



APPLICATION OF ARTIFICIAL INTELLIGENCE IN ALTERNATIVE DISPUTES RESOLUTION IN THE OIL AND GAS INDUSTRY IN NIGERIA

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ABSTRACT

This article focuses on the application of artificial intelligence in alternative dispute resolution in the oil and gas industry in Nigeria. Adopting the doctrinal research methodology, this article revealed that the application of artificial intelligence in ADR is desirable in present day evolving society. Again, there is no specific law on the application of artificial intelligence in ADR proceedings in Nigeria and the existing institutions on ADR proceedings at both national and international levels lack the required security and technological architecture, efficiency and support to ensure the smooth application of artificial intelligence in ADR especially in the oil and gas industry. The development of robots and avatars like ‘*sophia*’ for instance clearly exemplifies how artificial intelligence can be applied in ADR proceedings. Lack of a robust legal regime and poor infrastructural facilities are some of the identified challenges militating against the successful application of artificial intelligence in alternative dispute resolution procedures. Others are lack of adequate and enhanced software for coding algorithm and programming, resistance to change as well as digital divide. Despite these challenges, the application of artificial intelligence in ADR procedures in the industry offers benefits of better performance through rule-based tasks such as electronic recovery of documents with higher level of accuracy, lower cost implications and time saving factor. Artificial intelligence offers the elimination of all forms of human-bias associated with human ADR and an inbuilt policy for the detection of corruption and negative influences of human arbitrators in alternative dispute resolution proceedings.

KEYWORDS: Artificial Intelligence, Alternative Dispute Resolution, Oil and Gas Industry

INTRODUCTION

The application of artificial intelligence in the practice of alternative dispute resolution is traceable to the historic global movement in embracing the internet’s use especially as regards to its usage



in legal practice.¹ They were the results of application of science as computer systems or programs were designed to perform tasks that are ordinarily performed through the human intellect in the legal field especially in an arbitrary world.² There was the exhibition of intellectual traits that are conventionally associated with humans by a machine in legal tasks. Additionally, the use of technology has been argued to have flourished more in alternative dispute resolution as compared to litigation due to the fact that arbitration is not burdened by the procurement and implementation nightmares that bedevil large institutions like the court when it comes to acquiring and capitalizing on technology.³

While alternative dispute resolution is often famed for its relatively high speed, confidentiality, less-technicality, and control to litigation, more disputes that are increasingly complex in nature are being presented before alternative dispute mechanism techniques thereby rendering this speed and confidentiality traits illusionary by the day.⁴ The efficient characteristics of the use of ADR techniques have endeared it to the hearts of many parties that continue to seek

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¹. J. Arsic, 'International Commercial Arbitration on the Internet: Has the Failure Come Too Early?' (1997)(14)(3) *Journal of International Arbitration* <<https://themonline.org/fol/land.page?handshein.kleiwe/jiaoo14au=33ibids>> accessed 17 February, 2021.

². D. Dobrev, 'A Definition of Artificial Intelligence' (2004) *Institute of Mathematics and Informatics Bulgaria Academic of Science* <<https://arxiv.org/pdf/210;1568.pdf>> accessed 12 February 2021.

³. T. L. Holt, 'Whether Arbitration-What Can Be Done to Improve Arbitration and Keep Out Litigation's Ill Effects.' (2008)(7) *Depaul Business and Communication Law Journal* <<https://via.library.depaul.edu/cgif/viewcontent.cgi?article>> accessed 12 February, 2021.

⁴. J.D Halket, 'The Use of Technology in Arbitration: Ensuring the Future is Available to Both Parties' (2007) (81)(269) *St. John's Law Review* <<http://www.haiverweitz.com/use-of-technology-in-arbitration.pdf>> accessed 12 February 2021.



resolution of their disputes, especially in this modern times where the use of technology and technical aids is becoming ever and more necessary.⁵ The use of technology in alternative dispute resolution techniques has been rising alongside the use of technology in the legal profession in general,⁶ an aspect that remains truly rapid and far-reaching in its impacts over the years.⁷

This has ushered in a new development in technological world called artificial intelligence. Artificial intelligence embraces a computer system or programs that are designed to perform tasks, in this context, dispute resolution, which are ordinarily performed through human beings and their intellects. Specific areas of impact that artificial intelligence has influenced legal practice thus far include issues of discovery, aspects of legal search, generation of documents, generation of briefs and the prediction of outcomes of cases.

Artificial intelligence has been described as the most necessary in alternative dispute resolution especially international arbitration. Artificial intelligence is touted to have the capacity to carry out the analysis of bulky data before the arbitration proceedings and most importantly, capacity to arrive at a rational decision which is free from cognitive biases.⁸ Other aspects of alternative dispute resolution that have been connected to increased utilization of artificial intelligence include; detection of corruption and negative influences on the part of the arbitrators, promotion of diversity in appointment of arbitral panels, and arbitration of smart contracts.⁹ The use of specific algorithms to detect red flags of corruptions, making the process of appointment of arbitrators more open by using automatic short lists of arbitrators and the use of robots in enhancing

⁵. Ibid.

⁶. S. Thomas, *Information Technology and Arbitration: A Practical Guide* (Kluwer Law International, 2006) <<https://books.google.co.ke/books>> accessed 12 February 2021.

⁷. R. Susskind, *The Future of Law: Facing the Challenges of Information Technology* (Oxford University Press, 1998) 225.

⁸. M. Scherer, 'International Arbitration: How Artificial Intelligence will Change Dispute Resolution' (2018) *Austrian Yearbook of International Arbitration*.

⁹. (n 8).



the arbitral process in smart contracts are some of its benefits.¹⁰ This article, therefore, attempts a discussion on the application of artificial intelligence in alternative disputes resolution in the oil and gas industry in Nigeria.

ARTIFICIAL INTELLIGENCE IN PERSPECTIVE

Artificial intelligence, also called AI is a general name of the technology for the development of machines which are created entirely by artificial means and can exhibit behaviours like human beings, without taking advantage of any living organism.¹¹ Artificial intelligence products, which, when approached as an idealistic are completely human like and can perform things such as feeling, foreseeing, and making decisions, are generally called robot names.¹² Artificial intelligence is one of the most important factors in the emergence of various military weapon technologies and the development of computers during the period of World War II.¹³

AI is the study of cognitive processes using the conceptual frameworks and tools of computer science.¹⁴ It is the science of making machines do things that would require intelligence if done by man.¹⁵ The concept of machine intelligence emerging with various code algorithms and data studies reveals that all the technological devices produced from the first computers to today's

¹⁰. Ibid.

