

*Integrating Technology, Modernity, Artificial Intelligence (AI) and Maximum Efficiency into the Nairobi
Centre for International Arbitration: A Critical Appraisal*

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**Integrating Technology, Modernity, Artificial Intelligence (AI) and Maximum
Efficiency into the Nairobi Centre for International Arbitration: A Critical Appraisal**

Kariuki Muigua*

Abstract

This paper discusses how the Nairobi Centre for International Arbitration (NCIA) can effectively embrace technology and AI towards ensuring modernity, maximum efficiency, accessibility and appropriateness of its services. The paper observes that the emergence of modern technologies including AI can improve dispute resolution under the auspices of NCIA. In particular, the paper notes that technology and AI can strengthen arbitration and mediation services under NCIA while also strengthening its administrative capacity. Despite their transformative potential, the paper notes that several challenges can undermine the effective and appropriate integration of technology and AI into NCIA. The paper discusses these challenges and examines how they can be addressed in order to appropriately integrate technology and AI into NCIA towards ensuring modernity, maximum efficiency, accessibility and appropriateness of ADR processes such as arbitration and mediation.

1.0 Introduction

Technology is a powerful tool that strengthening access to justice in the modern era. The rapid growth of technology has permeated into all aspects of life including the field of dispute resolution¹. It has been observed that technology holds the promise for an improved dispute resolution landscape that is based on fewer physical, conceptual, psychological and professional boundaries, while enjoying a higher degree of transparency, participation and change². In particular, modern digital technologies including Artificial Intelligence (AI) have significant potential to bolster access to justice, as well as to support its resilience, efficiency, fairness and effectiveness³. For instance, AI

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¹ Muigua. K., 'The Evolving Alternative Dispute Resolution Practice: Investing in Digital Dispute Resolution in Kenya' Available at <https://kmco.co.ke/wp-content/uploads/2022/04/The-Evolving-Alternative-Dispute-Resolution-Practice-Investing-in-Digital-Dispute-Resolution-in-Kenya-KariukiMuigua.pdf> (Accessed on 08/09/2026)

² Rabinovich-Einy..O., & Katsh. E., 'Reshaping Boundaries in an Online Dispute Resolution Environment.' *International Journal of Online Dispute Resolution*, Volume 1, No. 1 (2014)

³ Organisation for Economic Co-operation and Development., 'AI in Justice Administration and Access to Justice' Available at https://www.oecd.org/en/publications/2025/06/governing-with-artificial-intelligence_398fa287/full-report/ai-in-justice-administration-and-access-to-justice_f0cbe651.html (Accessed on 08/09/2026)

has the ability to automate legal tasks, sift through previous cases to generate legal analyses, undertake legal research, and generate legal documents and communications more quickly making it a valuable asset in the access to justice discourse⁴.

Integrating technologies such as AI in justice systems can therefore strengthen access to justice in the modern era. The United Nations notes that when harnessed effectively and in line with human rights, modern technologies such as AI can serve the interest of people and ensure that they access justice in a timely, inclusive, participatory and efficient manner⁵. One of the areas that is immensely benefiting from the emergence of modern technologies is the field of Appropriate Dispute Resolution (ADR). For instance, technology has the potential to bridge gaps in access to justice by offering flexible, low-cost, user-friendly and accessible solutions for resolving disputes through ADR⁶. The integration of technology and digital tools such as AI and block-chain contracts in ADR is transforming the field into a more modern, expeditious, efficient and accessible domain⁷. In particular, AI is revolutionizing ADR by providing viable solutions including case management, document review, legal research and analysis, streamlining of routine tasks and predictive analytics among other tasks⁸. Integrating technologies such as AI into ADR can therefore transform the field into a modern, efficient, accessible and appropriate forum for accessing justice.

This paper discusses how the Nairobi Centre for International Arbitration (NCIA) can effectively embrace technology and AI towards ensuring modernity, maximum efficiency, accessibility and appropriateness of its services. The paper observes that the emergence of modern technologies including AI can improve dispute resolution under the auspices of NCIA. In particular, the paper notes that technology and AI can

⁴ Monachino. C., 'Chat GPT: A Look into the Future (Litigation).' Available at <https://www.clemetrobar.org/?pg=CMBABlog&blAction=showEntry&blogEntry=91543#:~:text=Chat%20GPT%20and%20similar%20platforms,navigate%20the%20quickly%20changing%20environment> (Accessed on 08/09/2026)

⁵ United Nations., 'Advancing Rule of Law, Justice for All through Technology Must Include Equal Internet Access, Human Rights Compliance, Sixth Committee Speakers Stress' Available at <https://mail.google.com/mail/u/0/#inbox/FMfcgzQbfVGtksmCfmrlxLQbCCknVLCW> (Accessed on 08/09/2026)

