute resolution process, it is now becoming apparent that online tools and technology will take centre-stage as part of the new normal.

Section 1 of this article examines responses from leading arbitration institutions around the world, including the American Arbitration Association International Centre for Dispute Resolution (AAA-ICDR), International Chamber of Commerce (ICC), International Centre for Settlement of Investment Disputes (ICSID), London Court of International Arbitration (LCIA), Vienna International Arbitral Centre (VIAC), Arbitration Institute of the Stockholm Chamber of Commerce (SCC), Singapore International Arbitration Centre (SIAC), Hong Kong International Arbitration Centre (HKIAC), Korean Commercial Arbitration Board International ('KCAB International'), China International Economic and Trade Arbitration Commission (CIETAC), Beijing Arbitration Commission (BAC), Shanghai International Arbitration Centre (SHIAC), Shenzhen Court of International Arbitration (SCIA) and Guangzhou Arbitration Commission (GZAC). This article highlights innovative responses from various institutions, including the foresight of several institutions who already had online case management platforms and robust remote hearing infrastructures in place.

Section 2 proposes a 'Digital Readiness Index', which aims to evaluate arbitral institutions on their level of digital readiness based on five evaluative indicators. Cross-referenced against IMD's 2019 World Digital Competitiveness Rankings, the findings reveal synergies between an economy's digital competitiveness and its adoption of technology in dispute resolution.

Section 3 discusses the impact of this paradigm shift towards technology on Belt and Road Initiative (BRI) dispute resolution. Members of the Beijing Joint Declaration of the 'Belt and Road' Arbitration Institutions ('Beijing Joint Declaration')<sup>(1)</sup> have set out their intentions to form a multi-national cooperative framework to promote international arbitration for BRI disputes. In this regard, digitally-ready arbitral institutions should lead the way under the Beijing Joint Declaration to share best practices and formulate protocols on the use of technology in arbitration, building on good work such as the Seoul Protocol on Videoconferencing in International Arbitration ('Seoul Protocol')<sup>(2)</sup> and the Delos Checklist on holding arbitration and mediation hearings in times of Covid-19 ('Delos Checklist').<sup>(3)</sup> Crucially, members of the Beijing Joint Declaration should enhance cooperation in the following areas: (1) best practices in

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the use of remote hearings; (2) cybersecurity and data protection; and (3) the uneven advancement of technology.

## 2 THE FUTURE IS ONLINE

In 2017, Alexis Mourre, President of the ICC International Court of Arbitration, stated that online dispute resolution is the future of dispute resolution and that technology offers arbitration unprecedented opportunities to save time and costs. <sup>(4)</sup> In a 2018 Queen Mary University of London and White & Case (QMUL) international arbitration survey, more than half of the respondents thought that 'increased efficiency, including through technology' is the factor that is most likely to have a significant impact on the future evolution of international arbitration. <sup>(5)</sup> While the benefits of technology have been lauded, actual adoption in practice has arguably been slow. A 2017 ICC Report revealed that many widely-available Information Technology (IT) solutions are not used to save time and costs as effectively as they could be. For instance, parties and tribunals were reluctant to use video-conferencing even for minor witnesses, when such a solution could easily cut time and costs. <sup>(6)</sup>

In response to the pandemic, arbitration institutions have risen to the challenge, allowing for proceedings to be conducted virtually so as to minimize disruptions. Some institutions appear to be better-equipped for this transition because of their existing technological infrastructure, and should lead the way by sharing information in order for the rest of the arbitral community to benefit and adapt to this new normal.

### 2.1 Case management

In response to the Coronavirus disease 2019 (COVID-19) pandemic, arbitral institutions have put in place business continuity and contingency plans in order to prioritize the health and safety of all users. Institutions with existing digital

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infrastructure have had particularly easy transitions. Since 2019, VIAC has operated under a fully electronic case management system. <sup>(7)</sup> Similarly, from September 2019, all new SCC arbitrations are administered on the SCC Platform – a digital platform for communication and file sharing between the SCC, the parties, and the tribunal. <sup>(8)</sup>

Institutions have also developed interim measures for payments and transmission of awards. By and large, institutions have informed parties to make payments by electronic bank transfer or on their online platforms, and are transmitting awards electronically, with hard copies to follow. In fact, delivery of awards by way of electronic transmission results in greater efficiency as this allows parties to receive the award simultaneously and instantaneously, regardless of location.

#### 2.1[a] Commencing an Arbitration Case

Almost all institutions have requested for requests/notices of arbitration to be filed electronically for the duration of the pandemic. SIAC and HKIAC have informed users to commence cases by email, including applications for emergency arbitrators. <sup>(9)</sup> Arbitration institutions which have online case filing systems have informed their users to file their cases online, for instance, AAA-ICDR's Fast File, LCIA's Online Case Filing Platform, the SCC Platform, BAC, and GZAC's online platforms. CIETAC has two electronic systems available, an Online Filing System (computer) and WeChat filing (mobile). <sup>(10)</sup>

#### 2.1[b] Written Submissions and Communications

Prior to the pandemic, there was already a shift from reliance on paper and face-to-face approaches, to processes that are technologically supported and either partly or entirely online. <sup>(11)</sup>

In a 2015 International Bar Association (IBA) Report, P 257

practitioners noted their reliance on email for the purposes of communication and file transfer, and they were also keen on going paperless, by saving documents to a cloud system/platform. <sup>(12)</sup> Practitioners have also noted that hearing bundles are now increasingly electronic, since they are more efficient and easier to work with (with advantages such as hyperlinked cross-references), not to mention the environment-saving impact. <sup>(13)</sup>

With COVID-19, arbitrators and parties are further incentivized to take their communications and submissions online, with support from institutions. Many institutions have made updates to their rules to explicitly provide for and facilitate online correspondence. HKIAC amended its Arbitration Rules in 2018 to reflect that any written communication shall be deemed to be received if uploaded to any secured online repository that the parties have agreed to use. <sup>(14)</sup> Additionally, the VIAC Rules state that the Secretariat shall receive all written communications between the arbitral tribunal and the parties in electronic form. <sup>(15)</sup>

## 2.1[c] Integrated Platforms

Institutions with existing digital infrastructures have embraced the new normal. For instance, AAA-ICDR's WebFile enables users to access and manage their case in one secure place, including the ability to search and sort documents as well as tasks. LCIA's online filing systems allow parties to file requests for arbitration, responses, applications for expedited procedures, supporting documents, and pay filing fees. The SCC Platform allows users to communicate and file case materials securely on the platform. SIAC, in collaboration with Maxwell Chambers, offers an integrated platform for case preparation, and connected hearing room services for parties and tribunals. <sup>(16)</sup>

Chinese arbitral institutions such as SCIA and GZAC have invested in digital platforms allowing users to conduct proceedings online from start to finish. In response to the pandemic, both SCIA and GZAC took the initiative to upgrade their platforms. The SCIA upgraded its online filing platform's identity verification as well as its payment processes. The remote hearing platform was also upgraded to

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facilitate multi-party video-conferencing. With the help of voice-to-text technology, transcripts of arbitration hearings can be automatically generated and displayed synchronously during the hearing. The audio – and video-recordings are then stored on a cloud system/platform. The transmission and storage capacity of electronic evidence on the platform was also increased, as well as the platform's ability to accept multiple formats of electronic evidence. <sup>(17)</sup> Similarly, the technical aspects of GZAC's arbitration platform was strengthened to ensure online filing and payments could be done twenty-four hours a day. <sup>(18)</sup>

Institutions have also taken practical measures to encourage users to shift online. SCIA announced a special reduction of fees for parties who choose to use their online arbitration platform during the pandemic. <sup>(19)</sup> In the same vein, the SCC announced that together with Thomson Reuters, the SCC is making a version of the SCC Platform available free of charge to all ad hoc arbitrations globally for arbitrations which commenced during the COVID-19 outbreak. <sup>(20)</sup>

In this regard, because of their existing technological capabilities and infrastructure, several arbitral institutions are well-equipped to handle disruptions caused by the pandemic. After the launch of the SCC platform, the SCC planned a world tour to discuss cybersecurity and digitalization within arbitration. <sup>(21)</sup> As arbitral institutions continue to fine-tune their digital platforms, this information can be shared with other institutions looking to upgrade their existing infrastructure and enhance user experience.

## 2.2 Hearings

One of the immediate issues that parties and tribunals have had to grapple with is how to deal with scheduled hearings. There are a few options available, first, to

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adjourn the hearing to a later date; second, for the proceedings to proceed on a documents-only basis; and third, to proceed with a remote hearing.

### 2.2[a] Postpone Hearing

The first option to adjourn is understandably difficult as the pandemic situation has become global with no definite end date in sight. However, as some cities have gone into lockdown, postponement of hearings may be inevitable. For instance, SHIAC announced that in light of the impact of the pandemic, hearings originally scheduled from 31 January to 9 February 2020 will be postponed. For hearings held after 9 February 2020, if parties are unable to participate due to the coronavirus, parties should apply for an extension of time in accordance with the arbitration rules.

A potential issue that may arise is if parties abuse this opportunity by requesting for indefinite or lengthy postponement of the hearing. As envisaged under the SHIAC Arbitration Rules (effective 1 January 2015) ('SHIAC Arbitration Rules'), a party requesting postponement has to have 'justifiable reasons' for doing so and the tribunal will exercise its discretion in whether to grant the request. Similarly, parties have to demonstrate 'sufficient cause' if they are unable to appear for a meeting or hearing as per Rule 24.3 of the SIAC Rules (effective 1 August 2016) ('SIAC Rules'). To guard against abuse, the tribunal would have to evaluate the reasons put forth carefully and ask for corroborating evidence, for instance, a medical certificate or quarantine order issued by the relevant authority.

The Delos Checklist can also assist tribunals and parties in this situation. The Delos Checklist recommends that tribunals hold a conference call to discuss the questions raised in the checklist with the parties. Rather than opting for an automatic suspension of the proceedings or of time limits, tribunals should decide each matter on the basis of its individual circumstances, taking into account the provisions of the dispute resolution agreement (e.g., time limits for pre-arbitral steps, fast-track

arbitration); the specific characteristics of the case (such as a pending request for interim measures); and requirements at the seat of arbitration. <sup>(22)</sup> Ultimately, dialogue between the tribunal and parties is key in order to ensure parties' interests are balanced with fairness and efficiency.

With regard to postponement of hearings, an issue may arise in relation to expedited or fast-track procedures. The Delos Checklist notes that this is one factor that tribunals should consider in adjusting timelines, and arbitration rules do provide for such situations. For instance, rule 5.2(d) of the SIAC Rules allows for an extension of time to be granted under the expedited procedure if P 260

'exceptional circumstances' arise. If inordinate delay is expected and parties require it, rule 5.4 of the SIAC Rules also allows for proceedings to be taken off the expedited procedure. If time is of the essence, parties and tribunals may decide to proceed with a documents-only hearing or remote hearing instead.

