
USE OF ARTIFICIAL INTELLIGENCE IN INTERNATIONAL ARBITRATION: OPPORTUNITIES, RISKS AND THE EVOLVING LEGAL FRAMEWORK

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Introduction

It won't be an understatement to say that Artificial intelligence popularly known as AI has been the invention of the century. AI has proved to be revolutionary in all fields, which also includes revolution in the form of evolution in the field of law.¹ With respect to AI development in context of International arbitration, the latter has been undergoing a profound technological transformation driven largely by the rapid advancement of AI. As disputes between parties become more and more complex and documentary heavy, counsel as well as parties and even the arbitral institutions are increasingly turning towards the help of AI tools to decrease their extensive workload by managing evidence, analysing legal materials and streamlining the proceedings.² The aim of this article is to examine how exactly AI is being integrated into the evolving field of International Arbitration, the opportunity which this change creates, the risk it poses and the regulatory responses emerging around the world towards the same. The objective is simply to understand the overall effectiveness, efficiency and impact of AI in the field of international arbitration, so as to ensure fairness, transparency, principles of international law, legitimacy and thus justice in the international arbitration framework.

Just like any other field, technology has played vital and supporting role in the field of not only traditional dispute resolution but also in the field of Arbitration. What started with introducing the concept of electronic filings or as we call them E-filings, eventually adverted towards online repositories, digital hearing rooms, digital tracking of case status, etc. COVID-19 pandemic dramatically accelerated the shift towards digitisation of the arbitration process by pushing the arbitral institutions to adopt virtual hearings and remote management tools in order to proceed with their arbitration. This transition led the foundation for the current wave of AI driven

¹ Chartered Institute of Arbitrators, *Guideline on the Use of AI in Arbitration* (Mar. 2025), https://www.ciarb.org/media/bpndtcgu/guideline-on-the-use-of-ai-in-arbitration_updated-sept-2025.pdf

² SCC Online, *Arbitration in the Era of AI: Experts' Corner*, SCC Online (Jan. 8, 2025), <https://www.scconline.com/blog/post/2025/01/08/arbitration-in-the-era-of-ai-experts-corner/>

systems which can now be seen across the world. What began as a basic technological adaptation and which was meant to be temporary has now evolved into sophisticated analytics, machine, learning tools and automated systems capable of performing tasks once considered exclusively human.³ The evolution from traditional technology towards artificial intelligence marks evolving point in the method and conduct of arbitration, both domestic and international.

Key Applications of AI in International Arbitration

In the field of legal research, AI tools have become extremely invaluable. The systems now have the capability to analyse and research upon vast collections of case laws, judgements, arbitral awards, treaties, scholarly comments, jurisprudence, etc; all within seconds offering insights and legal understanding that would take human researches days or sometimes even weeks to generate. For example in Investment Treaty Arbitration, AI can now identify how terminal have historically, interpreted, fair and equitable treatment clause or indirect expropriation, helping council, develop more accurate and strategically informed arguments does not replace legal reasoning, but significant enhances the depth and precision of the research while allowing the human angle to still be there, as AI is used as an aid supplement, the work done by the researchers and not relied upon to do the complete work.⁴

One of the most evolving and transforming uses of AI has been seen to be observed in the field of E-discovery, which is often the most time, consuming and expensive stage of any International Arbitration. E-discovery as the name suggests is discovery of a document completely online. The document can anything be it a government order, notification, rules, company compliance, etc. Modern disputes, especially in construction and energy sectors can involve millions of documents. AI driven platforms help organise these massive volume of documents and data by identifying relevant materials, clustering, documents thematically, and detecting the anomalies that may indicate fraud or inconsistencies thus separating the grain from the chaff.⁵

More easier to understand and relatable feature of AI comparison to E discovery and document

³ AI and Arbitration: Key Considerations for Practitioners, Lexology (Feb. 20, 2025), <https://www.lexology.com/library/detail.aspx?g=4c126ec3-89f3-410c-b178-13a66b555b5d>