⁶ Integration of Technology in Dispute Resolution., Available at [https://www.schreiberadr.com/integration-of-technology-in-dispute-resolution#:~:text=Advances%20in%20artificial%20intelligence%20\(AI,essence%20of%20alternative%20dispute%20resolution](https://www.schreiberadr.com/integration-of-technology-in-dispute-resolution#:~:text=Advances%20in%20artificial%20intelligence%20(AI,essence%20of%20alternative%20dispute%20resolution) (Accessed on 08/09/2026)

⁷ Shaheen. S., 'Technology in ADR: An Overview of Transformative Tools' Available at <https://www.linkedin.com/pulse/technology-adr-overview-transformative-tools-saleem-shaheen-j4j3e/> (Accessed on 08/09/2026)

⁸ Integration of Technology in Dispute Resolution., Op Cit

strengthen arbitration and mediation services under NCIA while also strengthening its administrative capacity. Despite their transformative potential, the paper notes that several challenges can undermine the effective and appropriate integration of technology and AI into NCIA. The paper discusses these challenges and examines how they can be addressed in order to appropriately integrate technology and AI into NCIA towards ensuring modernity, maximum efficiency, accessibility and appropriateness of ADR processes such as arbitration and mediation.

2.0 Technology and Artificial Intelligence in Appropriate Dispute Resolution (ADR): Opportunities and Challenges for the Nairobi Centre for International Arbitration (NCIA)

Technology and AI provides tools and solutions that can improve ADR services at the NCIA. For instance, it has been observed that in international dispute resolution, online arbitration and online mediation have become increasingly popular due to their role in addressing geographical barriers between parties and saving costs through the use of digital tools and platforms such as electronic conferencing, online chat and video conferencing to manage disputes all over the world⁹. Technology provides an opportunity for ADR institutions and practitioners to foster access to justice for geographically separated parties through processes such as online arbitration and online mediation¹⁰.

In particular, by harnessing technology and AI, ADR institutions including NCIA can streamline and enhance the efficiency of ADR processes such as arbitration and mediation. For example, NCIA observes that technology and AI are enabling arbitral institutions to effectively undertake administrative tasks including case management¹¹. By integrating technology and AI into its activities, NCIA can effectively streamline and enhance efficiency of tasks such as case filing, communication with arbitrators, managing documents and identification of inefficiencies in arbitration proceedings¹². In addition, when appointing arbitrators, AI can aid arbitral institutions and parties to make sound

⁹ Sulistianingsih. D et al., 'Online dispute resolution: Does the system actually enhance the mediation framework?' Available at <https://www.tandfonline.com/doi/full/10.1080/23311886.2023.2206348#abstract> (Accessed on 08/09/2026)

¹⁰ Rule. C., 'Technology and the Future of Dispute Resolution' Available at <https://law.scu.edu/wp-content/uploads/Rule-Technology-and-the-Future-of-Dispute-Resolution-copy.pdf> (Accessed on 08/09/2026)

¹¹ Nairobi Centre for International Arbitration., 'Artificial Intelligence 'AI' in International Arbitration: Machine Arbitration' Available at <https://ncia.or.ke/wp-content/uploads/2021/08/ARTIFICIAL-INTELLIGENCE-AI-IN-INTERNATIONAL-ARBITRATION.pdf> (Accessed on 08/09/2026)

¹² Ibid

decisions by examining thousands of candidates' track records in similar cases¹³. Further, NCIA notes that the use of technology in arbitration increases efficiency, reduces costs and permit the expansion of arbitration into new market segments¹⁴.

In addition to supporting arbitration services, technology and AI can also bolster mediation services at NCIA. For instance, AI tools can streamline administrative tasks in mediation including through scheduling meetings and organizing information and documents¹⁵. AI tools can also undertake legal research and provide language support and translation thus enhancing efficiency in mediation proceedings¹⁶. Through the use of technology and AI, ADR institutions can enhance access to justice through mediation through services such as online mediation sessions, electronic filing of pleadings, efficient communication with mediators and parties and effective appointment of mediators¹⁷.

Due to their transformative potential, there have been calls for ADR institutions to integrate technology and AI into their operations towards modernity, accessibility and maximum efficiency. In particular, technology and AI tools can enable arbitration institutions to improve internal processes and case management including through tracking time and costs of proceedings, preparing casework reports, aiding with knowledge management and record keeping, and preparing drafts of correspondence to the parties and arbitrators¹⁸. AI tools can also enable arbitration institutions to promote the efficiency, fairness and effectiveness of arbitration processes including through assistance with arbitrator selection by vetting and checking for potential cases of conflicts of interests, scrutinizing draft awards and procedural orders to ensure justice and fairness, preparing case summaries, and identifying key issues to be addressed by arbitrators¹⁹.