## 2.2[b] Documents-only Arbitration

The second approach is to proceed on a documents-only basis. Tribunals, with the agreement of parties, can exercise their discretion to proceed on a documents-only basis for the entire dispute or part thereof. For instance, Article 25(2) of the BAC Arbitration Rules (effective 1 September 2019) ('BAC Arbitration Rules') states that if the parties agree on a documents-only arbitration, or if the tribunal considers an oral hearing unnecessary and the parties so agree, the tribunal may decide the arbitration on the basis of the documents submitted by the parties. Similarly, rule 24.1 of the SIAC Rules allows for a documents-only arbitration if the parties so agree. However, parties may not be likely to agree to proceeding on a documents-only basis, especially for complex and large value claims.

## 2.2[c] Remote Hearing

The final option is to proceed with a remote hearing, and this appears to be the de facto choice. HKIAC reports that their users are generally choosing to proceed with hearings, and incorporate virtual hearing aspects as necessary, rather than postpone proceedings. <sup>(23)</sup> The legal seat of arbitration need not be the same as the hearing venue. Therefore, there is no issue if the hearing venue changes, or a remote hearing is decided upon. Article 24(2) of the KCAB's International Arbitration Rules (effective 1 June 2016) ('KCAB Arbitration Rules') permits hearings to be heard at any physical location that the tribunal deems appropriate.

Respondents in the 2018 QMUL international arbitration survey noted that one of the most notable advantages of technology is the ability of participants to conduct hearings and meetings via video-conferencing due to the substantial savings in terms of time and money. <sup>(24)</sup> Indeed, there is widespread acceptance among practitioners that interim and procedural hearings can be conducted virtually. <sup>(25)</sup> Year-on-year, ICSID has seen a steady uptick in its number of online hearings. In 2019, about 60% of the 200 hearings and sessions organized by ICSID were held by video-conference. <sup>(26)</sup>

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GZAC raised the example of two financial dispute cases whose hearings were successfully conducted online. The chief arbitrator in these cases, Professor Ye Changfu of the School of Law of Guangdong University of Foreign Studies, was in his hometown of Jingzhou, Hubei, and was unable to come to Guangzhou for the scheduled hearing because he was isolating at home. Yao Zhenqian, head of the Nansha International Arbitration Center, branch of GZAC, noted that 'originally, we thought that these two cases would be postponed, but Professor Ye is very dedicated. Considering that parties wanted to resolve the dispute as soon as possible, he offered to host the trial remotely at home'. <sup>(27)</sup> CIETAC also raised the example of a complex, high-value, stock investment dispute case, whose trial was successfully completed online during the pandemic period. <sup>(28)</sup>

What happens when parties do not agree to a remote hearing? Article 67 of the SCIA Arbitration Rules (effective 21 February 2019) ('SCIA Arbitration Rules') provides that the SCIA or the arbitral tribunal may decide to conduct all or part of the arbitral proceedings by virtue of information technology, with the consent of the parties. In this case, deadlock situations may arise between parties and the tribunal. This situation raises delicate questions and arbitral tribunals have to balance the parties' right to be heard and to be treated equally with its obligation to conduct the proceedings in an efficient and expeditious manner. <sup>(29)</sup> For instance, rule 19.1 of the SIAC Rules prescribes, inter alia, that the tribunal shall ensure the fair, expeditious, economical, and final resolution of the dispute. In the same vein, Article 2(3) of the BAC Rules provides, inter alia, that the tribunal shall ensure the efficient and fair resolution of disputes. Ultimately, as recommended by Professor Scherer, a balancing exercise should be conducted by the tribunal with a multifactorial approach, including the assessment of the reasons for, and the content of, the remote hearing, as well its envisaged technical framework, the envisaged timing for the hearing, any potential delay if it is held physically, and costs considerations. <sup>(30)</sup> Arbitrators have to be mindful of their independent duties to conduct proceedings fairly and efficiently, and make sure there is proactive planning on

their part, such as

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initiating a conference call to discuss the possibility of remote hearings or contingency plans, as proposed by the Delos Checklist.

## 3 DIGITAL READINESS INDEX

In section 1, we examined the responses of leading arbitral institutions around the world towards digitalization in response to the COVID-19 pandemic. Section 2 proposes a 'Digital Readiness Index'.

### 3.1 Methodology

The 'Digital Readiness Index' aims to evaluate arbitration institutions according to their integration of technology into their processes from a user perspective (see Table 1). The Digital Readiness Index is formulated according to five indicators: (1) Case Filing and Management; (2) Arbitrator Panel; (3) Meetings/Hearings; (4) Security; and (5) Thought Leadership. Table 2 provides a more detailed explanation of the five indicators. Each indicator is further separated into three bands, Band I (1 point), Band II (2 points), Band III (3 points). By computing the total weighted scores from these five indicators, arbitration institutions' overall digital readiness score can be tabulated (see Table 3).

#### 3.1[a] Overview of Digital Readiness Index

Table 1 provides a general overview of the types of conduct that fall within the three bands of the Digital Readiness Index, with Band I being the lowest, and Band III being the highest on the scale of digital readiness. This is a general overview of the types of institutional conduct that would fall within the three bands. A more detailed breakdown with respect to each indicator is provided in Table 2.

Table 1 Overview of Digital Readiness Index

<i>Band I</i>	<i>Band II</i>	<i>Band III</i>
Predominant reliance on non-digital means of case filing and case management. The arbitration process is conducted primarily in-person. Seminars and workshops on arbitration are conducted primarily in-person.	Use of electronic case-filing and digital case management. Incorporation of IT tools and software to enhance the arbitration process, including remote meeting/hearing facilities. Basic implementation of cybersecurity and data protection measures. Resources for users and arbitrators are available online.	Digital case management ecosystem that supports electronic case filing, payment, correspondence, and document storage. Integration of tools and software to enhance the arbitration process including robust remote meeting/hearing facilities. Targeted implementation of cybersecurity and data protection measures. Comprehensive digital library of resources available to users. Formulation of best practices and protocols on use of technology in arbitration.

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#### 3.1[b] Digital Readiness Index Indicators

The Digital Readiness Index is comprised of five evaluative indicators. Each indicator is weighted differently according to its importance in the arbitration process. Each indicator is separated into three bands: Band I, Band II, and Band III. Table 2 provides a detailed explanation of the five indicators.

Table 2 Digital Readiness Index Indicators

<i>Indicators</i>	<i>Band I</i>	<i>Band II</i>	<i>Band III</i>
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	<i>Indicators</i>	<i>Band I</i>	<i>Band II</i>	<i>Band III</i>
1.	Case Filing and Management (30%)	Predominant reliance on non-digital, non-automated case filing and case management.	Electronic case filing and payment available. Rules, fee calculators and other relevant information to the arbitration process is readily available on the institution's website.	Digital platform which allows users to file their case online and make payment. Users and arbitrators can efficiently manage their cases through the online platform. Some institutions have also created apps (mobile-friendly) for case filing and to provide on-the-go access to rules, fees, model clauses and other information relevant to the arbitration process. A user-friendly, searchable list of arbitrators is available online, with advanced search filters. Some institutions also maintain specialized arbitrator panels. Robust remote meeting/hearing facilities available with ample institutional support. Ancillary hearing-room services available (translation, transcription, use of multimedia presentations, etc.). Use of secure electronic communications, payment, document storage (e.g., cloud platforms) and video-conference platforms. The institution invests in the security of its own digital infrastructure and implements targeted cybersecurity and data protection protocols.
2.	Arbitrator Panel (10%)	Parties nominate their own arbitrators, pursuant to the institution's rules.	A list of arbitrators is available online. The list is grouped according to basic categories such as name and location. Institutions may offer arbitrator recommendation/appointment services.	
3.	Meetings/Hearings (20%)	Predominant reliance on in-person meetings and hearings to conduct arbitration.	Parties are free to use commercially available platforms (Skype, Zoom, etc.) to conduct remote meetings/hearings with basic institutional support.	
4.	Security (15%)	Use of unsecured email, software, and tools (e.g., public email services, free document storage platforms, etc.).	Use of email, payment, document storage and video-conference platforms with embedded security functions. The onus is placed on users to enable these security functions. General cybersecurity and data protection guidelines in place.	

<i>Indicators</i>	<i>Band I</i>	<i>Band II</i>	<i>Band III</i>
5. Thought Leadership (25%)	Seminars, trainings, and workshops conducted primarily in-person. Conceptualization stage of use of technology in dispute resolution.	Seminars, trainings, workshops available in-person and online. Database of dispute resolution resources available online, including specific resources related to online arbitration and/or the use of technology in arbitration.	Seminars, trainings, and workshops available in-person and online. Comprehensive digital library of dispute resolution resources. Formulation of guidelines, protocols, and rules specific to online arbitration, including related issues such as cybersecurity and data protection.

The Digital Readiness Index aims to evaluate institutions' use of technology from a user perspective. The five evaluative factors cover the entire life cycle of the dispute. From initiating the case (Indicator 1: Case Filing and Management); appointing an arbitrator (Indicator 2: Arbitrator Panel); the use of remote meetings and hearings to conduct arbitration (Indicator 3: Meetings/Hearings); security of the entire process (Indicator 4: Security); and support provided by the institution in terms of online resources, including guidelines on the use of remote hearings (Indicator 5: Thought Leadership). Each indicator is

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weighted differently depending on its importance to the arbitration process from a user perspective.

The first indicator is 'Case Filing and Management' (weighted 30%). From a user perspective, case initiation is the first point of contact with the institution. A simple online form for case filing (or at a more advanced level, a user log-in portal or app) would enhance the user experience by making the case initiation process streamlined and user-friendly. Having easy access to the arbitration rules online and a fee calculator will also enhance the case initiation process, such that users are readily aware of the right procedures to be followed and fees to be paid. Additionally, where institutions have a digital platform for case administration, users and arbitrators are able to manage their cases more efficiently, for instance, being able to log-in into a centralized portal to access information and important dates relevant to your case. According to the 2020 Singapore International Dispute Resolution Academy (SIDRA) International Dispute Resolution Survey, efficiency was selected by the survey respondents as the main consideration influencing their choice of arbitration institution. <sup>(31)</sup> Having a digitized case management system will greatly improve user experience by increasing efficiency and this is especially useful if a user or arbitrator has several cases ongoing with the same institution. Due to the central importance of case filing and management, this indicator is weighted the most among the five indicators (weighted 30%).

The second indicator is 'Arbitrator Panel' (weighted 10%). Selecting an arbitrator is a vital part of the arbitration process from a user perspective. Having a list of arbitrators on the institution's website will help parties immensely in nominating an arbitrator and speed up their search process, particularly where institutions enhance user-friendliness by having advanced filters (searchable by country, nationality, location, expertise, etc.). Providing detailed information on their background and arbitrator experience will also help parties' decision-making. Some institutions also offer specialty panels (e.g., for intellectual property disputes).

The third indicator is 'Meetings/Hearings' (weighted 20%). From a user perspective, the ability of the institution to facilitate remote meetings and hearings is very important. The use of remote hearings has been the chief area of focus by the arbitral community in response to the Covid-19 pandemic, as travel and social distancing restrictions have necessitated the use of virtual meetings and hearings. This indicator evaluates the institution's ability to

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facilitate remote meetings and hearings, such as the capabilities of the video-conferencing platform, whether ancillary hearing-room services are provided (translation, voice-to-text transcription, etc.), and whether the institution as a whole provides adequate guidance and helps to make the remote hearing experience user-friendly and accessible to parties.