¹¹.M. Minsky, 'Stormed Search for Artificial Intelligence' in M. M. Maad, 'History of Artificial Intelligence'(2015)(15) <<https://www.researchgate.net/publication/322234922>> accessed 10 March 2021.

¹². Ibid.

¹³. Ibid.

¹⁴. E. Charniak and D. McDormott, 'Introduction to Artificial Intelligence' in E. L. Rissland, *Artificial Intelligence and Law, Stepping Stones to a Model of Legal Reasoning* (1958)(99) *The Yale Law Journal*.

¹⁵. (n11).



smart phones are developed on the basis of people. The artificial intelligence, which was developed very slowly in the old periods has made much progress with the emergence of gifted robots today.¹⁶

According to Pastukhova, artificial intelligence is the theory and development of computer systems that learn how to competently perform ‘cognitive functions’ such as decision-making, speech recognition and visual perception that will intuitively associate with human minds.¹⁷

One way to build an artificial intelligence is using machine learning approach, a process when a computer program is taught to recognize man features of a given set of information and further apply what it has learned to make predictions about other information. According to Woodrow Barfield, with deep learning, machines teach themselves without human intervention by crunching large sets of data and then statistically analyzing the data looking for patterns.¹⁸ The implication of the above is that there are already technologies capable to develop a functioning artificial intelligence for affirmative dispute resolution of first generation that will be autonomous from humans. However, this will be subject to the existing legal regimes.

There was the introduction of the ability to assign various functions to robots by utilizing artificial intelligence studies, artificial nerves cells and different science branches at the product development focus pointing to human behaviours. In 1956, McCarthy, Minsky, Sharnon and Rochester in the study process conducted by the artificial intelligence put forward the name McCarthy as the father of artificial intelligence.¹⁹

As systems that are powered by algorithms and use techniques such as learning, deep learning and rules, artificial technologies are categorized by their capacity to mimic human characteristic, the technology they use to do this, their real-world applications, and the theory of

¹⁶. Ibid.

¹⁷. C. Stainer, *Automate This: How Algorithms Came to Rule Our World* (1st edn, Peugum Group, 2005).

¹⁸. W. Barfield, *Cyber-Humans* (Springer International Publishing, 2015) 86.

¹⁹. (n11).



mind.²⁰ Using the above characteristics for reference, all artificial intelligence system-real and hypothetical fall into one of three types to wit, narrow artificial intelligence,²¹ general artificial intelligence²² and super artificial intelligence.²³

TYPES OF ALTERNATIVE DISPUTE RESOLUTION

Alternative dispute resolution may involve the resolution of disputes by a neutral third party outside the formal court system.²⁴ It is dispute resolution processes and techniques that act as means for disagreeing parties to come to an agreement short of litigation.²⁵ The relevance of ADR in the current dispensation of justice can never be over emphasized. ADR has gained acceptance among the general public and legal practitioners and judges in the temple of justice. Today, courts encourage parties to resort to ADR options, usually negotiation, mediation, arbitration and conciliation before such cases are tried and determined.

The rising popularity of ADR may not be unconnected with the overcrowding nature of the conventional court system which causes delay in the dispensation of justice, and the high cost of litigation. ADR ushered along with it the following features or advantages over litigation. It is cheaper for the parties especially where it does not take a long period, parties are free to choose persons to preside over their proceeding and confidentiality is present as proceedings are usually conducted in private. Other preferences are freedom to express one's feeling, less technicality, flexibility and speed. The dispute is determined in private with final and binding effect by the

²⁰. 'What are the 3 Types of Artificial Intelligence?' <<https://codebots.com>> accessed 27 March 2021.

²¹. Abbreviated ANI, which has a narrow ranges of abilities.

²². Abbreviated AGI, which is in par with human capabilities.

²³. Abbreviated ASI which is more capable than human intelligence and ability.

²⁴. O. A. Onadeko (ed), "*Professional Ethics: Skills: Practice Handbook*" (Pauaf Press Nigeria, 2018)160.

²⁵. A. Halpem, 'Negotiating Skills,' in A. O. Okoye, *Law and Practice in Nigeria: Professional Ethics and Skills* (2nd edn, Snap Press Nigeria Ltd. 2015) 43.



impartial third person(s) acting in a judicial manner rather than a traditional court. ADR processes differ, varying from the one who leaves the process in the hands of the decision-maker and the outcome in the hands of the parties, to processes that leave both the control of the process as well as the outcome to the facilitator.

Alternative Dispute Resolution is referred to as a procedure for settling a dispute by means other than litigation.²⁶ Alternative Dispute Resolution as practised globally is divided into arbitral and non-arbitral methods or what is also known as adjudicatory and non-adjudicatory processes.²⁷ The arbitral or adjudicatory method refers to arbitration which shares some characteristics with litigation. Alternative Dispute Resolution includes a range of dispute resolution processes or mechanisms that many think of as outside or as an alternative to litigation. Specific non adjudicatory ADR processes that are relevant to artificial intelligence include negotiation, mediation, arbitration, and conciliation.

Negotiation

Negotiation is a problem solving process in which two or more people voluntarily discuss their differences and attempt to reach a joint decision on their own common concerns.²⁸ Negotiation is described as a consensual bargaining process in which parties attempt to reach agreement on a disputed or potentially disputed matter.²⁹ Negotiation usually involves complete autonomy for the parties involved without the intervention of third parties.³⁰ It is defined as including all cases in

²⁶. A. Olufemi, 'Resolving Domestic Violence Through Alternative Dispute Resolution in Nigeria' (2010)(6) *University of Ilorin Law Journal*, 163.

²⁷. Ibid. 163-164.

²⁸. Halpern (n25), 412.

²⁹. (n26), 166.

³⁰. (n 29).



which two or more parties are communicating, each for the purpose of influencing the other's decision. Negotiation may take any of the three models, that is, face to face communication, telephone or written communication.³¹ Therefore, negotiation involves only the parties to a dispute. The parties may be more than two depending on the nature of the dispute. When a dispute arises between two or more parties, they may decide to settle it between themselves without involving a third party. This process is spread through several stages like preparatory, ice-breaking, agenda setting, bargaining, conclusion and execution stages.³²

Mediation

Mediation is a method of non-binding dispute resolution involving a neutral party who tries to help the disputing parties reach a mutually agreeable solution.³³ Mediation ordinary involves at least three persons; the parties and the mediator. The mediator is a person procured jointly by both parties to help them in reaching an agreement amicably.³⁴ Mediation involves negotiation in part. However, instead of the two parties trying to solve every problem arising from the dispute, a third person is there to help the parties in the negotiation. The mediator has no vested interest in the outcome of the case other than to help the parties to resolve their differences.³⁵ He is usually a neutral person. Mediation is voluntary in the sense that none of the parties is obliged to accept the suggestions of the mediator. Therefore, it is defined as:

A process in which an impartial third party called the mediator is invited to facilitate the resolution of a dispute by the self-determined agreement of the disputants. The mediator facilitates the communication, promotes

³¹. Okoye (n25), 432.