⁴ John D. Clough et al., AI in International Arbitration: What Is the Big Deal?, Columbia Univ. Artificial Intelligence and the Rule of Law Initiative (ARIA), <https://aria.law.columbia.edu/ai-in-international-arbitration-what-is-the-big-deal>

⁵ Id.

review is the inculcation of AI in aiding virtual hearings and transcription.⁶ The wide acceptance of virtual hearings worldwide post the coronavirus pandemic place an important role in facilitating real time, transcription and multilingual translation, thus impacting widespread audience by its use in the virtual hearings. AI tools automatically identify speakers generate searchable, transcripts and streamline in the management of hearing logistics, these features have not only enhance the efficiency, especially with respect to cross border disputes where multiple players who speak and understand multiple languages are involved, but it has also helped the process become much faster by reducing the overall time taken.

For an Arbitral Tribunal, AI increasingly seems to function as a decision support partner. These tools help to summarise lengthy submissions, check internal consistency within awards, organise evidence and check the relevant precedents across multiple jurisdictions.⁷ In complex disputes where the factual matrix is dense, interconnected and buried in paperwork, AI can help arbitrator navigate the relevant material more efficiently. Nonetheless it is essentials that tribunal maintain clear boundaries as AI may assist with organisation and analysis, but the final reasoning must always remain human.

Benefits of AI in International Arbitration

The benefits of AI in arbitration is panoramic, substantial and is increasingly evident across different stages of the arbitral process has significantly enhanced the procedure efficiency by automating the repetitive and time consuming tasks that traditionally would have required long hours and large teams. By taking over document sorting, keyword extraction, criminal legal research and transcript organisation, AI has reduced the administrative burden on counsels and tribunals, thereby allowing them to focus on the important substantive, legal and factual work and analysis rather than focusing on ancillary tasks. This improved efficiency directly translate into shorter timelines for Arbitration thus ensuring faster and speedier Arbitration, a factor that is especially important in high value International disputes where delays of even a single day can result in significant commercial loss and uncertainty.⁸

In addition to streaming the process, AI has contributed meaningfully to cost reduction of

⁶ AI for Legal Document Review, MyCase Blog, <https://www.mycase.com/blog/ai/ai-for-legal-document-review/>

⁷ Use of AI in Administrative Tribunals and Arbitration, LawBhoomi, <https://lawbhoomi.com/use-of-ai-in-administrative-tribunals-and-arbitration/>

⁸ Supra Note 4

International Arbitration. The document heavy Arbitration often requires extensive human review teams in order to review the pile of documents which are attached to any international dispute in an arbitration. This pile of documents in turn piles up the Arbitration expenses and this is even more true in the case of International Cross border Arbitration. The document review systems has helped in minimising the need for such large review teams by identifying relevant documents, filtering out the duplicates, clustering information and thereby increasing the overall efficiency by ensuring.⁹ This reduction in manpower combined with the accelerated review cycles has made International Arbitration more accessible to smaller parties and as reduced the financial burden on corporates and the nation states alike.

Another major benefit offered by the AI is accuracy. In disputes involving thousands or even millions of documents, it is common for human reviewers to overlook inconsistencies, miss critical information due to fatigue, time pressure and sometimes even due to cognitive bias which can sometimes overshadow the work. This problem, however, is not attached with the AI systems as it does not faces all these human emotions and can examine these large databases and data sets consistently and exhaustively without getting tired or making mistakes, thus reducing the risk of oversight and making the record more reliable.¹⁰ AI tools can also detect patterns, anomalies and correlations in data that may not be immediately apparent to human researchers, thereby strengthening the case preparation and enhancing the quality of arguments which are to be presented before the tribunal.¹¹

This helps improve overall case management by offering tools that organise complex fact and procedural material. More efficiently Tribunals can use AI generated summaries and classification tools to maintain coherence across procedural orders, evidence and submissions. This result in a more structured manageable and transparent Arbitration process supported platforms thus also enabling better tracking of deadlines, hearing schedules, procedural compliance and documents submissions thereby facilitating a smoother coordination between parties, counsels, Arbitrators and the overall institution.