The fourth indicator is 'Security' (weighted 15%). Confidentiality is of vital importance to arbitral proceedings. As such, security is critical for digital case management and online arbitration. The data, documents, and correspondence that are transferred between parties, the tribunal, and the

institution are sensitive and critical information that needs to be safeguarded. Some institutions have invested in cloud systems to facilitate the secure storage and transfer of large files (as may be required in evidence-heavy arbitrations). Additionally, as the Covid-19 pandemic has pushed everything online, parties may be tempted to use unsecured email, or to use commercially available video-conferencing platforms without the right security settings. This is where institutions have an important role to play to ensure that targeted cybersecurity and data protection protocols are in place. Institutions should also be cognizant of the possibility of cyber-attacks. Both the institution and tribunal (in consultation with the parties) should implement a cybersecurity and data protection protocol and/or contingency plan to prevent and strategize for a potential loss or leak of case data.

The fifth and final indicator is 'Thought Leadership' (weighted 25%). Thought leadership refers to the contributions that institutions have made towards increasing dialogue on online dispute resolution (ODR) and furthering best practices in the use of technology in arbitration. This includes resources made available on the institution's website (news, publications, case notes, regulations, etc.). Institutions have also organized webinars on the use of technology in arbitration which have helped users work through practical issues relating to the conduct of virtual hearings. Institutions have also formulated rules, guidelines, and protocols on online arbitration and virtual hearings. These efforts are noteworthy and constitute the fifth indicator (Thought Leadership) because this goes towards showing how strongly an arbitral institution endorses online/digital proceedings and how well it supports parties and tribunals in executing them.

### 3.1[c] Overview of Institutions according to the Digital Readiness Index

Table 3 sets out an overview of the fourteen arbitration institutions covered in this article and details each institution's use of technology in accordance with the indicators of the Digital Readiness Index. Each indicator can be scored according to the three bands, Band I (1 point), Band II (2 points), Band III (3 points). By

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computing the total weighted scores from these five indicators, arbitration institutions' overall digital readiness score can be calculated.

Table 3 Overview of Institutions According to the Digital Readiness Index

Institution	Indicator 1 Case Filing and Management	Indicator 2 Arbitrator Panel	Indicator 3 Meetings/Hearings	Indicator 4 Security	Indicator 5 Thought Leadership
Weightage	30%	10%	25%	15%	25%
American Arbitration Association International Centre for Dispute Resolution (AAA-ICDR)	Fast File allows users to quickly file a case online with guest access. Users can also Quick Pay invoices online. The AAA-ICDR's mobile app contains rules and standard clauses. AAA Webfile/Panelist eCenter allows users/arbitrators to sign into their account to access and manage their case.	AAA-ICDR assists parties in the selection of arbitrators, through a full-service option (case administration and appointment), or an ad hoc appointment service where ICDR assists parties to shortlist arbitrators. ICDR's Energy Arbitrators List is available online and searchable by country, language, key words, etc.	AAA-ICDR has issued a Virtual Hearing Guide for parties utilizing Zoom. AAA-ICDR's Zoom Virtual Hearing Managed Services aims to create a productive virtual hearing experience. A virtual hearing specialist will attend to all details and configure the set-up.	AAA-ICDR has implemented best practice policies and technologies to protect all case data stored and managed on its technology infrastructure. The AAA-ICDR has also formulated a Cybersecurity Best Practices Guide, an Information Security Program, and a Business Continuity/Cybersecurity Incident Response Plan.	AAA-ICDR has a digital library of resources including recorded webinars. A ClauseBuilder tool is available online to assist parties in drafting dispute resolution clauses. AAA-ICDR has developed numerous best practices guides for online arbitration, including a cybersecurity checklist.
AAA-ICDR	Band III	Band II	Band III	Band III	Band III

<i>Institution</i>	<i>Indicator 1 Case Filing and Management</i>	<i>Indicator 2 Arbitrator Panel</i>	<i>Indicator 3 Meetings/Hearings</i>	<i>Indicator 4 Security</i>	<i>Indicator 5 Thought Leadership</i>
Arbitration Institute of the Stockholm Chamber of Commerce (SCC)	Requests for arbitration can be submitted via email. An online fee calculator is available. From September 2019, all new SCC arbitrations are administered on the SCC Platform. Each case is allocated its own individual 'site' on the platform, and access is restricted.	Under the SCC Rules, the claimant is required to appoint an arbitrator along with the request for arbitration. The arbitrator must be contacted before the appointment is submitted to the SCC. Any person may be appointed so long as he/she is impartial and independent.	The SCC Platform is a secure digital platform for communication and file sharing. The site has a calendar and notice board function, and an archiving service after the arbitration has been terminated. The Stockholm International Hearing Centre launched a virtual platform for digital hearings in April 2020.	The SCC Platform is powered by HighQ. All files are kept in cloud-based storage in high security facilities with separate back-up facilities. The system has numerous security systems in place including two-factor authentication, firewalls, anti-virus, etc. and is regularly scanned for vulnerabilities.	SCC has a comprehensive digital library with resources on arbitration. The SCC World Tour was initiated to provide insights into the trends in legal tech and digitalization, privacy matters and cyber security as well updates on the SCC Platform. The tour continues online through the SCC Online Seminar Series.
SCC	Band III	Band I	Band III	Band III	Band III
Beijing Arbitration Commission (BAC)	BAC has an online service platform that allows users to log-in to file and access their case. The relevant filing forms are downloadable from the website, and there is also an online fee calculator.	BAC's Panel of Arbitrators is available for download on the website. There is a search tool, with filters such as name, expertise, occupation, nationality, residence, language, etc.	BAC has issued guidelines to assist parties in online hearings. BAC does not recommend any specific video – conferencing platform; and has cooperated with vendors outside China so that international parties have more options.	BAC's working guidelines on how to conduct online arbitrations state, inter alia, that parties should choose platforms that have security functions and to verify the identity of parties. BAC also provided a template of a non-disclosure agreement for online hearings.	BAC provides online resources and webinars on arbitration. BAC has released working guidelines for online hearings, covering pre-hearing procedures and frequently asked questions.
BAC	Band III	Band III	Band II	Band II	Band III
China International Economic and Trade Arbitration Commission (CIETAC)	Case filing can be done through CIETAC's online case filing system or through its public WeChat account. Filing forms are also downloadable from the website, and there is also an online fee calculator.	CIETAC's Panel of Arbitrators is available on the website, with QR codes for each arbitrator which can be scanned for more information. There is also an online search tool, with filters such as name, nationality, language, location, and expertise.	CIETAC has an Online Dispute Resolution Center which specializes in resolving Internet domain name, e-commerce, and other disputes through ODR. CIETAC has its own Intelligent Hearing Platform for virtual hearings.	Pursuant to CIETAC's Online Arbitration Rules, CIETAC must make reasonable efforts to ensure secure online transmission of case data and encrypt data to maintain confidentiality. CIETAC's Provisions on Arbitration Actively Virtual Hearings state that hearings are strictly confidential.	CIETAC has a comprehensive online library of resources, and webinars. In addition to its online arbitration rules, CIETAC launched trial Guidelines on Proceeding with Arbitration Actively and Properly during the COVID-19 Pandemic and Provisions on Virtual Hearings in April 2020.
CIETAC	Band III	Band III	Band III	Band II	Band III
Guangzhou Arbitration Commission (GZAC)	GZAC has an online platform for parties and arbitrators. Users can file and manage their cases through the platform. Rules, arbitration procedures, and a fee calculator are readily accessible on the website.	GZAC's list of arbitrators is available online, and categorized according to occupation, education, expertise, and location. The list is searchable by name.	GZAC's Arbitration Cloud platform facilitates evidence exchange and video – conferencing. GZAC also offers online arbitration for Internet-related contractual disputes.	Under the online Arbitration Rules, GZAC will provide secure transfer of case data between the parties, tribunal and GZAC, and will encrypt data for confidentiality.	GZAC has an online library of resources, including information on Artificial Intelligence (AI), blockchain and examples of cases incorporating such technology. GZAC's online Arbitration Rules were the first in mainland China. GZAC initiated the China Internet Arbitration Alliance in 2015 and has won awards on legal tech innovation in China.
GZAC	Band III	Band II	Band III	Band II	Band III

<i>Institution</i>	<i>Indicator 1 Case Filing and Management</i>	<i>Indicator 2 Arbitrator Panel</i>	<i>Indicator 3 Meetings/Hearings</i>	<i>Indicator 4 Security</i>	<i>Indicator 5 Thought Leadership</i>
Hong Kong International Arbitration Centre (HKIAC)	Case filing can be initiated by email. Information on rules and case procedures are accessible on the website. There is also an online fee calculator.	HKIAC maintains a Panel and a List of Arbitrators. HKIAC provides a fully searchable online database of arbitrators with advanced filters. HKIAC also has specialized panels for financial services and intellectual property disputes.	HKIAC partners with legal technology specialists to offer parties a comprehensive range of integrated virtual hearing services, including video – conferencing, electronic bundles, electronic presentation of evidence, transcription, and interpretation.	HKIAC Guidelines for Virtual Hearings emphasize the confidentiality and security of virtual hearings and recommend, inter alia, password protecting all cloud-based video – conferences and only allowing approved individuals to participate in the hearing.	HKIAC has a comprehensive online database of resources and has a webinar series. HKIAC has issued Guidelines for Virtual Hearings, and held webinars providing practical guidance on conducting virtual hearings.
HKIAC	Band II	Band III	Band III	Band III	Band III
International Chamber of Commerce (ICC)	Requests for arbitration may be filed by email. The ICC Dispute Resolution Services (DRS) app provides access to rules, standard clauses, calculates costs, resources, events and connects with the Secretariat.	A request for arbitration should typically include the nomination of an arbitrator. The ICC website provides a searchable directory on key information on ICC arbitration cases, including a non-exhaustive list of the arbitrators appointed in cases.	The ICC Hearing Centre in Paris offers support to parties to understand their hearing and electronic bundle facilities. The ICC Guidance Note provides a checklist for a protocol on virtual hearings.	The ICC Guidance Note notes that parties should only use licensed video – conferencing platforms, with maximum security settings. Parties and the tribunal should discuss privacy and minimum encryption requirements.	Note outlines measures to help mitigate the effects of the Covid-19 pandemic, including suggested cyber-protocols and procedural orders. The 2021 ICC Rules confirm that tribunals may, after proper consultation with the parties, decide to hold remote hearings.
ICC	Band III	Band II	Band II	Band II	Band III
International Centre for Settlement of Investment Disputes (ICSID)	A request and all supporting documents should be uploaded onto ICSID's document sharing platform and transmitted to the ICSID Secretariat's email. ICSID publishes procedural information on its cases database.	ICSID Panels of Arbitrators and Conciliators consist of designates of the ICSID Contracting States and the Chairman of the Administrative Council. ICSID maintains an online database of the list of members, which is searchable by name and categorized by state.	ICSID provides comprehensive services and technology for virtual hearings. A dedicated hearing team is assigned to parties for pre-hearing preparation. A technical specialist and tribunal secretary are present throughout the hearing. Virtual court stenographer and translator services are also available.	ICSID uses Cisco's Webex, with capacity for up to 1,000 participants. High-definition audio and document display, virtual chat is available. All ICSID virtual hearings benefit from end-to-end encryption that meets the World Bank Group's stringent security and risk requirements.	ICSID provides online resources on investment arbitration, including webinars on practical tips for holding effective remote hearings.
ICSID	Band II	Band III	Band III	Band III	Band II
Korean Commercial Arbitration Board International (KCAB International)	A request for arbitration may be filed by email. A sample request form can be downloaded from the website. An online fee calculator is also available.	KCAB's Panel of Arbitrators is available online, and searchable according to name, expertise, and nationality.	The Seoul International Dispute Resolution Center (Seoul IDRC) is a state-of-the-art, multi-purpose hearing center, and offers Internet protocol (IP)-based video – conferencing services, with the option of transcription and interpretation services.	According to the Seoul Protocol, the Parties must use their best efforts to ensure the security of the participants of the video – conference and security of documents. Cross-border connections should be adequately safeguarded to prevent unlawful interception by third parties.	KCAB has an online database of useful resources and webinars. The Seoul Protocol on Video Conferencing in International Arbitration serves as a guide to best practice for planning, testing, and conducting video – conferences in international arbitration.
KCAB	Band II	Band III	Band III	Band II	Band III