³². Ibid.

³³. (n26), 165.

³⁴. Okoye (n 25), 432.

³⁵. Ibid.



the understanding, focuses the parties on their interests and uses creative problem –solving techniques to enable the parties to reach their own agreement.³⁶

The mediator cannot compel the parties to come to an agreement against their wish. He can only facilitate such agreement.³⁷ The major function of a mediator is to create a structure in which issues in dispute between the parties are aired and the parties can also hear what each party has to say.³⁸ The mediator elicits facts, agenda and the option for settlement from the parties and tries to help them find a solution to their problems. He also helps the parties to negotiate and achieve a win-win approach to their dispute.³⁹ It enjoys certain advantages over negotiation. They include speed, win-win approach and commitment. Again, the presence of a mediator helps the enforcement process as he serves as a witness while his expertise is of immense value to the parties in reaching a lasting solution to their dispute.⁴⁰

Arbitration

Arbitration is a special branch of the Alternative Dispute Resolution (ADR) process.⁴¹ Other branches include negotiation, mediation and conciliation. It is special in the sense that in some respects, it possesses some attributes of litigation though its informality and voluntariness still leaves it in the realm of Alternative Disputes Resolution.⁴² The learned author was right when he

³⁶. M. Noone, *Mediation: Essential Legal Skills* (London: Cavendish Publishing Ltd., 1996) 31.

³⁷. Okoye (n25), 433.

³⁸. (n 37), 443.

³⁹. H. Brayne and R. Grimes, *The Legal Skills Book* (2nd edn, Butterworth, 1998) 395.

⁴⁰. Okoye (n25), 438-439.

⁴¹. Okoye (n25), 442.

⁴². Ibid.



opined that arbitration possesses some salient features or attributes of litigation. For instance, both arbitral awards and final judgment of the court of competent jurisdiction are binding decisions on the parties.

According to the World International Property Organization Arbitration (WIPO) and Mediation Centre,⁴³ arbitration is a procedure in which a dispute is submitted by agreement of the parties to one or more arbitrators who make a binding decision on the dispute. In choosing arbitration, the parties opt for a private dispute resolution procedure instead of going to court.⁴⁴ From the above definition, it can be distilled that arbitration is consensual. In other words, arbitration can only take place if both parties have agreed to it. All existing disputes can be referred to arbitration by means of a submission agreement between the parties. Once the parties have validity agreed to submit a dispute to arbitration, neither of the parties can unilaterally withdraw from the procedure and the tribunal has the authority to render a final award. Thus, arbitration is a private process which commences with agreement of parties to an existing, or potential dispute to submit that dispute for decision by a tribunal of one or more arbitrators. Hence, the issue of voluntary submission which signifies agreement as between the parties is of essence. Statutorily, the Arbitration and Conciliation Act⁴⁵ defines arbitration as ‘commercial arbitration whether or not administered by a permanent arbitral institution.’ A cursory look at the above definition reveals that the drafters of the law had only one type of arbitration in mind that is, commercial arbitration. It is stated that this definition is inadequate to define the subject matter as there are other types of arbitration not covered by the said legislation.

⁴³. ‘World International Property Organization (WIPO) Arbitration and Mediation Centre’

<<http://www.wipo.int/amc>> Accessed 2 February 2021.

⁴⁴. Ibid.

⁴⁵. Arbitration and Conciliation Act Cap A18, Laws of the Federation of Nigeria 2004, s 57 (1).



In a broader sense, the Harlsbury Laws of England⁴⁶ defines arbitration as ‘the reference of a dispute between not less than two parties for determination after both sides in a judicial manner by a person or persons other than a court of competent jurisdiction.’ This definition appears better than that of the ACA⁴⁷ in that it does not only recognize the number of disputants as two or above, but also states that the arbitral tribunal could consist of one or more persons. Section 57(1) of the Act defines the word commercial to mean, ‘all transactions of a commercial nature including any trade transaction for the supply or exchange of goods or services, distribution agreement, commercial representation or agency factoring, leasing, construction of works, consulting, engineering, licensing, investment, financing, banking, insurance, agreement or concession, joint venture and other forms of industrial or business co-operations, carriage of goods or passengers by air, sea, rail or road.’ The above only showcases the areas or nature of transactions where the Act will apply. This is in no way asserting that other types of arbitration do not exist.

Ezeijiofor⁴⁸ adopted the definition of Halsbury in his book. Equally, the court in *MSR (Nig) Ltd v Oyedele*⁴⁹ defines arbitration as the reference of a dispute between not less than two parties for determination, in a judicial manner by a person or persons other than a court of competent jurisdiction. In *Collins v Collins*⁵⁰ Romly MR. defined arbitration as reference to the decision of one or more persons either with or without umpire of a particular matter in difference between the parties.

Arbitration is a specialized area of law and the practitioners and specialists in this noble area of law are always eager to guard jealously the domains of this area of law. The fact is that

⁴⁶. The Hallsbury Laws of England (3rd edn, volume 2) 2.

⁴⁷. (n45).

⁴⁸. G. Ezeijiofor, *The Law of Arbitration in Nigeria* (Longman Nigeria Plc, 2005) 3.

⁴⁹. (1962) ALR. 157. Adopting the definition of Hallsbury Law of England. (n.23).

⁵⁰. 28 LJCH. 186



arbitration, like negotiation, conciliation, and mediation is an alternative dispute resolution technique even though some authors have stopped referring to it as such since the field of arbitration has become rather complex. The reason for this is most likely due to the fact that the recent proliferation of different arbitral departments catalysed the need to discourage the all time cluster and avoid generalization of all the groups as representing different methods of alternative dispute resolution.

Arbitration is the investigation and determination of a matter or matters of difference between contending parties by one or more unofficial persons chosen by the parties, and called ‘arbitrators’ or ‘referees’.⁵¹ Arbitration could also be referred to as a process by which parties voluntarily refer their dispute to an impartial third person, an arbitrator selected by them for a decision based on the evidence and argument to be presented before the arbitral tribunal.⁵² The concept of voluntary submission runs through the definition sampled above.