In light of the foregoing, it has been correctly observed that AI-driven tools and technological innovations offer significant potential and solutions for practitioners, users, and institutions seeking to enhance efficiency and elevate service delivery in arbitration

¹³ Ibid

¹⁴ Ibid

¹⁵ International Bar Association., 'Guidelines on the Use of Generative Artificial Intelligence in Mediation' Available at <https://www.ibanet.org/document?id=Guidelines-on-the-use-of-generative-AI-in-mediation> (Accessed on 08/09/2026)

¹⁶ Ibid

¹⁷ Ibid

¹⁸ Are Arbitral Institutions Using Artificial Intelligence? The State of Play in Adopting AI., Available at <https://legalblogs.wolterskluwer.com/arbitration-blog/are-arbitral-institutions-using-artificial-intelligence-the-state-of-play-in-adopting-ai/> (Accessed on 08/09/2026)

¹⁹ Ibid

and ADR²⁰. NCIA notes that technology and AI tools have enabled it to strengthen its case management services and enhance the efficiency, security, accessibility, and responsiveness of ADR processes and services²¹. In addition, NCIA observes that most of its administrative functions have now transitioned to digital platforms, significantly improving the accessibility, speed and reliability of ADR services towards meeting the access to justice needs of users who expect modern, efficient and technology-enabled service delivery²².

However, despite their transformative potential, several factors and challenges can undermine the effective integration of technology and AI into ADR institutions. For instance, NCIA notes that overreliance on technology and AI including through the appointment of AI arbitrators and mediators can undermine the core values of ADR such as humanity and empathy²³. In addition, it has been observed that cultural, language, gender and racial biases that are embedded in AI algorithms need to be carefully addressed in order to promote the safe, ethical and appropriate adoption of technology and AI in ADR²⁴. Limited institutional capacity and inadequate investments can also undermine the effective integration of technology and AI into ADR institutions²⁵. It is imperative to tackle these challenges in order to effectively integrate technology, modernity, AI and maximum efficiency into NCIA.

3.0 Conclusion

The growth of technology and AI provides immense opportunities to revamp and streamline ADR services at the NCIA towards modernity and maximum efficiency. It is therefore necessary for the Centre to embrace and integrate technology and AI across all its services in order to improve the quality, accessibility and efficiency of ADR processes such as arbitration and mediation. It is also vital for NCIA and other ADR institutions to develop institutional rules on technology with emphasis on AI in order to ensure its safe, ethical, appropriate governance and purposeful integration into ADR²⁶. Further, ADR

²⁰ Nairobi Centre for International Arbitration., 'AI in Arbitration: What's New, What's Next' Available at <https://ncia.or.ke/ai-in-arbitrationwhats-newwhats-next/> (Accessed on 08/09/2026)

²¹ Ibid

²² Ibid

²³ Nairobi Centre for International Arbitration., 'Artificial Intelligence 'AI' in International Arbitration: Machine Arbitration' Op Cit

²⁴ Global Arbitration Review., 'Artificial intelligence in arbitration: evidentiary issues and prospects' Available at <https://globalarbitrationreview.com/guide/the-guide-evidence-in-international-arbitration/3rd-edition/article/artificial-intelligence-in-arbitration-evidentiary-issues-and-prospects> (Accessed on 08/09/2026)

²⁵ Are Arbitral Institutions Using Artificial Intelligence? The State of Play in Adopting AI., Op Cit

²⁶ Are Arbitral Institutions Using Artificial Intelligence? The State of Play in Adopting AI., Op Cit

institutions have been urged to take the lead in building capacity on technology and AI in ADR including through training programmes targeted towards arbitrators, mediators and counsel on incorporating technology and AI into modern legal practice²⁷. In addition, in order to tackle challenges such as algorithmic biases in technology and AI, it is necessary for NCIA and other African ADR institutions to collaborate with local developers towards designing and adopting AI models trained on local languages, cultures, ethics and access to justice needs²⁸.

Integrating technology, modernity, AI and maximum efficiency into NCIA is therefore a practical and achievable ideal towards revamping access to justice through ADR in Kenya and Africa.