<i>Institution</i>	<i>Indicator 1 Case Filing and Management</i>	<i>Indicator 2 Arbitrator Panel</i>	<i>Indicator 3 Meetings/Hearings</i>	<i>Indicator 4 Security</i>	<i>Indicator 5 Thought Leadership</i>
London Court of International Arbitration (LCIA)	Requests for arbitration can be filed through LCIA's online filing system or by email. The online system also allows the filing of responses, pre-constitution applications, supporting documents, payment of filing fees and access to all filings made online and payment records.	The LCIA keeps a database of arbitrators. While parties cannot access the database of arbitrators, if the parties agree, the LCIA is able to provide a list of potential arbitrators suited to the circumstances of the case.	The 2020 update to the LCIA Arbitration Rules includes refinement of the rules to accommodate the use of virtual hearings. The update also confirms the primacy of electronic communication and the facilitation of electronically signed awards.	LCIA's online filing system allows for secure filing of documents and payments. The 2020 update to the LCIA Rules prescribes that the tribunal should adopt information security measures to protect the physical and electronic information shared in the arbitration.	LCIA hosted webinars on how arbitration can adapt in the Covid-19 pandemic. LCIA provides an online database of digests of LCIA arbitration challenge decisions from 2010 to present. This database is provided as a research tool for users, counsel, and arbitrators.
LCIA	Band III	Band I	Band II	Band III	Band II
Singapore International Arbitration Centre (SIAC)	Case filing can be initiated by email. Information on rules, frequently asked questions (including filing procedures) and a fee calculator are available on the website.	SIAC's Panel of Arbitrators is available on the website, categorized according to the country. SIAC also maintains a panel of arbitrators for intellectual property disputes.	According to the SIAC Covid-19 Frequently Asked Questions (FAQ), SIAC Rules allows for virtual hearings. SIAC recommends Maxwell Chambers' virtual Alternative Dispute Resolution (ADR) services, which consist of an integrated platform for case preparation and connected hearing room services.	Maxwell Chambers collaborated with Opus 2 to offer an integrated platform for case preparation and connected hearing room services. Video – conferencing facilities (Bluejeans/Zoom) work seamlessly with the secure cloud-based ADR platform.	SIAC offers resources on its website. SIAC's webinar series covers various topics, including minimizing the impact of Covid-19 and strategies for virtual hearings. SIAC released a Covid-19 FAQ addressing various aspects of arbitrating in the Covid-19 pandemic.
SIAC	Band II	Band II	Band III	Band II	Band III
Shanghai International Arbitration Centre (SHIAC)	Requests for arbitration can be filed by email alongside post. Template forms are available on the website. There is an online fee calculator, and an online enquiry form.	SHIAC's Panel of Arbitrators is available on their website, categorized into arbitrators from China and arbitrators from foreign countries.	SHIAC's notice to users in response to Covid-19 states that parties may apply for postponement of hearing under the SHIAC Rules. SHIAC is also able to facilitate remote hearings.	The SHIAC Rules prescribe hearings in camera, and all case information should be kept strictly confidential. The tribunal may arrange a stenographic and/or audio-visual record of the hearing.	SHIAC's website has online resources on arbitration, including relevant laws and regulations relating to arbitration.
SHIAC	Band II	Band II	Band II	Band II	Band I
Shenzhen Court of International Arbitration (SCIA)	Users can file a case through SCIA's online platform or through their public WeChat account. SCIA's Arbitration Service Platform allows users to access and manage their case. There is also an online fee calculator on the website.	SCIA's Panel of Arbitrators is available online, and searchable according to name, nationality, expertise, and residence. SCIA also has guidance notes on selecting an arbitrator.	SCIA encourages parties to use their Arbitration Cloud Platform to manage their cases and integrate the use of remote meetings/hearings. In response to Covid-19, SCIA offered a special fee reduction for use of the platform.	In response to the pandemic, SCIA upgraded its online platforms for case filing, remote hearing and evidence exchange and file storage. Updates include enhanced identity verification, expanded cloud storage and synchronicity with mobile.	SCIA provides an online database of resources, including model cases. SCIA also conducts online webinars.
SCIA	Band III	Band III	Band III	Band III	Band II

Institution	Indicator 1 Case Filing and Management	Indicator 2 Arbitrator Panel	Indicator 3 Meetings/Hearings	Indicator 4 Security	Indicator 5 Thought Leadership
Vienna International Arbitral Centre (VIAC)	VIAC introduced an electronic case management system in 2019. Parties are encouraged to submit all written submissions by electronic means. There is a cost calculator available on the website.	VIAC publishes a list of practitioners on their website, organized according to nationality, language, and specialization. VIAC also publishes the names of arbitrators acting in current proceedings.	The Vienna Protocol notes that there are several commercially available video – conferencing platforms and parties should consider their features carefully before making a selection. The Vienna Protocol also provides procedures to be followed for remote hearings.	The Vienna Protocol notes that users should ensure that the video – conferencing platform they choose has protection against third-party access and to review the data protection conditions. VIAC recommends that arbitrators implement a data protection protocol in all their cases.	VIAC provides arbitration resources on their website, and hosts webinars on arbitration. VIAC released the Vienna Protocol – A Practical Checklist for Remote Hearings in June 2020.
VIAC P 276	Band III	Band II	Band II	Band II	Band III

### 3.2 Analysis of findings

The ‘Digital Readiness Index’ aims to showcase the use of technology by arbitral institutions. To meaningfully understand these findings, we have cross-referenced the digital readiness scores against IMD’s 2019 World Digital Competitiveness Ranking (see Figure 1). The IMD World Digital Competitiveness Ranking measures the capacity and readiness of sixty-three economies to adopt and explore digital technologies as a key driver for economic transformation in business, government, and the wider society. The IMD Ranking evaluates economies on three factors: knowledge, technology, and future readiness. The top five economies according to the 2019 Digital Competitiveness Ranking are: United States, Singapore, Sweden, Denmark, and Switzerland, which is unchanged from the previous year. (32) The majority of the fourteen arbitral institutions examined in this article fall within Band II and III of the ‘Digital Readiness Index’, and also the P 277

top thirty countries ranked in the IMD Digital Competitiveness Ranking. Therefore, any comparisons are amongst existing leaders in the field. Further research can be done to expand the scope of

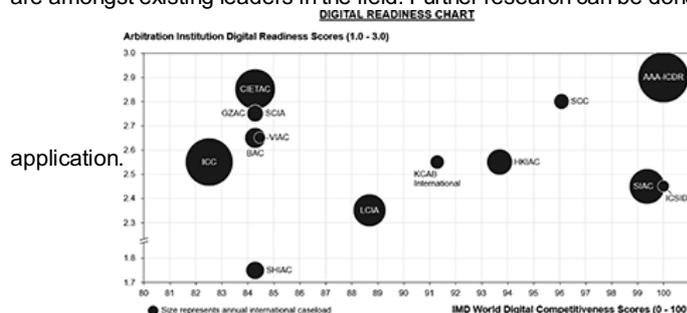


Figure 1

Digital Readiness Chart

Source: IMD World Digital Competitiveness Ranking 2019; Author’s calculations

The study is based on data and information publicly available at the time of writing. For the x-axis, the scores (0 to 100) from the 2019 IMD World Digital Competitiveness Ranking was used. For the y-axis, the author’s tabulated total scores for each institution according to the ‘Digital Readiness Index’ was used (see Table 3). For caseload size (represented by circle size in the graph), the most recent, publicly available number of international cases per year for each institution was referenced. (33)

The chart reveals interesting insights on arbitral institutions vis-à-vis the digital competitiveness of their host economy (as determined by the location of their headquarters). Notable institutions include the AAA-ICDR (United States) and SCC (Sweden). The AAA-ICDR and SCC rank highly on the Digital Readiness Index. The AAA-ICDR has upgraded its digital infrastructure to facilitate online filing and virtual hearings and issued user guides and trainings on the use of technology in arbitration (for both arbitrator and user). Similarly, the SCC, with its state-of-the-art SCC Platform, can be said to be a pioneer in the adoption of technology among arbitral institutions. United States and Sweden rank highly on the IMD World Digital Competitiveness Ranking (first and third, respectively). In choosing to submit disputes to the AAA-ICDR (United States) and SCC (Sweden), there is reassurance in the knowledge that these leading arbitral institutions are well-supported by their host economy’s resources and expertise in digital technology. The combination of a digitally ready institution within a digitally competitive economy creates synergy and a robust dispute

resolution ecosystem. Such a digitally competitive ecosystem sets the benchmark for other institutions and economies in the international dispute resolution landscape.

On the other hand, the chart also demonstrates that institutions such as the SIAC (Singapore) have room to grow. According to the IMD Ranking report, Singapore placed second, securing top place in the technology factor, third in knowledge and eleventh in future readiness. Singapore's strongest performance at the sub-factor level was in talent and technological framework, ranking first in both. It also ranked highly in training and education and IT integration (fourth in both).<sup>(34)</sup> The fact that several leading arbitral institutions (such as the AAA-ICDR

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and ICC) have chosen to set up branch offices in Singapore, demonstrates confidence in Singapore as a digitally competitive economy. In this regard, SIAC can make better use of its host economy's resources to improve its digital infrastructure as an institution.

The Digital Readiness Chart also showcases other notable institutions, such as CIETAC (China), GZAC (China), SCIA (China), BAC (China), and VIAC (Austria). Given that the Chinese and Austrian economies are ranked twentieth and twenty-second, respectively, on the IMD Ranking (which is on the lower end among the institutions surveyed in this article), CIETAC, GZAC, SCIA, BAC, and VIAC can be said to have shown outstanding potential in their use of technology. In particular, their advanced use of digital case management platforms, cloud-storage platforms, and remote hearing facilities, have led them to be ranked very highly on the Digital Readiness Index.