However, Hemuka defines arbitration as the amplified process of adjudication whereby the adjudication process or judicial role of the courts are kept in abeyance for the time being while the parties try to settle the dispute between them by a perfectly legal and statutorily sanctioned but extra judicial means.⁵³ Corroborating the above, Maxwell defines arbitration as a private process whereby a disinterested person called an arbitrator, chosen by the parties to fashion out, but without regards to legal technicalities, applying either existing law or norms agreed by the parties and acting in accordance with equity, good conscience and perceived merit of the dispute

⁵¹. B. A. Garner(ed), *Black’s Law Dictionary* (9th edn, West Publishers, 2009) <www.monstercrawler.com>. Accessed 4 February 2021; *Duren v Getchell*, 55 Me 241; *Boyden v Lamb*.152 Mass 416. 25. NE 609.

⁵². *Domke on Commercial Arbitration* in P. Opojo &F. Ajomo (eds), *Law and Practice of Arbitration and Conciliation in Nigeria* (Beyi Associates, 1999) 37.

⁵³. N. Hemuka, *The Nigerian Institute of Estate Surveyors and Valuers Professional Examination 1983-1988 Question and Answers on Legal Studies* (Hemuka Real Estate Publishers, 1999) 33.



makes an award to resolve the dispute.⁵⁴ The above definition captures certain essential ingredients of arbitration, to wit: voluntary submission to an impartial third party and less technical procedures according to agreed law or norms and whose procedure must be on merit. It also suggests that it is the disputing parties who choose the neutral third party, hence, a sense of control.

Arbitration and other forms of ADR are alternative options to litigation. Arbitration is a method of dispute resolution involving one or more neutral third parties who are usually agreed to by the disputing parties and whose decision is binding.⁵⁵ The uniqueness of arbitration over other ADR options is the bindingness of its awards. As stated earlier, the arbitral proceeding is conducted in private and the arbitrator(s) give an award which is final and binding on the parties. It is worthy of note that such arbitral award is at par with the judgment of a court of competent jurisdiction. Laying credence to the above, it is stated by the Supreme Court:

Arbitration proceeding as I have already shown are not the same thing as negotiation for settlement out of court. An award made, pursuant to arbitration proceeding constitute the final judgment on all matter referred to the arbitrator. It has a binding effect and it shall upon application, in writing to the court be enforceable by the court.⁵⁶

Distinguishing between other forms of ADR on one hand and arbitration and/or litigation on the other hand, it is submitted that ADR, like litigation and arbitration, will often involve an independent third party but his function is fundamentally different from that of a judge or arbitrator and is best described as a neutral facilitator. It does not impose a decision on the parties but on the contrary his role is to assist the parties resolve the dispute themselves. He may give opinions on

⁵⁴. F. Maxwell, *Commercial Arbitration Dispute Resolving* (The Law Book Co. Ltd. 1989) 55;

Russel on Arbitration (18th edn. Sweet & Maxwell 1970) 39.

⁵⁵. (n26), 162.

⁵⁶. *Ras Pal Gazi Construction Company Ltd v FCDA* (2001) 87 LRCN 1864 at 188.



issues in dispute but his primary function is to assist in achieving negotiated solution.⁵⁷ Not unmindful of other features or advantages of ADR, the hallmark of ADR is that if the proceeding is properly conducted, the parties still retain their earlier position or relationship they held before the dispute. This is not always the case with litigation.

Arbitration is seen as a voluntary method of alternative dispute resolution which is applied to domestic and international contracts and it is founded in the present future agreement of the parties to submit any dispute between them to arbitration and parties retain control over the process but not the outcome.⁵⁸ It is further stated that arbitration in Nigeria could be Mandatory or Consensual.⁵⁹ Mandatory arbitration refers to compulsory arbitrations which take place when the consent of one of the parties is enforced by statutory provisions.⁶⁰ This type of arbitration operates strictly on the dictates of the law and not the will and choice of parties.⁶¹ There are various forms

⁵⁷. R. Alan and H. Martin, *Law and Practice of International and Commercial Arbitration* (3rdedn, Sweet & Maxwell, 1999) in B. Oyaleke, *A Critical Analyses of Customary Arbitration in Nigeria* (University of Ilorin, 2013), 47.

⁵⁸. U.O. Timothy and N.Chinedu, '*Procedural Aspect of Arbitration in Nigeria*' <<https://researchgate.net>> accessed 12 February 2021.

⁵⁹. Ibid.

⁶⁰. The Trade Dispute Act, Cap. T18 LFN, 2004 Ss. 2 and 4 which provides that industrial disputes are required to be referred to the Industrial Arbitration Panel (IAP) before the National Industrial Court may have Jurisdiction.

⁶¹. D.O.N Agwor and O.O. Igila, 'An X-ray of the Legal Framework for Arbitration in the Nigerian <Petroleum Industry>'. In O.V.C Okene(ed) *Excellence in Governance and Creativity: Legal Essays in Honour of His Excellency E.N. Wike*, (Princeton Associates, 2018) 296.



of arbitration recognized in law. They include commercial arbitration,⁶² statutory arbitration,⁶³ adhoc arbitration,⁶⁴ international arbitration, institutional arbitration,⁶⁵ and customary arbitration.⁶⁶

Conciliation

Conciliation is often used as a synonym for mediation and they in fact have similarities.⁶⁷ Conciliation involves a situation where the third party known as a conciliator, is obliged to use his best endeavours to bring the parties in a dispute to a voluntary settlement of their dispute.⁶⁸ Conciliation processes are much more interventionist in outlook than mediation.⁶⁹ Conciliation is like mediation and in many instances used interchangeably but the two differ in that conciliation goes a little step further than mediation.

A conciliator is usually one who commands the trust and confidence of the parties. The major distinction is that unlike a mediator, who does not make any suggestions to the parties, a conciliator guides the parties and does make suggestions and may draw up what he feels is a fair compromise. The parties may accept or refuse or modify the conciliator's recommendations. That is why it is sometimes referred to as a process of ordinary and rational discussion under the guidance of a neutral third party. Conciliation is regulated in Nigeria by the Arbitration and

⁶². 'Commercial Arbitration' <<http://www.wiseseek.com/what-is-commercial-arbitration.htm>> accessed 2 February 2021 .

⁶³. 'Statutory Arbitrations and Conciliation' <<https://www.lawteacher.net>> accessed 1 April, 2024.

⁶⁴. 'Adhoc Arbitration' <<http://www.carrow.cern/ad.hoc.htm>> accessed 2 February 2021.

⁶⁵. 'Institutional Arbitration' <<http://www.out-law.com/en/topics/projects-constructing/internationalarbitration/institutional-vs-adhoc-arbitration/>> accessed 2 February 2021.

⁶⁶. Ibid.

⁶⁷. Okoye (n25), 440.

⁶⁸. Ibid.