Ultimately, we can say that AI empowers parties by giving them clear insights into the strengths

⁹ Michael J. Broyde, Don't Kill the Baby! The Case for AI in Arbitration, 2024 Emory L.J. Online, <https://scholarlycommons.law.emory.edu/cgi/viewcontent.cgi?article=1314&context=faculty-articles>

¹⁰ How AI Is Transforming Law Practice: A Guide, *WhisperIT* (2025), <https://whisperit.ai/blog/how-ai-is-transforming-law-practice-guide>

¹¹ The Power of AI for Data Analysis: Unleashing Insights and Efficiency, Graphite Note (2025), <https://graphite-note.com/the-power-of-ai-for-data-analysis-unleashing-insights-and-efficiency/>

and weaknesses of their case by predictive modelling. When used responsibly AI can help the counsels evaluate settlements, prospects accessories and refine strategic decisions. At the same time, tribunals benefit from greater clarity and organisation enabling them thus to focus their attention on core, legal and factual questions rather than administrative complexities. Collectively these advantages reinforce Arbitration's, long standing appeal as a flexible, faster, efficient and modern mechanism for resolving international disputes and thereby demonstrating why AI is increasingly viewed as an indispensable component of contemporary Arbitral practice.

Risks, Ethical Issues and Challenges

Despite its many advantages, the use of AI in Arbitration has raised critical, ethical and procedural concerns that must be examined with caution and as soon as possible. One of the major challenges is the algorithmic bias which the AI systems portray. The systems have inevitably reflected the characteristics and limitations of the data sets on which they are trained. If earlier Arbitral awards or legal materials contain systematic inconsistencies, implicit biases and incomplete reasonings. The AI models which are trained on the basis of them may replicate or even amplify these distortions rather than correcting them. This risk is especially pronounced in investor state arbitration where tribunals frequently engage with sensitive issues involving regulatory autonomy, public policy and sovereign rights in such context, even subtle distortions in how AI interpret could have significant implications for fairness and neutrality.¹²

Second major concern relates to the confidentiality and data protection with which the AI systems can be trusted with. As we know both these things form the cornerstone of Arbitration, as a dispute resolution mechanism, them also being the selling point to a great extent Arbitration in International disputes. How much these principles can be respected by AI systems, though is another thing. AI tools which often rely on cloud base processing, third-party service providers and external data service, by its very nature of being exposed to all of them possesses the risk of exposing sensitive information thus increasing the cyber security risk. Parties may have limited visibility regarding where their data is stored, how it is encrypted or whether it crosses multiple jurisdictions during processing. This creates real vulnerability including potential data breaches, unauthorised access and violation of international data protection laws, given that International Arbitration routinely involves commercially sensitive, proprietary and

¹² Algorithmic Bias and Fairness: A Critical Challenge for AI," Just Think (2024).
<https://www.justthink.ai/blog/algorithmic-bias-and-fairness-a-critical-challenge-for-ai>.

even politically delicate information, which could even have far reaching consequences for the parties and states involved.¹³

Another major concern is regarding the possibility of inequality of opportunity, arising from different access to advanced technological resources. The parties such as multinational corporation and developed states may be able to invest more and in a better manner in sophisticated AI driven research tools, predictive analytics and high end E- Discovery software, whereas smaller entities or developing states may lack the resources to do the same. This disparity can have a major influence in the quality of submissions, the speed of case preparation and even the effectiveness of advocacy, thereby creating an uneven playing field that undermines the fundamental principle of procedural fairness and equality. The very idea of Arbitration which aims to create flexibility, equality and party autonomy may inadvertently be compromised if one side gains a disproportionate advantage over other via superior technology.¹⁴