The 2019 IMD Ranking results highlighted the trend of several Asian economies advancing significantly in the ranking compared to 2018.<sup>(35)</sup> The largest increase in the overall ranking was experienced by China, moving from thirtieth to twenty-second, demonstrating marked progress in technological infrastructure and the agility of their businesses.<sup>(36)</sup> The fact that China has moved up significantly in ranking somewhat corroborates the findings that mainland Chinese institutions such as CIETAC, GZAC, SCIA, and BAC are ranked highly on the Digital Readiness Index. This rapid advancement in digitalization is in line with China's focus on the development of its digital economy in recent years. Huang Kunming, a member of the Political Bureau of the Communist Party of China (CPC) Central Committee, in his keynote speech at the 2019 Digital China Summit, called for the advancement of a digital China and smart society, stressing the role of IT in promoting high-quality development.<sup>(37)</sup> Given the Chinese government's focus on the advancement of a digital China, and the rapid integration of technology by Chinese arbitral institutions, the dispute resolution ecosystem in China is rapidly undergoing change, and is certainly one to watch in the future.

It is notable that CIETAC, BAC, GZAC, and SCIA are located in Beijing, Guangzhou, and Shenzhen, respectively, which are key cities of growth in China. The Chinese Cities of Opportunity Ranking showcases the top cities in China which are key drivers of innovation and economic growth in the country. According to the 2019 results, the top five cities are: Beijing, Shanghai, Hong Kong, Guangzhou, and Shenzhen. The report also notes that several cities located in the Guangdong-Hong Kong-Macao Greater Bay Area rank comparatively

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high.<sup>(38)</sup> Hong Kong, Macau, Shenzhen, and Guangzhou have been said to be the four key Bay Area cities in the technology and innovation corridor, aiding the transformation of the coastal region to a high-tech megalopolis.<sup>(39)</sup> As these Chinese cities transform, institutions in these key cities, such as CIETAC, BAC, GZAC, and SCIA, can ride on this wave of innovation and economic growth and continue to excel, and other Chinese institutions such as SHIAC, which ranked lower in the index, will also be stimulated to grow further.

The Digital Readiness Chart also demonstrates that there is uneven pace of development across institutions within the same host economy. Between arbitral institutions in mainland China, there are differences in digital readiness. While mainland arbitral institutions as a group have embraced the use of digital technologies and rank highly on the Digital Readiness Index, SHIAC trails behind its peers (CIETAC, GZAC, SCIA, and BAC). This is so even though SHIAC is located in a 'city of opportunity', Shanghai. The results demonstrate that SHIAC is an outlier, and SHIAC should take this cue to improve its digital infrastructure, keeping pace with other institutions, as well as China's overall digital advancement as an economy.

Hong Kong Special Administrative Region (SAR) and the Republic of Korea are two of the highlighted Asian economies in the IMD report, as both advanced in ranking, entering the top ten of the 2019 IMD Ranking. Both HKIAC and KCAB International rank well on the Digital Readiness Index. KCAB International is rising in prominence among arbitral institutions, especially with the timely release of the Seoul Protocol, as the use of video-conferencing has accelerated due to the global pandemic. HKIAC is also a reputable institution, and Hong Kong is a popular arbitration seat. Hong Kong (and the HKIAC) stands in good stead to rise further in the dispute resolution space, especially if its ambitions to create a combined deal-making and dispute resolution platform take off. Hong Kong's Electronic Business Related Arbitration and Mediation Platform ('eBRAM

Platform') is intended to be a secure and user-friendly platform that will facilitate cross-border deal-making and dispute resolution services to enterprises worldwide, including the BRI region and Greater Bay Area. eBRAM is intended to be complementary to arbitral institutions in Hong Kong like the HKIAC. <sup>(40)</sup> eBRAM aims to utilize technologies, such as AI, blockchain, and cloud, to enable

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the city to become a LawTech centre and hub for international business dispute avoidance and resolution. <sup>(41)</sup>

Another interesting insight is with respect to the position of the LCIA (United Kingdom). The LCIA is a reputable arbitral institution and London as an arbitral seat is very well-regarded and one of the most popular seats in cross-border arbitrations worldwide. However, the LCIA and the United Kingdom occupy a mid-range rank on both the Digital Readiness Index and the IMD Index. The LCIA has adopted technology into its processes, most notably in its online case filing platform. However, more can be done to facilitate the use of virtual hearings and there is a lack of user-friendliness and transparency with regards to its arbitral panel. In the IMD Ranking, the United Kingdom declined from tenth in 2018 to fifteenth in 2019. Its performance was affected by negative perceptions about access to relevant talent. Business agility and IT integration also experienced a decline. <sup>(42)</sup> Therefore, there is room to grow as an institution and economy, and more can be done to improve the dispute resolution ecosystem in the United Kingdom. At the same time, the 2020 update to the LCIA Arbitration Rules includes refinement of the rules to accommodate the use of virtual hearings. The update also confirms the primacy of electronic communication and the facilitation of electronically signed awards. <sup>(43)</sup> This is a noteworthy change and signals that the LCIA is ready to advance in digital readiness as an institution.

A qualifying statement must be made about ICSID and the ICC. The nature and historical background to the founding of both organizations means that they are much less influenced or impacted by their host economy's digital competitiveness. ICSID was established in 1966 by the ICSID Convention, which is a multilateral treaty formulated by the Executive Directors of the World Bank to further the Bank's objective of promoting international investment. ICC is known as the world business organization and was founded in the aftermath of the First World War. ICC is the institutional representative of more than 45 million companies in over 100 countries. Due to the historical background and organizational structure of ICSID and the ICC, they are far less influenced by their host economy's digital competitiveness. Additionally, the fact that ICSID primarily deals with investment disputes (rather than commercial disputes) does differentiate it from other institutions discussed in this article. Given the complex and sensitive nature of investment disputes, the fact that ICSID has already taken several steps to embrace digital

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technologies and remote hearings (and ranks fairly well on the Digital Readiness Index), showcases its advanced and forward-thinking nature.

Finally, it is important to note that digital readiness and competitiveness are extremely fluid concepts, as technology advances at a non-linear rate. The Digital Readiness Index provides a point of reference for arbitration institutions to measure and to reflect on the progress made in their digitalization journey. There is great scope and opportunity for economies and institutions to improve and transform rapidly. It is also important to note that increased digitization does not necessarily correlate with improved user experience. As most of these digital case management and video-conferencing platforms have only been implemented in recent years, it remains to be seen whether increased digitalization will lead to an increase in user satisfaction in terms of efficiency and/or improvement with regards to dispute resolution outcomes.

## 4 COOPERATION UNDER THE BEIJING JOINT DECLARATION

The Beijing Joint Declaration was promulgated during China Arbitration Week in 2019 which centered around effective dispute resolution for Belt and Road Initiative (BRI) disputes. Lu Pengqi, Deputy Director of the China Council for Promotion of International Trade (CCPIT), notes that arbitration practice differs from country to country along the Belt and Road, which are mostly emerging economies and developing countries. <sup>(44)</sup> The aim of the Beijing Joint Declaration is for arbitral institutions along the Belt and Road countries to work together to foster closer cooperation and promote the modernization and harmonization of arbitration practices and standards. <sup>(45)</sup> In response to the pandemic, CIETAC wrote letters to nearly thirty international arbitration institutions and organizations, including members of the Beijing Joint Declaration, to express the Chinese government's confidence and resolution to combat the pandemic, and to strengthen exchanges and cooperation among arbitration institutions. <sup>(46)</sup> In response, Alexis Moore, President of the ICC Court, expressed gratitude and hoped to strengthen cooperation after the epidemic and work

together to promote arbitration. Annette Magnussen, Secretary-General of the SCC, said that they are grateful for the solidarity expressed. Gunther Horvath,

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President of the VIAC, said that he is very grateful for the goodwill and help of CIETAC. KCAB International thanked CIETAC for its generous assistance and looked forward to cooperation in the future. <sup>(47)</sup>

Given the above, this is an opportune time for member institutions of the Beijing Joint Declaration to keep the ball rolling, and promote further dialogue on how technology can reduce disruptions caused by the pandemic and increase efficiency in arbitration. Institutions which have demonstrated high levels of digital readiness should lead the way in discussions in the following areas: (1) conduct of remote hearings; (2) cybersecurity and data protection; and (3) uneven advancement of technology.

## 4.1 Best practices in the use of remote hearings

While the technological capabilities for remote hearings already exist, protocols and best practices for remote hearings need to be formulated. KCAB International has led the way in this respect. The Seoul Protocol was introduced at the Seventh Asia Pacific ADR Conference in 2018, and officially released in March 2020. The Seoul Protocol contains technical specifications and best practices for the planning, testing, and logistical arrangements associated with conducting virtual hearings in international arbitrations. The ICC, AAA-ICDR, and HKIAC, amongst other institutions, have also issued their own guidelines for virtual hearings. The ICC's Guidance Note on Possible Measures Aimed at Mitigating the Effects of the COVID-19 Pandemic ('ICC Guidance Note') is very comprehensive, and also provides a checklist for a protocol on virtual hearings, as well as suggested clauses for cyber-protocols and procedural orders. <sup>(48)</sup> The AAA-ICDR has a Virtual Hearing Guide for Arbitrators and Parties and a Model Order and Procedures for a Virtual Hearing via Videoconference which parties can modify. <sup>(49)</sup> The HKIAC has also issued guidelines for online hearings. Upon completion of an online form, HKIAC will be able to provide parties an early breakdown of costs and make suggestions to ensure that the hearing proceeds as seamlessly and effectively as possible. <sup>(50)</sup>

The main challenge with regard to use of video-conferencing is the efficacy of witness evidence.

Respondents in the QMUL 2018 international arbitration survey

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expressed reservations as to the effectiveness of conducting cross-examinations of witnesses or delivering and hearing the parties' closing arguments through video-conference. <sup>(51)</sup> What technology can do is to try and mimic the real-life atmosphere of an in-person hearing as much as possible. According to a 2015 IBA Report, participants reported that the high quality of some of the video-conferencing technology is making remote cross-examination not only technologically possible, but substantively effective. Participants noted that long travel for hearings will likely be avoided if video-conferencing technology advanced to the stage that everyone can be in a virtual hearing room as if they were there in person. <sup>(52)</sup> The U.K. House of Lords held in *Polanski v. Condé Nast Publications Ltd.* that cross-examining a witness by video-link does not, in and of itself, prejudice the party conducting the cross-examination. <sup>(53)</sup> In this regard, Article 5 of the Seoul Protocol prescribes that the video-conference shall be of sufficient quality so as to allow for clear video and audio transmission of the parties. There must also be adequate placement and control of the cameras to ensure that all participants can be seen. Similarly, the AAA-ICDR's virtual hearing guide suggests that users use dual monitors, good quality webcams with appropriate lighting and audio conditions, and use high-speed Internet connection to ensure smooth transmission.

The other substantive challenge to video-conferencing is due process. To this effect, guidelines have been suggested by various institutions. To ensure that parties are treated with equality and each party is given a full opportunity to present its case during a virtual hearing, the ICC Guidance Note suggests that the tribunal should consider, inter alia, different time zones in fixing the hearing dates, start and finish times, breaks and length of each hearing day. <sup>(54)</sup> The checklist for a protocol on virtual hearings (Annex I of the ICC Guidance Note) highlights the need to establish protocols for online etiquette and due process considerations. Further, article 1.7 of the Seoul Protocol states that the tribunal may terminate the video-conference at any time if the tribunal deems the video-conference so unsatisfactory that it is unfair to

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either party to continue. In other words, this is a catch-all provision that allows the tribunal to stop the video-conference at any time to uphold fairness to the parties.