⁶⁹. M. Noone, *Mediation: Essential Legal Skills* (Cavendish Publishers, 1996)19.



Conciliation Act.⁷⁰ A party wishing to conciliate under the Act shall send to the other disputing party, a request for conciliation containing a brief statement of the subject of the case.⁷¹ The conciliation body shall after listening to the parties, presents its terms of settlement⁷² whose terms the parties are free to accept or reject.⁷³ The terms of settlement accepted by the parties are binding on the parties and they can take an action in court to enforce same.⁷⁴

Multidoor Court

Multidoor courthouse is a court connected alternative dispute resolution Centre.⁷⁵ It is a Centre with the objective of providing the necessary framework for the attainment of alternative dispute resolution of cases.⁷⁶ The multidoor court house also serves as an arbitral institution with its rules of procedure.⁷⁷ For instance, the Abuja Multi-Door Courthouse has an office at the High Court premises at Wuse Zone 5, Abuja. The Centre provides enabling environment for settlement of disputes by parties without litigation.⁷⁸ The Centre may also offer facilities for neutral evaluation,

⁷⁰. (n45), pt ii.

⁷¹. Ibid., s 38.

⁷². Ibid., s 42.

⁷³. Ibid.

⁷⁴. (n45), s 42.

⁷⁵. Okoye (n25), 475.

⁷⁶. Ibid.

⁷⁷. Ibid.

⁷⁸. Abuja Multi-Door Courthouse Mediation Procedure Rules 2003, rule 20(c).



dialogue or any other alternative dispute resolution process.⁷⁹ There is also the Lagos Multi-Door Courthouse originally established in 2002.

Parties to a dispute may choose to have their case mediated under the auspices of the Centre. Once such agreement is made, the parties are deemed to have adopted the rules of procedures governing mediation of cases submitted to the Centre and the rules become part of their agreement.⁸⁰ Even where there was no original agreement between the parties to have recourse to mediation, a party may request the Centre to invite the other party to join in a submission to mediation. The Centre then makes contact with the other party and persuades him to join in the submission to mediation.

APPLICATION OF ARTIFICIAL INTELLIGENCE IN ALTERNATIVE DISPUTE PROCEDURES IN THE OIL AND GAS INDUSTRY IN NIGERIA

Over the past decades, there has been a rapid expansion in the use of technological innovations and the internet in everyday interactions.⁸¹ People became very dependent on technology.⁸² Different desks, programmes and applications nowadays tell us where to go and what to do.⁸³ Man relies on technology in connection to his health and security. Man uses detection systems to send alarm notifications to police, machine servicing clients in banks, parking systems for cars, implants to substitute or maintain parts of the body, surgery and carry go robots and many other tools.⁸⁴

⁷⁹. Ibid.

⁸⁰. Ibid., rule 1.

⁸¹. R. Cupido, 'Online Dispute Resolution: An African Perspective'(2016)(2)(1) *ScientificCo-operations InternationalJournalofLawandPolitics*, 24.

⁸². A. Pastukleova, Artificial Intelligence as a Judge: Can We Rely on a Machine? (An LLM Dissertation Work of the Faculty of Law, Gheut University 2016-17) 5.

⁸³. (n82).

⁸⁴. Ibid.



Information technologies are deeply integrated into business, politics, leisure, travel and other spheres of life and drastically change existing professions. This integration process also affects the job of lawyers, arbitrators and the justice system.⁸⁵ One can find successful operating technology in justice, such as online dispute resolution platforms and the application of artificial intelligence in alternative dispute resolution. Computer systems are developed to learn how to perform cognitive functions competently that are intuitively associated with human minds such as decision-making, speech recognition, visual perception, all geared towards settling disputes through the use of robots rather than human beings.

In 1942, an American author, Isaak Asimov first formulated the three laws of robotics in his book, 'Runaround'. He introduced the idea that robots should be placed as subordinates to human beings and such as not to harm people.⁸⁶ According to him, a robot may not harm a human being or, through inaction, allow a human being to come to harm.⁸⁷ A robot must obey the orders given to it by human beings, except where such orders would conflict with the first law; and a robot must protect its own existence as long as such protection does not conflict with the first and second law.

Artificial intelligence, the notion that computerized systems can replace human thought processes and interaction, continues to gain traction in all areas of life including the legal professions and in particular, in the field of dispute resolution.⁸⁸ Lex Machina, a Data-mining computer programme created at Stanford University in 2006 has been used to look for patterns to help with predictions on the progress of cases in the US. In November, 2017, there were news

⁸⁵. (n 82).

⁸⁶. (n 82)18.

⁸⁷R Leenes and F. Lucivero, 'Lawson Robots Law by Robots, Laws in Robots: Regulations Robot Behaviour by Design' (2014)(6(2) *Law, Innovatory and Technology*, 193-220.

⁸⁸. W. Kluwer, *KluwerMediationBlog*, (Center for Effective Dispute Resolution, August 30, 2018).



headlines about ‘Case Cruncher Alpha,’ a project at Cambridge University where an A1 system predicted the outcome of 775 financial Ombudsmen cases with 86.61 percent accuracy. A panel of 100 experienced lawyers who assembled to perform the same task achieved 66.3 percent. Today, we now have the emergence of ‘smart contracts agreements’ stored across computers (a process known as blockchain) and which are defined by computer codes rather than traditional written clauses.⁸⁹

In adjudicative capacity, AI has the capacity to process clauses faster and even make a decision about cases. Whether or not claimants would tolerate their cases being resolved by computers becomes another topic. However, the countervailing argument is that, as A1 increasingly becomes part of our day-to-day lives, the point that man allows it to drive families around in self-driving cars—then, there will come a time where man will completely be comfortable in letting the algorithm adjudicate over arbitration panels.⁹⁰ In alternative dispute resolution sphere, the use of A1 used to be seen as even more remote mediation which in many ways is about bringing the human element back into dispute and litigations. The birth of ‘*Sophia*’ in 2013 may be a harbinger of things to come.

Developed by Hanson Robotics, *Sophia* with a life-like human head is designed specifically to interact socially with people. Therefore, artificial intelligence could now be present at the mediation table and could equally be the mediator.⁹¹ Artificial intelligence will reach such a point where a robot might represent a client or even chair a mediation session. What once sounded like pure science fiction is now, because of development such as ‘*Sophia*,’ becoming remote but not impossible. There are today, myriad of programmes that can recognize and respond to human emotion. Whilst these may not yet be the same as human interactions, they are improving all the

⁸⁹. (n 88).

⁹⁰. (n 88).