Further, an increasingly discussed risk relates to undisclosed reliance on AI by Arbitrators. Tribunals may use AI in summarising submissions, analysing patterns or organising complex evidence using such tools without informing the parties. This creates serious due process issues. Parties may be deprived of the opportunity to challenge, clarify or contextualise AI generated insights that could influence that terminal deliberations. This lack of transparency may form the basis for challenge to the award, including arguments related to breach of right to be heard or improper delegation of decision making functions. Undisclosed AI use threatens the perception and at times the reality of Arbitral independence thereby increasing impartiality. It can be summed up thus that there is a greater and sympathising need for clearer guidelines and disclosing the obligations regarding the use of AI in International Arbitration.¹⁵

Regulatory and Institutional Responses

Recognising these concerns in the Arbitration mechanisms, Arbitral institutions and International organisations have started developing comprehensive guidelines to regulate and

¹³ Elliot Friedman, Marta García Bel, Veronika Timofeeva, & Desmond Chong, “Generative AI: Opportunities and Risks in Arbitration,” Freshfields (2024). <https://www.freshfields.com/en-gb/our-thinking/campaigns/international-arbitration-in-2024/generative-ai-opportunities-and-risks-in-arbitration/>.

¹⁴ Meriam Al-Rashid & Ulyana Bardyn, “The Role of Artificial Intelligence in International Arbitration,” *Global Arbitration Review* (Jul. 25, 2019). <https://globalarbitrationreview.com/review/the-arbitration-review-of-the-america/2020/article/the-role-of-artificial-intelligence-in-international-arbitration#:~:text=Against%20this%20backdrop%2C%20AI%20is%20now%20poised%20to.>

¹⁵ Supra Note 1

standardise the use of AI in arbitration, especially International Arbitration. Institutions such as the *International Chamber of Commerce (ICC)*, the *London Court of International Arbitration (LCIA)*, the *Singapore International Arbitration Centre (SIAC)*, and the *International Centre for Settlement of Investment Disputes (ICSID)* have taken proactive steps by issuing guidance documents that promotes responsible integration of AI while ensuring the importance of maintaining core procedural safeguards.¹⁶

These guidelines generally impose the need to preserve confidentiality, ensure robust data, increased security protocols thereby upholding the principles of due process and procedure fairness in the Arbitration. For example, several institutional rules now explicitly encourage the adoption of secure digital platform which require parties to cooperate on cyber security arrangements and recommend that tribunals considered technological capabilities of organisations when issuing procedural orders. Such measures reflect a growing awareness that AI cannot be treated as a mere convenience and that it must be integrated in a way that sentence rather than compromise the procedural integrity of Arbitration.¹⁷

On the international level, UNCITRAL's Working Group III, which has led earlier, the reforms related to investor state dispute settlement (ISDS), has also acknowledged the expanding role of AI and has begun examining how procedural rules and ethical duties should evolve in response to the same. In the ISDS context, where decisions can have far reaching implications over the public policy and sovereign regulation, the introduction of AI raises unique concerns regarding transparency, neutrality and legitimacy. Working Group III discussions has therefore emphasized the need for disclosure obligations, a minimum standard governing the use of automated tools by tribunals and parties and overall oversight mechanisms. These ongoing deliberations indicate that AI is no longer viewed as a peripheral technological development, but as an issue central to the reform and sustainability of the ISDS system.

Collectively these regulatory and institutional initiatives signal a shift towards embedding AI governance within the architecture of International Arbitration. This reflects a shared understanding that while AI offers significant opportunities to improve efficiency, accuracy and access to justice, its deployment must be carefully control to preserve the credibility,

¹⁶ Mark-Silas A. Malekela, AI and Confidentiality Protection in International Commercial Arbitration: Analysis of the Existing Legal Framework, 5 *Discover Artificial Intelligence* 83 (2025), <https://doi.org/10.1007/s44163-025-00316-7>

¹⁷ Silicon Valley Arbitration & Mediation Center, Guidelines on the Use of Artificial Intelligence in Arbitration, First Edition (Apr. 30, 2024), <https://svamc.org/wp-content/uploads/SVAMC-AI-Guidelines-First-Edition.pdf>

predictability and fairness of the Arbitral system. The emerging standards demonstrate that the global Arbitration community recognise the need for proactive regulation rather than reactive correction, ensuring thus that AI's integration sustains, the long-term legitimacy of arbitration rather than destabilising it.¹⁸