To ensure that the highest standards of video-conferencing are adopted in BRI dispute resolution, arbitral institutions should come together to formulate best practices for virtual hearings in international arbitrations, building on the Seoul Protocol, Delos Checklist, and guidelines issued by individual institutions. Many institutions have initiated webinars and training sessions to educate

users on how to use video-conferencing during the COVID-19 pandemic. <sup>(55)</sup> Building upon these guidelines and educational trainings, further synthetization should be done in order for international best practices to be harmonized, such that tribunals are able to balance fairness, efficiency, and the interests of the parties in the conduct of remote hearings in international arbitration.

## 4.2 Challenges in cybersecurity and data protection

Given the importance of confidentiality in arbitration proceedings and the regulatory requirements that are in place in major jurisdictions, cybersecurity and data protection are critical issues in use of technology in arbitration. An ICC report notes that it is common practice for users to communicate through unencrypted email with unencrypted attachments, despite the significant risks and commercial consequences. <sup>(56)</sup> Such risky practices may have increased in the Covid-19 climate as many have shifted to working at home and are more inclined to use commercially-available software and platforms without adequate security settings.

The International Council for Commercial Arbitration (ICCA) New York City Bar Association (NYC Bar) and the International Institute for Conflict Prevention and Resolution (CPR) Protocol on Cybersecurity in International Arbitration ('Cybersecurity Protocol') and the consultation draft of the ICCA/IBA Joint Task Force's Roadmap on Data Protection in International Arbitration ('Roadmap on Data Protection'), both released in 2020, offer helpful suggestions for cybersecurity and data protection in arbitration. The Cybersecurity Protocol provides a recommended framework to guide tribunals, parties, and administering institutions in their consideration of what information security measures are reasonable to apply to a particular arbitration matter. <sup>(57)</sup> Information security should be raised as early as practicable in the arbitration, and the arbitral tribunal has the authority to determine the information security measures applicable to the

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arbitration. In the event of a breach of an information security measure or the occurrence of an information security incident, the arbitral tribunal may, in its discretion: (1) allocate related costs among the parties; and/or (2) impose sanctions on the parties. <sup>(58)</sup> The Roadmap on Data Protection was developed to help arbitration professionals better understand the data protection and privacy obligations to which they may be subject in relation to international arbitration proceedings, <sup>(59)</sup> especially in light of the entry into force of the European Union's General Data Protection Regulation (GDPR) in May 2018.

Arbitral institutions and users need to adopt shared responsibility for cybersecurity and data protection. For instance, the VIAC suggests that arbitrators and parties clarify the applicability of data protection regulations and the effect on the conduct of the proceedings at the beginning of the proceedings. <sup>(60)</sup> The AAA-ICDR Best Practices Guide for Maintaining Cybersecurity and Privacy also contains a helpful checklist to aid arbitrators and parties' discussion on reasonable precautions that should be taken. <sup>(61)</sup>

The prevalence of electronic correspondence, remote meetings, and hearings in this COVID-19 period may increase cybersecurity risks such as cyber-attacks or data leaks. Users may be tempted to communicate and send files via unsecured connections as an interim measure as they grapple with the shift to working remotely. They may be unaware of or careless about the risks that come with the usage of unsecured connections and systems. Some arbitral institutions have proposed the use of commercially available video-conference services to their users such as Skype, Microsoft Teams, or Zoom. As evident from recent news reports surrounding Zoom, cybersecurity risks may be enhanced when using external services and software. <sup>(62)</sup> The ICC Guidance Note reminds tribunals and parties to ensure that any video-sharing platform that is used for virtual hearings is licensed and is set to maximum security settings. <sup>(63)</sup> The AAA-ICDR's virtual hearing guide also contains security guidelines for use of video hearing platforms such as having a unique, automatically generated meeting ID for each virtual hearing which is password-protected. Additionally, participants should use secure Internet connections and not attend from public locations. <sup>(64)</sup> The AAA-ICDR has also set out a

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specific Virtual Hearing Guide for Arbitrators and Parties Utilizing Zoom, and Appendix A provides a list of Zoom default settings for virtual hearings. Articles 2.1(c) and 2.2 of the Seoul Protocol also set out a duty for parties to use their best efforts to ensure the security of the video-conferencing participants, and that cross-border connections should be adequately safeguarded to prevent unlawful interception by third parties. In this regard, it is the shared responsibility of both user and institution to ensure that adequate precautions are undertaken when using any platform for communication, file transfer, or file storage.

Institutions like the SCIA, SCC, and AAA-ICDR have also invested in upgrading the security of their digital infrastructure. The SCIA's online filing platform's identity verification process was upgraded recently to encompass a face recognition system (for natural persons) and a national social credit

score system (for legal persons).<sup>(65)</sup> The SCC Platform was designed with secure digital information-sharing in mind. All files are kept in cloud-based storage with separate back-up facilities. All data is encrypted, and all files are scanned for malware and viruses when uploaded. The system has numerous security systems in place: two-factor authentication; a single encrypted https entry point; web application firewalls; intrusion detection; log file monitoring; anti-virus; code scanning technologies, etc. The system is regularly scanned for vulnerabilities and subjected to third-party penetration tests at regular intervals.<sup>(66)</sup> The AAA-ICDR employs several layers of advanced and best-practice protections against both external and internal cyber-threats to current correspondence and stored documents. This includes highly advanced firewalls to prevent access from unauthorized Internet users, extensive use of encryption and security patches, and a Payment Card Industry Data Security Standard (PCD DSS) process for secure credit card payments.<sup>(67)</sup>

For the international community to have confidence in online arbitration, institutions should invest in the security of their digital infrastructure and tribunals and parties have to implement targeted cybersecurity and data protection protocols. This is especially important for Chinese arbitral institutions as the security of Chinese technology has come under scrutiny in recent times.<sup>(68)</sup>  
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In the context of BRI dispute resolution, it is especially important for Chinese arbitral institutions to ensure high standards of cyber-security and data protection in order for them to retain legitimacy as key stakeholders of BRI dispute resolution.

### 4.3 Uneven advancement of technology

Sundaresh Menon, Chief Justice of Singapore, opined that the problem of access to justice is closely tied to one of the most pressing challenges of our age: the problem of inequality, both within and between countries. C.J. Menon suggests that technology has the potential to help close the justice gap.<sup>(69)</sup> While technology has been used to streamline arbitration procedures, uneven advancement of technology is still considered to be a challenge in developing countries, which is of particular significance to BRI dispute resolution.<sup>(70)</sup>

Technology can alleviate the burden on claimants by removing the need for convergence, both physically and temporally.<sup>(71)</sup> In this way, technology helps to close the resource gap as parties are able to minimize time and costs spent on travel and accommodation. Technology can also be used to democratize justice where a large number of claimants are involved. For instance, in April 2014, a dispute arose between Shenzhen Hirisun Technology Incorporated, a listed company, and nearly 10,000 investors across the country regarding false statements made by the company.<sup>(72)</sup> SCIA, together with the Shenzhen Securities and Futures Industry Dispute Mediation Centre and China Securities Investor Protection Fund Co., Ltd., participated in the implementation of the compensation fund scheme. Various online tools were used to facilitate the settlement negotiations, including video-conferences. Eligible investors were then able to accept the compensation plan and agree to a voluntary settlement online, resulting in the successful 'online settlement' with 9,823 claimants across the country.<sup>(73)</sup>

Where arbitral institutions have invested in technological infrastructure, parties are able to enjoy the advantages of economies of scale. Access and use of the SCC Platform are included in the SCC administrative fee.<sup>(74)</sup> ICSID's online hearing services and technology are available in all ICSID cases at no extra charge and its video-conferencing platform does not require special hardware or  
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software.<sup>(75)</sup> Institutions such as HKIAC and SIAC offer hearing facilities that parties can engage at a time-based rate, so cost are minimized to usage. Institutions that support BRI dispute resolution are cooperating to share their expertise, networks, and arbitration facilities. For instance, SIAC and SCIA have signed a memorandum of understanding (MOU), whereby SCIA will extend the use of its hearing facilities at preferential rates for SIAC arbitrations that are held in China. Dr Liu Xiaochun, President of the SCIA, said:

we are confident that the MOU will provide both institutions with an enhanced platform to extend our outreach efforts to existing and potential users of international arbitration in China and Belt and Road economies, across a range of industry sectors including construction, infrastructure, energy, maritime and finance.<sup>(76)</sup>

ICSID has entered into twenty-three cooperation agreements with dispute settlement institutions that allow ICSID to hold hearings at their facilities.<sup>(77)</sup> Parties can thus avail themselves of shared networks and existing infrastructure, at lowered costs. Parties from developing countries who may encounter difficulties in accessing digital platforms/software or have poor connectivity to the Internet, can avail themselves of platforms and hearing facilities provided by institutions. The cost of access

is usually included in the administration fee or charged per use.

At the case management level, it is also imperative that tribunals consider parties' differing circumstances (in relation to access to technology and facilities) and ensure that both parties are given equal footing. <sup>(78)</sup> According to CIETAC's Guidelines on Proceeding with Arbitration Actively and Properly During the COVID-19 Pandemic (Trial), when deciding whether to hold a virtual hearing, the arbitral tribunal shall take into account a variety of factors, such as the parties' opinions; the complexity of the case; the volume of evidence; witnesses to be present; the justification of the party's reasons against holding a virtual hearing; and the convenience and equality of the participants to access virtual hearing facilities. The tribunal shall take care to protect the procedural rights of the parties, afford a reasonable opportunity to both parties to present their case, and treat both parties equally. <sup>(79)</sup>

In 2016, the United Nations Commission on International Trade Law published the Technical Notes on Online Dispute Resolution ('UNCITRAL ODR P 289

Technical Notes'). The U.N. General Assembly requests all states to support the promotion and use of the UNCITRAL ODR Technical Notes. <sup>(80)</sup> In response, the Asia-Pacific Economic Cooperation (APEC) is currently undertaking a project to establish an ODR platform, incorporating negotiation, mediation, and arbitration, to benefit micro, small and medium-sized enterprises in business-to-business cross-border disputes. <sup>(81)</sup> CIETAC's Online Dispute Resolution Centre specializes in resolving Internet domain name disputes and e-commerce disputes. SCIA also offers ODR services via its Online Arbitration Service Platform. In this regard, there is an observable trend of increased appetite for ODR in the dispute resolution sector in Asia.

There is optimism that developing countries will rise to the challenge, given that many technologies are interchangeable and relatively cheap. <sup>(82)</sup> Developing countries are likely to benefit from a shift to technological processes because a computer is all that is needed. Parties save immense time and travel costs by having meetings virtually. In this regard, technology tends to be a great leveler. Moreover, the explosive growth in Internet penetration in emerging economies has also significantly narrowed the digital divide. In 2018, Africa experienced its fastest growth rates in Internet penetration, with the number of Internet users increasing by more than 20% as compared to 2017. <sup>(83)</sup> Therefore, continuing to leverage technology will increase access to justice in the long run.