⁹¹. Ibid.



time.⁹² These are good possibilities – all of which could be true. Artificial intelligence could be a tool for the mediator or adjudicator to elaborate. It could be another stage in a bigger resolution process change or it just might be our competition.⁹³

Traditionally, the tribunal is composed of human arbitrators who conduct hearings in person. As the development of modern technology began to spread, human-powered alternative dispute resolution became the only technologically feasible possibility.⁹⁴ However, digitization, artificial intelligence (AI) and blockchain technology are currently disrupting the traditional format and conduct of ADR. Stake holders in the ADR market are exploring how new technologies and tools can be deployed to increase the efficiency, cost, higher speed and quality of the ADR process.⁹⁵ In fact, intelligent machines hold the promise of more rational consistent and unbiased decisions when compared to human factors.⁹⁶

The Covid-19 pandemic also accelerated the trend towards adopting smart technologies, robots and other algorithms to increase the efficiency and quality of ADR. For instance, if physical hearings are not feasible due to the risk of contracting Covid-19, parties and tribunals can require online meetings, desktop sharing, video conferencing software and the use of robots that enable them resolve their disputes without meeting in real time. Therefore, practical necessities and constraints prompt rapid, technology assisted adaptation to the traditional way of doing ADR by humans.⁹⁷ When fully artificial intelligence-powered ADR processes become technologically

⁹². Ibid.

⁹³. Ibid.

⁹⁴. (n88).

⁹⁵. Ibid.

⁹⁶. Ibid.

⁹⁷. (n 88).



feasible, they will be able to functionally perform the same tasks as human actors and should be permitted by the law.

In ADR, AI has been described to be most necessary in international ADR, especially arbitration due to the typically complex nature of the cases that are presented before international tribunals.⁹⁸ AI is touted to have the capacity to carry out the analysis of the bulky data and most importantly carrying of a national decision which is free from cognitive biases.⁹⁹ Other aspects of ADR that have been connected to increased utilization of artificial intelligence include detection of corruption and negative influences on the part of the arbitrators, promotion of diversity that is, appointment of arbitral panels, and arbitration of smart contracts.¹⁰⁰ AI can be utilized through the use of specific algorithms to detect red flags of corruption in ADR procedures, to make the process of appointment more open using automated shortlists of arbitrators as well as enhancing the process through the use of robots.¹⁰¹

AI is seen as having the ability to reduce the inordinate amounts of tasks before humans in ADR proceedings especially bearing in mind midnight clauses.¹⁰² AI equally has the capacity to scrutinize arbitral awards to enhance its chances of recognition as well as enforcement by checking to see whether the tribunal complied with requisite procedural formats and in an efficient manner.

⁹⁸. M. Scherer, 'International Arbitration: How Artificial Intelligence will Change Dispute Resolution' (2018) <https://papers.ssrn.com/8013/data-integrity_notice.cfmdabid=3377234> accessed 27 March, 2021.

⁹⁹. Ibid.

¹⁰⁰ L. Dokopoulou, 'Arbitration & Technology: A Call for Awakening' (2019) Kluwer Arbitration Blog' <<https://arbitrationblog.kluwerarbitration.com>> accessed 27 March, 2021.

¹⁰¹. (n100).

¹⁰². The term 'Midnight Clause' refers to arbitration provisions/Clauses in contracts that is often inserted at the end of the contract document when memorializing the final terms of the deal making it appear like an afterthought long into the process.



In conclusion, AI has the ability to provide enhanced representation to parties by augmenting the human cognitive abilities and automating tasks that would otherwise consume huge amounts of time through human labour.¹⁰³ AI could also smoothen the adjudication process in ADR by enhancing the non-biased appointment of arbitrators and reviewing awards to ensure that they are watertight.¹⁰⁴ Importantly, all these AI interventions are likely to reduce the cost of ADR for the parties concerned following a reduction in labour and time occasioned by AI. Considering the volume of transactions and the web of relations and international transactions involved in the oil and gas industry in Nigeria, it becomes imperative to adopt this technologically-driven ADR technique to resolve disputes in the industry.

CHALLENGES FACING THE APPLICATION OF ARTIFICIAL INTELLIGENCE IN ALTERNATIVE DISPUTE RESOLUTION IN THE OIL AND GAS INDUSTRY IN NIGERIA

There are various areas of concern in the application of artificial intelligence in alternative dispute resolutions in the world over. These challenges include legal constraints and lack of infrastructure which opens the floodgates for susceptibility to cyber-attacks and hacking. Others are resistance to change, technological divide as well as the issue of flexibility.

Legal Constraints

Legally speaking, there is no specific legislation on the regulation of artificial intelligence in alternative dispute resolution in Nigeria. Apart from the Constitutional provisions which allows

¹⁰³. L. Bento, 'International Arbitration and Artificial Intelligence: Time to Tango' (2018) Kluwer Arbitration Blog' <<https://arbitrationblog.kluwerarbitration.com>> accessed 27th March, 2021.

¹⁰⁴. Ibid.



for the promotion of science and technology,¹⁰⁵ the Constitution is silent on the application of artificial intelligence in ADR. Again, the Constitution equally directed that for the promotion and protection of national interest, there should be respect for international law and treaty obligations as well as the seeking of settlement of international disputes by negotiation, mediation, conciliation, arbitration and adjudication.¹⁰⁶ It thus appears that the community reading of sections 18(2) and 19(a)(d) of the Constitution imposes a duty on the government of Nigeria to promote settlement of disputes through ADR mechanisms by using technological advancement and by extension, artificial intelligence.¹⁰⁷ Regrettably, these functions fall under chapter 11 of the Constitution which has been declared non-justiciable.¹⁰⁸ Likewise, the Arbitration and Conciliation Act¹⁰⁹ does not specifically provide for artificial intelligence in ADR. There is therefore the need for a legislative enactment on the application of artificial intelligence in ADR. There is need to review the legal regimes on ADR to specifically incorporate artificial intelligence into her practice. This way, the gains and benefits of the technology assisted and technology-driven ADR will nevertheless be sustained.

Infrastructural Challenge

The necessary and basic physical, organizational and software structures and facilities needed for the smooth application of artificial intelligence in alternative dispute resolution practices are lacking in Nigeria. This becomes the infrastructural challenge to artificial intelligence in ADR. Artificial intelligence operations include communication networks, power supplies, adequate and

¹⁰⁵. Constitution of the Federal Republic of Nigeria 1999 (as amended) Hereinafter, CFRN 1999, s 18(2).

¹⁰⁶. Ibid., s 19(a)(d).

¹⁰⁷. L. A. Ayinla and T. Oniyide, 'Juridical Perspective on the Regulation of Online Dispute Resolution in Nigeria' (2020)(7)(2) *IslamicUniversityMultidisciplinaryJournal*, 71.