Conclusion

A balanced approach is thus essential for the future of International Arbitration as the integration of AI in it becomes increasingly unavoidable. Arbitral institutions must adopt clear and mandatory disclosure norms wherever and whenever AI tools materially influence any stage of the proceedings, whether it is in legal research in drafting in document review in compliance or in procedural organisation of even the smallest of work. Such disclosure is central to preserving the procedural fairness and ensuring the transparency that underpins the Arbitral process thereby ensuring that parties retain the opportunity to address, challenge or contextualise any generated component that may affect the tribunals reasoning. Ethical standards should prioritise, explainability; a principle that requires AI systems to produce output that can be meaningfully understood, questioned and audited by the human decision makers. Without ensuring this, AI risks introducing opaque and unviable elements, which might ruin the due process and procedural fairness, which is sine qua non to Arbitration as a method of dispute resolution.¹⁹

At the same time, it can also be concluded that investment in robust and advanced cyber security infrastructure measures have become indispensable. Since Arbitration frequently involves commercially sensitive documents, proprietary corporate information and sometimes even state confidential materials, the use of AI system has become an area of concern due to its high exposure to cyber threats. Institution and parties must therefore adopt advanced encryption practices, secure data transfer mechanisms, multi layered authentication systems and clear protocols for responding to data breaches. These measures are not only merely technical safeguards towards potential cyber security breach is, but they also form a crucial component of maintaining the party confidence in arbitration.

¹⁸ Brian Spisak, Louis B. Rosenberg, & Max Beilby, "13 Principles for Using AI Responsibly," Harvard Business Review (Jun. 30, 2023). <https://hbr.org/2023/06/13-principles-for-using-ai-responsibly>.

¹⁹ Janine Haesler & Tim Isler, "Navigating the Main Impacts of Artificial Intelligence in International Arbitration: Insights from the ICC YAAF Workshop," Kluwer Arbitration Blog (Mar. 17, 2024). <https://arbitrationblog.kluwerarbitration.com/2024/03/17/navigating-the-main-impacts-of-artificial-intelligence-in-international-arbitration-insights-from-the-icc-yaaf-workshop/>.

Further more responsibility in integration of AI in arbitral system requires comprehensive training for arbitrators, councils, and institutional personnels. As the AI tools become more and more sophisticated and advanced, stakeholders must possess the competence to understand their capabilities and limitations, and thus they must critically evaluate AI assisted insights and prevent any type of overreliance on automated outputs. Training should encompass both technical literacy and ethical awareness, ensuring that users can identify potential biases, address data, quality issues and maintain human oversight in decision making. Given the inherently international nature of Arbitration, a coordinated approach is equally important, in order to ensure the harmonisation of rules relating to data protection, AI, governance and technological standards across jurisdictions which significantly reduce the uncertainty, minimise any type of conflicts between domestic regulatory regime and thus promote a uniform predictable environment for the global arbitral community.²⁰

Ultimately Artificial intelligence is the way forward as it continues to reshape the ways in which International Arbitration works by offering tools that enhance efficiency, accuracy and procedure organisation. Yet we cannot ignore the risk which arises from opacity, bias, unequal access to technology, confidential breach is, overreliance and disclose, reliance, et cetera, all of which underscores the urgent need for robust safeguards. Just to conclude it should remain a tool that supplements and strength and human reasoning rather than replacing it. Totally the ultimate decisions must always be from a human mind rather than from an AI tool. Legitimacy of Arbitration will depend on how effectively institutions, practitioners and tribunal integrate AI with within ethical transparent and accountable frameworks. With thoughtful regulation and responsible deployment, AI can fortify the arbitration ecosystem and support its evolution in an increasingly digital world.

²⁰ SCC Online, *Embracing AI in Arbitration: Enhancing Efficiency Without Compromising Justice*, SCC Online (Sept. 5, 2025), <https://www.sconline.com/blog/post/2025/09/05/embracing-ai-in-arbitration-enhancing-efficiency-without-compromising-justice/>