## 5 CONCLUSION

Liu Wei, an associate professor in the School of Public Administration and Policy at Renmin University of China, notes that the international community – including both developing countries and traditional major powers – currently views the BRI through a zero-sum, geopolitical lens. If China's initiatives are to be successful, China needs to accept its responsibilities as a major stakeholder in the international order, highlighting its non-monetary investments and areas for mutually beneficial international cooperation. <sup>(84)</sup>

The Beijing Joint Declaration is an excellent avenue for arbitral institutions to strengthen cooperation towards mutually beneficial international cooperation. In P 290

April 2020, arbitral institutions from around the world issued a joint statement in response to the Covid-19 pandemic. The statement highlights that cooperation and collaboration is at the centre of an effective response to Covid-19. Collaboration is particularly important as each institution looks to ensure that they make the best use of digital technologies for working remotely. <sup>(85)</sup> Increased knowledge-sharing and collaboration between institutions would benefit the arbitral community at large. Digitally ready institutions such as the AAA-ICDR and SCC should take the initiative to share their know-how and experiences in digital case management and the conduct of remote hearings with other institutions. Further work should be done to synthesize the various virtual hearing guides issued by arbitral institutions, such that international best practices for virtual hearings can be determined.

To strengthen the dispute resolution framework under the BRI, Chinese institutions such as CIETAC, BAC, GZAC, and SCIA, who are early adopters of technology in mainland China, should continue to improve their digital infrastructure and protocols in accordance with international best practices, and also share their experiences and know-how with other institutions that support BRI dispute resolution. Additionally, given the central importance of cybersecurity in online arbitration and the increased scrutiny on Chinese technology, Chinese arbitral institutions, as key stakeholders in BRI dispute resolution, must ensure that adequate cybersecurity and data protection protocols are implemented so that international parties have confidence in the integrity of their processes and platforms. In this regard, greater cooperation among institutions to initiate dialogue will also be helpful to set benchmarks for cybersecurity and data protection in online arbitration.

Finally, the shift towards reliance on technology is a positive trend overall for BRI dispute resolution. Technology can help to democratize justice, as it provides for increased opportunity and access for claimants in developing countries to participate in cross-border arbitration. In this regard, arbitral institutions should continue the positive trend of working together to share resources, expertise, and facilities in order to alleviate the challenges of uneven advancement of technology around the world, and contribute towards the international harmonization of arbitration norms and practices as envisaged under the Beijing Declaration.

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#### References

\*)

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1)

Wei Zhang, *Yi Dai Yi Lu Zhong Cai Ji Gou Bei Jing Lian He Xuan Yan Fa Bu* [Release of the Beijing Joint Declaration of the 'Belt and Road' Institutions] (Legal Daily 12 Nov. 2019), [www.chinalaw.gov.cn/Department/content/2019-11/12/612\\_3235567.html](http://www.chinalaw.gov.cn/Department/content/2019-11/12/612_3235567.html) (accessed 11 May 2020).

2)

KCAB International Announcement, *Seoul Protocol on Video Conference in International Arbitration Is Released* (KCAB International website 18 Mar. 2020), [www.kcabinternational.or.kr/user/Board/comm\\_notice\\_view.do?BBS\\_NO=548&BD\\_NO=169&CURRENT\\_MENU\\_CODE=ME...](http://www.kcabinternational.or.kr/user/Board/comm_notice_view.do?BBS_NO=548&BD_NO=169&CURRENT_MENU_CODE=ME...) (accessed 11 May 2020).

3)

Delos Know-How, *Delos Checklist on Holding Arbitration and Mediation Hearings in Times of COVID-19* (Delos website 20 Mar. 2020), <https://delosdr.org/index.php/2020/03/12/checklist-on-holding-hearings-in-times-of-covid-19/> (accessed 11 May 2020) ('Delos Checklist').

4)

ICC, *Three Takeaways on How Digital Technologies are Transforming Arbitration* (ICC website 30 Aug. 2017), <https://iccwbo.org/media-wall/news-speeches/three-takeaways-digital-technologies-transforming-arbitr...> (accessed 11 May 2020).

5)

Queen Mary University of London and White & Case LLP, *International Arbitration Survey: The Evolution of International Arbitration* 3 (2018), ('QMUL Survey').

6)

Report of the ICC Commission on Arbitration and ADR, *Information Technology in International Arbitration* 3 (ICC website 2017), <https://iccwbo.org/content/uploads/sites/3/2017/03/icc-information-technology-in-international-arbitr...> (accessed 11 May 2020) ('ICC Report').

7)

VIAC News, *Availability and General Measures Undertaken by VIAC in Times of COVID-19* (VIAC website 2020), [www.viac.eu/en/news/availability-and-general-measures-undertaken-by-viac-in-times-of-covid-19](http://www.viac.eu/en/news/availability-and-general-measures-undertaken-by-viac-in-times-of-covid-19) (accessed 11 May 2020).

8)

SCC News, *Introducing the SCC Platform – Simplifying Secure Communication from Request to Award* (SCC website 20 May 2020), <https://sccinstitute.com/about-the-scc/news/2019/introducing-the-scc-platform-simplifying-secure-com...> (accessed 11 May 2020).

9)

SIAC Press Release (6 Apr. 2020), para. 4; HKIAC Press Release, *HKIAC Measures and Service Continuity During COVID-19* (HKIAC website 27 Mar. 2020), [www.hkiac.org/news/hkiac-service-continuity-during-covid-19](http://www.hkiac.org/news/hkiac-service-continuity-during-covid-19) (accessed 11 May 2020).

10)

CIETAC News, *Announcement of the Launch of Party's Online Filing System* (CIETAC website 2018), [www.cietac.org/index.php?m=Article&a=show&id=15779&l=en](http://www.cietac.org/index.php?m=Article&a=show&id=15779&l=en) (accessed 11 May 2020).

11)

Mohamed Wahab & Ethan Katsh, *Revolutionizing Technologies and the Use of Technology in International Arbitration: Innovation, Legitimacy, Prospects and Challenges*, in *Arbitration in the Digital Age: The Brave New World of Arbitration* 27 (Maud Piers & Christian Aschauer eds, Cambridge University Press 2018).

12)

IBA Arb 40 Subcommittee Report, *The Current State and Future of International Arbitration: Regional Perspectives* 63 (2015) ('IBA Report').

13)

Damian Honey & Nicola Gare, *Questions and Answers on How Best to Deal with International Arbitration in the Face of COVID-19* (HFW website 19 Mar. 2020), [www.hfw.com/Questions-and-answers-on-how-best-to-deal-with-International-Arbitration-in-the-face-of-...](http://www.hfw.com/Questions-and-answers-on-how-best-to-deal-with-International-Arbitration-in-the-face-of-...) (accessed 11 May 2020).

14)

HKAC Administered Arbitration Rules (effective 1 Nov. 2018), Art. 3.1(e).

15)

Vienna Rules of Arbitration and Mediation (effective 1 Jan. 2018), Art. 12(2).

16)

Maxwell Chambers, *Maxwell Chambers Offers Virtual ADR Hearing Solutions* (Maxwell Chambers website 18 Feb. 2020), [www.maxwellchambers.com/2020/02/18/maxwell-chambers-offers-virtual-adr-hearing-solutions/](http://www.maxwellchambers.com/2020/02/18/maxwell-chambers-offers-virtual-adr-hearing-solutions/) (accessed 11 May 2020).

17)

Ming Long Su, *Shen Zhen Guo Ji Zhong Cai Yuan Ying Dui Yi Qing Jian Mian Zhong Cai Fei, Qi Ye Jian Fu Guo Ban [Shenzhen Court of International Arbitration Reduction/Exemption of Arbitration Fees in Response to the Pandemic, Relieving the Burden of Enterprises by More than Half]* (Legal Daily 6 Feb. 2020), [www.legaldaily.com.cn/index/content/2020-02/06/content\\_8111573.htm](http://www.legaldaily.com.cn/index/content/2020-02/06/content_8111573.htm) (accessed 11 May 2020).

18)

Xin Jian Deng & Jun Deng, *Guang Zhou Zhong Cai Wei Chu Tai Ba Xiang Cuo Shi Ying Dui Yi Qing [The Guangzhou Arbitration Commission Introduced Eight Measures to Deal with the Pandemic]* (Legal Daily 3 Mar. 2020), [www.moj.gov.cn/Department/content/2020-03/03/612\\_3243118.html](http://www.moj.gov.cn/Department/content/2020-03/03/612_3243118.html) (accessed 11 May 2020).

19)

SCIA News, *SCIA Special Decision on Reduction of Arbitration Fees* (SCIA website 11 Feb. 2020), <http://120.25.66.138/web/news/detail/1919.html> (accessed 11 May 2020).

20)

SCC News, *SCC Platform Made Available to Ad Hoc Arbitrations Globally* (SCC website 23 Apr. 2020), <https://sccinstitute.com/about-the-scc/news/2020/scc-platform-made-available-to-ad-hoc-arbitrations-...> (accessed 11 May 2020).

21)

SCC Platform World Tour (SCC website 2019), <https://sccinstitute.com/scc-platform/scc-world-tour/> (accessed 11 May 2020).

22)

Delos Checklist, *supra* n. 3, Appendix 1.

23)

HKIAC Press Release, *Virtual Hearings at HKIAC: Services and Success Stories* (HKIAC website 6 May 2020), [www.hkiac.org/news/virtual-hearings-hkiac-services-and-success-stories](http://www.hkiac.org/news/virtual-hearings-hkiac-services-and-success-stories) (accessed 11 May 2020).

24)

QMUL Survey, *supra* n. 5, at 32.

25)

IBA Report, *supra* n. 12, at 18.

26)

ICSID News Release, *A Brief Guide to Online Hearings at ICSID* (ICSID website 24 Mar. 2020), <https://icsidworldbank.org/en/Pages/News.aspx?CID=362> (accessed 11 May 2020).

27)

Xin Jian Deng & Jun Deng, *supra* n. 18, para. 2.

28)

CIETAC News, *Remote Video Hearing Enhanced Efficiency of the Arbitration Procedure, CIETAC Informationized Arbitration Stepped Into a Fast Development Period* (CIETAC website 14 Apr. 2020), [www.cietac.org/index.php?m=Article&a=show&id=16899&l=en](http://www.cietac.org/index.php?m=Article&a=show&id=16899&l=en) (accessed 11 May 2020).

29)

Maxi Scherer, *Remote Hearings in International Arbitration: An Analytical Framework*, 37(4) J. Int'l Arb. 421 (Maxi Scherer ed. 2020).

30)

*Ibid.*

31)

SIDRA International Dispute Resolution Survey: 2020 Final Report (SIDRA Website 3 July 2020), Exhibit 6.2.8, <https://sidra.smu.edu.sg/sites/sidra.smu.edu.sg/files/survey/62/index.html> (accessed 12 Oct. 2020).

32)

IMD World Competitiveness Center, *IMD World Digital Competitiveness Ranking 2019* (IMD website 2019), [www.imd.org/wcc/world-competitiveness-center-rankings/world-digital-competitiveness-rankings-2019/](http://www.imd.org/wcc/world-competitiveness-center-rankings/world-digital-competitiveness-rankings-2019/) (accessed 11 May 2020) ('IMD World Digital Competitiveness Ranking 2019').