²⁷ AI in Arbitration: Institutional Guidance and Emerging Developments., Available at <https://www.scl.org/ai-in-arbitration-institutional-guidance-and-emerging-developments/> (Accessed on 09/09/2026)

²⁸ Code for Africa., 'African-language Large Language Models (LLMs) present major opportunities for the continent' Available at <https://medium.com/code-for-africa/african-language-large-language-models-llms-present-major-opportunities-for-the-continent-8a92a69518b3> (Accessed on 09/09/2026)

References

AI in Arbitration: Institutional Guidance and Emerging Developments., Available at <https://www.scl.org/ai-in-arbitration-institutional-guidance-and-emerging-developments/>

Are Arbitral Institutions Using Artificial Intelligence? The State of Play in Adopting AI., Available at <https://legalblogs.wolterskluwer.com/arbitration-blog/are-arbitral-institutions-using-artificial-intelligence-the-state-of-play-in-adopting-ai/>

Code for Africa., 'African-language Large Language Models (LLMs) present major opportunities for the continent' Available at <https://medium.com/code-for-africa/african-language-large-language-models-llms-present-major-opportunities-for-the-continent-8a92a69518b3>

Global Arbitration Review., 'Artificial intelligence in arbitration: evidentiary issues and prospects' Available at <https://globalarbitrationreview.com/guide/the-guide-evidence-in-international-arbitration/3rd-edition/article/artificial-intelligence-in-arbitration-evidentiary-issues-and-prospects>

Integration of Technology in Dispute Resolution., Available at [https://www.schreiberadr.com/integration-of-technology-in-dispute-resolution#:~:text=Advances%20in%20artificial%20intelligence%20\(AI,essence%20of%20alternative%20dispute%20resolution](https://www.schreiberadr.com/integration-of-technology-in-dispute-resolution#:~:text=Advances%20in%20artificial%20intelligence%20(AI,essence%20of%20alternative%20dispute%20resolution)

International Bar Association., 'Guidelines on the Use of Generative Artificial Intelligence in Mediation' Available at <https://www.ibanet.org/document?id=Guidelines-on-the-use-of-generative-AI-in-mediation>

Monachino. C., 'Chat GPT: A Look into the Future (Litigation).' Available at <https://www.clemetrobar.org/?pg=CMBABlog&blAction=showEntry&blogEntry=91543#:~:text=Chat%20GPT%20and%20similar%20platforms,navigate%20the%20quickly%20changing%20environment>

Muigua. K., 'The Evolving Alternative Dispute Resolution Practice: Investing in Digital Dispute Resolution in Kenya' Available at <https://kmco.co.ke/wp-content/uploads/2022/04/The-EvolvingAlternative-Dispute-Resolution-Practice-Investing-in-Digital-Dispute-Resolution-in-Kenya-KariukiMuigua.pdf>

Nairobi Centre for International Arbitration., 'AI in Arbitration: What's New, What's Next' Available at <https://ncia.or.ke/ai-in-arbitrationwhats-newwhats-next/>

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Centre for International Arbitration: A Critical Appraisal*

Nairobi Centre for International Arbitration., 'Artificial Intelligence 'AI' in International Arbitration: Machine Arbitration' Available at <https://ncia.or.ke/wp-content/uploads/2021/08/ARTIFICIAL-INTELLIGENCE-AI-IN-INTERNATIONAL-ARBITRATION.pdf>

Organisation for Economic Co-operation and Development., 'AI in Justice Administration and Access to Justice' Available at https://www.oecd.org/en/publications/2025/06/governing-with-artificial-intelligence_398fa287/full-report/ai-in-justice-administration-and-access-to-justice_f0cbe651.html

Rabinovich-Einy..O., & Katsh. E., 'Reshaping Boundaries in an Online Dispute Resolution Environment.' *International Journal of Online Dispute Resolution*, Volume 1, No. 1 (2014)

Rule. C., 'Technology and the Future of Dispute Resolution' Available at <https://law.scu.edu/wp-content/uploads/Rule-Technology-and-the-Future-of-Dispute-Resolution-copy.pdf>

Shaheen. S., 'Technology in ADR: An Overview of Transformative Tools' Available at <https://www.linkedin.com/pulse/technology-adr-overview-transformative-tools-saleem-shaheen-j4j3e/>

Sulistianingsih. D et al., 'Online dispute resolution: Does the system actually enhance the mediation framework?' Available at <https://www.tandfonline.com/doi/full/10.1080/23311886.2023.2206348#abstract>

United Nations., 'Advancing Rule of Law, Justice for All through Technology Must Include Equal Internet Access, Human Rights Compliance, Sixth Committee Speakers Stress' Available at <https://mail.google.com/mail/u/0/#inbox/FMfcgzQbfVGtksmCfmrlxLQbCCknVLCW>