¹⁰⁸. CFRN 1999 (n105), s 6(6)(c).

¹⁰⁹. ACA (n45).



enhanced software for coding, algorithm, and programming as well as constant power supply within the system. Artificial intelligence only thrives and becomes an alternative where there is a firm, basic and foundational infrastructural structure for operation. The lack of these structures has opened the floodgate for ADR processes to be susceptible to cyber-attacks and hacking.¹¹⁰ These threats backed by the confidential nature of ADR pose great financial and reputational risks to arbitrators as well as parties who would have patronized the application of artificial intelligence in ADR.¹¹¹

Resistance to Change

Resistance to change is the unwillingness of people to adapt to altered circumstances which can be covert or overt, organized or individual.¹¹² This is the act of opposing or struggling with modifications that alter the status quo.¹¹³ Traditionally, parties to disputes and arbitrators are used to the physical meetings and alternative dispute resolution proceedings wherein tribunals will sit and interact with parties and their witnesses. This human interface and face-to-face communication which has become the norm and traditional way of resolving disputes through the tribunal is composed of human arbitrators, mediators or conciliators who conduct hearings in person. However, as the development in modern technology evolved through digitization, the internet, artificial intelligence and block-chain technology, arbitrators and parties alike began to feel the current wave of application of technology-power ADR to disrupt the traditional format and conduct of alternative dispute resolutions.

¹¹⁰. R. Backer and C. ‘Mackenze, Technology: Coming for A Job Near You?’ (2019) <<https://www.accuracy.com/perspective/tech-in-arbitration>> accessed 27 March, 2021.

¹¹¹. Ibid.

¹¹². ‘Resistance to Change’ <<https://www.thebalancecareers.com>> accessed 2 April, 2021.

¹¹³. Ibid.



Everyone looks upon any major change with suspicion as they are unsure that it will work. People are afraid that they will not be able to master new technology. Resistance to change appears intensified since parties, especially arbitrators and tribunals involved in ADR proceedings fear that application of artificial intelligence in ADR will force them to be involved in a series of changes that have had insufficient support to gain the anticipated results. Their anticipated results and fears could now be that the application of artificial intelligence could cause job loss for human tribunals, arbitrators and mediators alike. When this is perceived, they become weary to accept the new technological changes as the new normal. It is the position of this article that society is evolving, dynamic and not static. Technology is setting a new pattern of operation for every discipline. Therefore, the field of alternative dispute resolution cannot afford to be left behind in the current technological-driven and AI-powered society especially following the outbreak of Covid-19 where physical meetings are not feasible. Tribunals and parties to ADR therefore, need to adjust to artificial intelligence in ADR which holds the promise of more rational, consistent, and unbiased decisions when compared to human actors.

Technological Divide

Technological divide, also known as digital divide means the gulf or difference between those who have ready access to computers and the internet and those who do not. It refers to the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard to both their opportunities to access information and communication technologies (ICTS) and to use the internet for a wider variety of activities.¹¹⁴ Technological divide has contributed to differences in development levels among states.¹¹⁵ The access to information in the developed

¹¹⁴. 'Digital Divide Definition – OECD Glossary of Statistical Terms' <<https://stats.oecd.org>> accessed 2 April 2021.

¹¹⁵The Pros and Cons of Digital Divide Advantages and Disadvantages.' <<http://www.digitaldividecouncil.com>> accessed 2 April 2021.



world is much better as compared to the case in the underdeveloped world.¹¹⁶ This disparity has created an economic divide globally since information is critical in facilitating business transactions and productivity.¹¹⁷ Technological divide could be categorized into three different types namely gender divide, social divide, and universal access divide.¹¹⁸

Consequently, as artificial intelligence relies on large amount of data, the first of policy questions and concerns relates to access and cost of processing data, as well as how the under developed citizens or country's data will manage to proffer privacy rights and swim in the new normal of applying artificial intelligence in ADR. Only a very few percentage of Africans and those within the underdeveloped and rural areas of Nigeria have access to the internet. As data is the pre-requisite asset allowing AI systems to function. Questions about connectivity and unequal access to facilities and the internet by parties also arise in Nigeria. Data is expensive, and internet connectivity variable. These affect developers, disputants, and AI practitioners and entrepreneurs especially in its application in ADR.

Therefore, a greater percentage of the people living in rural areas and the poor urban dwellers may not have the financial viability to acquire technological appliances, computers, hi-tech phones and other internet gadgets as well as subscribing to the huge data required for application of artificial intelligence in ADR. This presents a major challenge to its smooth application across all divides.

BENEFITS OF THE APPLICATION OF ARTIFICIAL INTELLIGENCE IN ALTERNATIVE DISPUTE RESOLUTION PROCEDURES.

¹¹⁶. Ibid.

¹¹⁷. (n116).

¹¹⁸. Ibid.



Notwithstanding all the numerous challenges, there is indeed a place for artificial intelligence and its associated benefits in the practice of alternative dispute resolution (ADR).¹¹⁹ First, artificial intelligence has recorded better performance than humans at rule-based tasks such as electronic discovery of documents with even a higher accuracy.¹²⁰ This is a clear advantage as far as reduction of workload is concerned towards creating access to justice.

Another benefit of artificial intelligence in ADR is seen in the area of cost of ADR proceedings on the parties seeking determination of their matter.¹²¹ Whenever travels and movement of parties and tribunals are involved, there are expenses incurred. The use of technology in artificial intelligence will give the parties the ability to reduce, if not eliminate the cost of air, land travels, hotels or accommodation bills, meals and other ancillary expenses. Artificial intelligence is likely to reduce to a great extent, the cost of acquiring justice by equally reducing labour and time factor that often increase the costs and this is likely to open up and make resolution of dispute through alternative dispute resolution options operative and attractive to more people who need justice.¹²²

Thirdly, there is the benefit of time saving. A great deal of effort and time goes into the setting up of mediation, conciliation or arbitrators proceedings. It takes time, especially in multi-party cases to coordinate the schedules of the neutrals, the parties and their witnesses. A cancellation can result in the ADR processes and same being adjourned for a lengthy period. Again, whether you travel internationally or locally to attend an ADR setting or tribunal, significant time is spent getting to and from the physical tribunal or arbitral venue. If you are

¹¹⁹. I. Godofa, 'Artificial Intelligence and its Future in Arbitration' (2020)(4(1) *Journal of CMSD*).

¹²⁰. M. McKamey, 'Legal Technology: Artificial Intelligence and the Future of Law Practice (2017)(12) *Appeal Law Journal* <<https://static1.squarespace.com/static/59bb4f5dc@277>> accessed 27 March, 2021.