33)

The scores for the x-axis are extracted from the IMD World Digital Competitiveness Ranking 2019 report. The scores for the y-axis are generated from the author's calculations (see Table 3). For caseload size, the most recent publicly available data was used (sourced from institutions' annual reports). Where exact data was not available for international caseload, the total number of cases (domestic and international combined) was used (LCIA, VIAC), or a placeholder figure of 100 cases was inserted (GZAC, SCIA).

34)

IMD World Digital Competitiveness Ranking 2019, *supra* n. 32, at 19.

35)

*Ibid.*, at 16.

36)

*Ibid.*, at 17–18.

37)

Yu Liang, *Summit Demonstrates China's Leapfrog into Digital World* (Xinhua Net 6 May 2019), para. 4, [www.xinhuanet.com/english/2019-05/06/c\\_138038079.htm](http://www.xinhuanet.com/english/2019-05/06/c_138038079.htm) (accessed 11 May 2020).

38)

PwC and China Development Research Foundation, *Chinese Cities of Opportunity 2019 Report* 13–14 (PwC China website 2019), [www.pwccn.com/en/research-and-insights/chinese-cities-of-opportunities-2019-report.pdf](http://www.pwccn.com/en/research-and-insights/chinese-cities-of-opportunities-2019-report.pdf) (accessed 11 May 2020).

39)

Business Reporting Desk, *Greater Bay Area, A Gateway to Belt & Road Initiative* (Belt and Road News 20 Jan. 2020), para. 1, [www.beltandroad.news/2020/01/20/greater-bay-area-a-gateway-to-belt-road-initiative/](http://www.beltandroad.news/2020/01/20/greater-bay-area-a-gateway-to-belt-road-initiative/) (accessed 11 May 2020).

40)

Legislative Council Panel on Administration of Justice and Legal Services, *Development of an Online Disputes Resolution and Deal Making Platform by Non-governmental Organisation*, Paper No. CB (4)665/18-19(03) (HK Department of Justice website 25 Mar. 2019) paras 2–5, [www.doj.gov.hk/pdf/ajls20190325e1.pdf](http://www.doj.gov.hk/pdf/ajls20190325e1.pdf) (accessed 11 May 2020).

41)

eBRAM, *Overview* (eBram Website 2020), <https://ebram.org/overview.html> (accessed 20 Oct. 2020).

42)

IMD World Digital Competitiveness Ranking 2019, *supra* n. 32, at 19.

43)

LCIA, *Updates to the LCIA Arbitration Rules and the LCIA Mediation Rules 2020* (LCIA website Oct. 2020), [www.lcia.org/lcia-rules-update-2020.aspx](http://www.lcia.org/lcia-rules-update-2020.aspx) (accessed 20 Oct. 2020).

44)

Business Reporting Desk, *Arbitration Institutions to form Mechanism Under Belt & Road Initiative* (Belt and Road News 8 Nov. 2019), para. 7, [www.beltandroad.news/2019/11/08/arbitration-institutions-to-form-mechanism-under-belt-road-initiativ...](http://www.beltandroad.news/2019/11/08/arbitration-institutions-to-form-mechanism-under-belt-road-initiativ...) (accessed 11 May 2020).

45)

Crystal Wong & Ying Lee Zhe, *A Special Interview with Mr Wang Chengjie, Vice Chairman & Secretary General of CIETAC, China* (Mondaq 19 Dec. 2019), para. 3,

[www.mondaq.com/Litigation-Mediation-Arbitration/866636/China-Arbitration-Week-2019](http://www.mondaq.com/Litigation-Mediation-Arbitration/866636/China-Arbitration-Week-2019)

(accessed 11 May 2020).

46)

Cheng Wei Fu, *Zhong Guo Mao Zhong Wei Ji Ji Zhi Chi Guo Ji Zhong Cai Ji Gou Kang Ji Yi Qing [CIETAC Actively Supports International Arbitration Institutions to Fight the Pandemic]* (CCPIT website 1 Apr. 2020), para. 1,

[www.ccpit.org/Contents/Channel\\_4132/2020/0401/1251183/content\\_1251183.htm](http://www.ccpit.org/Contents/Channel_4132/2020/0401/1251183/content_1251183.htm) (accessed 11 May 2020).

47)

*Ibid.*, paras 3–6.

48)

ICC News, *ICC Court Issues COVID-19 Guidance Note for Arbitral Proceedings* (ICC website 9 Apr. 2020), para. 4, <https://iccwbo.org/media-wall/news-speeches/icc-court-issues-covid-19-guidance-note-for-arbitral-pro...> (accessed 11 May 2020).

49)

AAA-ICDR COVID-19 Resource Center, *Virtual Hearings* (AAA-ICDR website 2020), <https://go.adr.org/covid-19-virtual-hearings.html> (accessed 11 May 2020).

50)

HKIAC, *HKIAC Guidelines for Virtual Hearings* (HKIAC website 14 May 2020) guideline 3, [www.hkiac.org/sites/default/files/ck\\_filebrowser/HKIAC%20Guidelines%20for%20Virtual%20Hearings\\_0.pdf](http://www.hkiac.org/sites/default/files/ck_filebrowser/HKIAC%20Guidelines%20for%20Virtual%20Hearings_0.pdf) (accessed 15 May 2020).

51)

QMUL Survey, *supra* n. 5, at 32.

52)

IBA Report, *supra* n. 12, at 101.

53)

*Polanski v. Condé Nast Publications Ltd.* [2005] UKHL 10. Further, in *Re One Blackfriars Ltd. (in Liquidation)* [2020] EWHC 845 (Ch), John Kimbell, Q.C., sitting as a Deputy High Court Judge, refused an application to adjourn a five-week trial, involving four live witnesses of fact and thirteen expert witnesses, which was scheduled to take place in June 2020. The Judge took into account the various guidance issued by the senior judiciary, as well as legislation passed in response to the coronavirus outbreak (Coronavirus Act 2020 and Coronavirus Regulations 2020, S.I. 350/2020) and noted that, 'the legislature is sending a very clear message that it expects the courts to continue to function so far as they able to do safely by means of the increased use of technology to facilitate remote trials.' The Judge also noted that the experience of the courts in conducting remote trials to date was that they had been, on the whole, successful, even when the proceedings involved multiple parties and more than 10 witnesses.

54)

ICC Guidance Note, *supra* n. 48, para. 28.

55)

For instance, SIAC's Webinar series, HKIAC Webinar series, SCC Online Seminars and ICC's Livecast.

56)

ICC Report, *supra* n. 6, at 13.

57)

ICCA-NYC Bar-CPR Cybersecurity Protocol for International Arbitration (2020), Principle 1.

58)

Cybersecurity Protocol, Principles 6, 10 and 13.

59)

ICCA-IBA Roadmap to Data Protection in International Arbitration, Public Consultation Draft (Feb. 2020), para. 1.

60)

*VIAC Arbitration Privacy Policy* (VIAC website 2019), para. 12, [www.viac.eu/en/privacy-statement](http://www.viac.eu/en/privacy-statement) (accessed 11 May 2020).

61)

AAA-ICDR Best Practices Guide for Maintaining Cybersecurity and Privacy, para. 1.

62)

Johan Moreno, *Google Bans Employees from Using Zoom* (Forbes 9 Apr. 2020), paras 3–4, [www.forbes.com/sites/johanmoreno/2020/04/09/google-bans-employees-from-using-zoom/#274f21a6770f](http://www.forbes.com/sites/johanmoreno/2020/04/09/google-bans-employees-from-using-zoom/#274f21a6770f) (accessed 11 May 2020).

63)

ICC Guidance Note, *supra* n. 48, para. 32.

64)

AAA-ICDR, *Virtual Hearing Guide for Arbitrators and Parties* 1–2 (AAA-ICDR website 2020), <https://go.adr.org/covid-19-virtual-hearings.html> (accessed 11 May 2020).

65)

Ming Long Su, *supra* n. 17, para. 4.

66)

SCC, *Security on the Platform* (SCC website 2019), <https://sccinstitute.com/scc-platform/security/> (accessed 11 May 2020).

67)

AAA-ICDR Technology Services, *Key Technology Protections* (AAA-ICDR website 2019), [www.adr.org/TechnologyServices/cybersecurity-and-data-protection](http://www.adr.org/TechnologyServices/cybersecurity-and-data-protection) (accessed 11 May 2020).

68)

SCMP Reporters, *Inside China Tech: A Tale of Two Targets – Huawei and Zoom* (SCMP 11 Apr. 2020), paras 1–5, [www.scmp.com/tech/enterprises/article/3079478/inside-china-tech-tale-two-targets-huawei-and-zoom](http://www.scmp.com/tech/enterprises/article/3079478/inside-china-tech-tale-two-targets-huawei-and-zoom) (accessed 11 May 2020).

69)

Sundaresh Menon, *Technology and the Changing Face of Justice*, 37(2) J. Int'l Arb. 167, 173–174 (2020).

70)

IBA Report, *supra* n. 12, at 18.

71)

Menon, *supra* n. 69, at 173–174.

72)

Ming Long Su, *supra* n. 17, para. 4.

73)

*Ibid.*

74)

SCC, *Frequently Asked Questions* (SCC website 2019), para. 2, <https://sccinstitute.com/scc-platform/faq/> (accessed 11 May 2020).

75)

ICSID News Release, *supra* n. 26, paras 3–6.

76)

SIAC Highlights, *SIAC Signs Memorandum of Understanding with the Shenzhen Court of International Arbitration* (SIAC website 24 Aug. 2018), paras 3–5, [www.siac.org.sg/69-siac-news/578-siac-signs-memorandum-of-understanding-with-the-shenzhen-court-of-i...](http://www.siac.org.sg/69-siac-news/578-siac-signs-memorandum-of-understanding-with-the-shenzhen-court-of-i...) (accessed 11 May 2020).

77)

ICSID Annual Report, *Excellence in Investment Dispute Resolution* 29 (2019).

78)

IBA Report, *supra* n. 12, at 63.

79)

Guideline 2.6, CIETAC Guidelines on Proceeding with Arbitration Actively and Properly During the COVID-19 Pandemic (Trial) (effective 1 May 2020).

80)

U.N.G.A. Resolution 71/138, UNCITRAL Technical Notes on Online Dispute Resolution (13 Dec. 2016).

81)

*APEC Collaborative Framework for Online Dispute Resolution of Cross-Border Business-to-Business Disputes* (APEC Meeting Document Database 2019),

[http://mddb.apec.org/documents/2019/ec/ec2/19\\_ec2\\_022.pdf](http://mddb.apec.org/documents/2019/ec/ec2/19_ec2_022.pdf) (accessed 11 May 2020).

82)

IBA Report, *supra* n. 12, at 74.

83)

Menon, *supra* n. 69, at 179.

84)

Liu Wei, *The Belt and Road Initiative: A Bellwether of China's Role in Global Governance* (Carnegie Tsinghua 10 Sept. 2018), para. 2, <https://carnegietsinghua.org/2018/09/10/belt-and-road-initiative-bellwether-of-china-s-role-in-globa...> (accessed 11 May 2020).

85)

*Arbitral Institutions Covid-19 Joint Statement* (ICC website 17 Apr. 2020),

<https://iccwbo.org/content/uploads/sites/3/2020/04/covid19-joint-statement.pdf> (accessed 11 May 2020).

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