¹²¹. P. Thompson, 'Creating New Pathways to Justice Using Simple Artificial Intelligence and Online Dispute Resolution' (2015) *Osgoode Legal Studies Research Paper Services*.

¹²². (n 121).



travelling from one state to another, you will likely spend several hours or days commuting. However, the use of artificial intelligence is likely to eliminate the need for travel, resulting in the saving of a significant amount of time.

AI can also be used in the management of legal processes towards an efficient access to justice through AI-powered ADR mechanisms.¹²³ This is built primarily around data-driven efficiencies that are all forms of wastages, be it in time, labour or other aspects of efficiency towards speedy resolution of disputes.¹²⁴

Fourthly, a foremost benefit of the application of artificial intelligence in ADR proceedings is the fact that the outbreak of Covid-19 pandemic in the world in 2019 and the subsequent lockdown of public facilities and institutions that followed in 2020 has affected travels and physical meetings. The pandemic left a radical effect on the ability to conduct businesses including ADR proceedings. Of the same effects are natural disasters, weather strikes, and accidents. Anything that affects travelling can equally disrupt businesses, resulting in the cancellation of a scheduled alternative dispute resolution proceeding. Nevertheless, with the benefit of artificial intelligence in alternative dispute resolution processes using robots and other AI-powered technologies, cancellations need not happen.

Again, the adoption of artificial intelligence in ADR offers the benefits of eliminating every form of human bias associated with human ADR. This is correct because AI is touted to have the ability to arrive at rational decisions which are free from cognitive biases.¹²⁵ Finally, artificial intelligence in ADR has been characterized with the policy for detection of corruption and negative influences on the part of arbitrators, mediators or conciliators styled tribunals, and promotion of

¹²³. R. W. Staudt and M. P. Andrew, 'Access to Justice and Technology Clinics: A 4% Solution' (2012) (88) *Chi-kentLawReview*.
<<https://scholarship.kentlaw.iit.edu/cgi/viewcontent.cgi?article=3326&context=fcschool/>> accessed 27 March, 2021.

¹²⁴. Ibid.

¹²⁵. Scherer (n98).



diversity in appointment of arbitral panels.¹²⁶ Artificial intelligence can be utilized through the development of certain algorithms to detect red flags of corruption in ADR proceeding, to make the process of appointment of tribunal members or panel more transparent using automated short lists of panel members as well as enhancing the resolution of disputes in smart contracts through the use of robots.¹²⁷

CONCLUSION

Despite the traditional alternative dispute resolution mechanisms which incorporated human factors, the many years of history of technological development and innovations in the areas of word processor, fax machines, pagers, cell and smart phones, the internet, email, personal computers, development of robots and avatars and their subsequent acceptance have positively impacted on the practice of law generally and alternative dispute resolution procedures in particular. The outbreak of Corona-virus pandemic created a new normal and a necessity that has forced radical change in society, business, and government including the conduct of alternative dispute resolution through the application of artificial intelligence. The application of artificial intelligence in alternative dispute resolution proceedings has been slow owing to certain challenges which include lack of a specific, adequate and robust legal framework, absence of required basic infrastructural facilities like constant power supply, communication networks and enhanced software. Others are resistance to change as everyone looks on any major change with suspicion as well as technological divide across individual, household, socio-economic and geographic levels. It is further concluded that artificial intelligence has been successfully applied in other professions and disciplines like the medical imaging and sports.

Finally, in spite of the challenges militating against the speedy and smooth application of artificial intelligence in alternative dispute resolution, the application of artificial intelligence in

¹²⁶. Dokopoudon (n100).

¹²⁷. Dokopoudon (n100).



alternative dispute resolution offers enormous benefits especially in the electronic recovery of documents at higher accuracy rate, cost effectiveness and time saving as a result of the machine speed comparative advantage. It has the propensity to eliminating every form of human bias associated with traditional human ADR proceedings especially as AI is adjudged to have the ability to arrive at rational decisions that are free from cognitive biases. Thus, it presents opportunities and prospects for the use of artificial intelligence in alternative dispute resolution in the future.

RECOMMENDATIONS

In order to ensure that the benefits associated with the adoption of Information Communication Technology especially artificial intelligence are brought to bear in alternative dispute resolution proceedings, the following recommendations are made:

1. There is a dire need to formulate and/or enact a specific and robust legal framework at both national and international levels to regulate the application of artificial intelligence in alternative dispute resolution procedures.
2. In the interim, the Arbitration and Conciliation Act, which is the main legal regime regulating alternative disputes resolutions in negotiation, mediation, conciliation and arbitration in Nigeria should be amended to incorporate a clause that will copiously and directly recognize the use of artificial intelligence in the field of alternative dispute resolution proceedings. This development, it is believed, will promote the development of e-commerce and stimulate the growth of the technology industry.
3. The artificial intelligence systems and development of modern, enhanced and sophisticated technologies should be carried out for the efficient protection of alternative dispute resolution practitioners and disputing parties against cybercrimes and internet frauds.
4. The various institutions for the enforcement, management and monitoring of the ADR proceedings like the Lagos Regional Centre for International Commercial Arbitration, the Chartered Institute of Arbitration, Maritime Arbitrators of Nigeria, Lagos Multi Door Court House and the Centre for Effective Dispute Resolution amongst others need to be



- restructured for an efficient and effective management, enforcement and monitoring of compliance with existing alternative dispute resolution rules.
5. Governments and institutions should put in place solid infrastructural facilities like fortified communication networks, constant power supply and enhanced software for coding, algorithm and programming so as to give room for the smooth application of artificial intelligence in alternative dispute resolution.
 6. There should be widespread education and enlightenment programs for the society generally and ADR practitioners in particular on the gains and benefits in the application of artificial intelligence in ADR as against the existence of traditional alternative dispute resolution mechanisms. This way, the existing technological gap and/or divide existing at individual, socio-economic and geographic levels would have been closed or bridged.
 7. Nigerian legal system and practitioners in the field of alternative dispute resolution should borrow a leaf from the flourishing application of artificial intelligence in medicine, particularly in medical imaging and sports and adopt same in the field of alternative dispute resolution.
 8. With the increasing and high-profile cases and threats of cyber-attacks in alternative dispute resolution, actors in the arbitral space should undertake their obligation to ensure that they pay attention to cyber-security and establish and follow procedures that ensure proper storage and transmission of sensitive information throughout the alternative dispute resolution process to mitigate threats in the digital world.
 9. There is also need to diversify the field of machine learning to be able to recognize bias in artificial intelligence and remedy same in order to have non-biased results or awards.

There is need to develop an instant language translation service provider or software application which will come in really handy with regards to cross-border language issues.