



# The impact of artificial intelligence on generating automated standard form construction contracts: A Step in the right direction?

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## Introduction

Artificial intelligence (“AI”) is the ability of machines to perform tasks that are typically associated with human intelligence, such as learning and problem-solving. AI has many advantages. Amongst other advantages, it saves time, automates repetitive tasks and eliminates biases. AI is not exempt from disadvantages, and these include costly implementation, potential human job loss, and lack of emotion and creativity. This article discusses AI-generated contracts and the advantages and disadvantages of the same. It will then discuss the impact of AI on standard form construction contracts and explore whether deploying AI technology to draft standard-form contracts is a step in the right direction for the South African construction industry.

## Artificial intelligence generated contracts

AI-generated contracts involve the use of text-based machine learning applied to contracts to make the process of drafting, reviewing, and tracking contracts more efficient. Like its human counterpart, contract AI begins by understanding and familiarising itself with the language used in legal contracts. AI-generated contracts are created automatically by software using machine learning algorithms and natural language processing, prime examples of the scope and functionality of this technological innovation. AI-generated contracts offer many benefits over traditional contracts created manually by legal professionals. One significant advantage is the speed and efficiency with which these contracts can be created. AI algorithms can analyse vast amounts of data and generate contracts in a matter of seconds, significantly reducing the time it takes to create a legally binding agreement.

Another way of assessing the value of AI is understanding how effective its outputs are. A key advantage is the improved accuracy and consistency the technology stands to contribute to the legal workflow. I software is programmed to analyse and interpret contractual terms, safeguarding against the risk of contract drafting errors

and omissions. Of course, this depends on how well the machine learning workflow is designed, that is how it is built on an algorithm that figures out all the key terms (attributes/type of datasets) of a professional services agreement, additionally, this algorithm must be trained on representative datasets of standard construction contracts. An ideal AI legal assistant helps to minimise the potential for disputes and legal challenges down the line that may be based on technical linguistic errors or word choice. In addition to speed and accuracy, AI-generated contracts are also more accessible and affordable than traditional contracts. Legal services can be costly and time-consuming, especially for small businesses or individuals who may not have the resources to hire a team of legal professionals. By utilising AI-generated contracts, individuals and businesses can access legal services at a fraction of the cost while still ensuring that their contracts are legally binding and compliant.

## **AI, construction and contract management**

The life cycle of a construction contract is twofold, namely pre-signature and post-signature. Both stages explicate key procedures in the project life span and their respective challenges and responsibilities, mostly involving manual tasks and negotiations, leading to delays, setbacks, and potential compliance issues. These stages can be further explicated in terms of the procedures that make up the life span of the standard form construction contract and its project, from the initial stages of tendering, the awarding of the contract right up to all parties fulfilling their respective contractual obligations in the final procedures/activities of the defects liability period.

Contract management has been and will always be an integral part of any construction project. AI has and continues to assist with contract management functions by providing new ways for users to create, store, review, index, retrieve, analyse, negotiate, and approve agreements. Therefore, AI can be used to not only accelerate the contract assembly process but also fast-track contract reviews and provide deeper insights into business performance across the project life span and the organisation.

In addition, AI can simplify complex and unstructured contract management processes, freeing up time for more crucial aspects of contract management, particularly compliance and risk management. AI can specifically assist with contract search and insight extraction, contract clause and metadata analysis, which can enable parties to negotiate terms more easily in the future.

Therefore, AI can be a useful tool for all stages in the construction contract workflow and life cycle. It may assist in expediting the processes involved at the pre-signature stage, such as compiling and drafting a tender evaluation report on submitted tenders and drafting a tender bid. AI can assist in shortening the processes involved in both the pre-signature stage and the post-signature stages of the construction contract concluded between parties. Thus, as shown above, AI, when utilised effectively and properly may improve the overall efficiency of the procurement and construction contract drafting workflow.

Concurrent with on-going debates about the role and impact of AI, while AI-generated contracts offer several benefits, the technology presents several challenges and risks associated with their use. One major concern, with the use of AI in respect of the construction contract process is legal and regulatory compliance challenges which may arise. In addition to legal and regulatory compliance challenges, AI-generated contracts also raise ethical and privacy concerns in their development. These AI-generated contracts rely on the collection and analysis of vast amounts of datasets, which may include personal and sensitive information in training to recognize patterns and make accurate forecasts. It is important to ensure that the sourcing and use of this data comply with ethical and privacy standards, such as data protection laws, regulations and compliance. Since laws and regulations can vary from country to country, it is important to ensure that the AI employed complies with local regulations and laws. Failure to do so can result in costly legal challenges, penalties, and reputational damage. A further concern is the potential for bias in the data used to generate computations in the form of model construction contracts. If the data used is biased, it can result in discriminatory or unfair contractual terms. It is crucial to ensure that the data used is unbiased and representative to ensure fair and equitable contractual terms for all parties concerned in the agreement.

AI also presents a challenge to construction lawyers as it is just a procedural tool and is not liable for any contract-related legal mistakes or omissions. The lawyers using the AI system will ultimately be responsible for ensuring that the contract is legally sound, this provides an essential role for human oversight in regulating the AI technology to ensure that it is not only accurate in its computations, but rather that its operation upholds key human values. In this way, AI assistants will not only be efficient and productive but also trustworthy, with its decision-making governed and regulated by stringent human-sight of legal personnel.

It is important also that construction lawyers today develop best practices in navigating AI contracts within this field of law. In using AI-generated contracts, construction lawyers must understand the technology's limitations, conduct thorough due diligence and risk assessments, ensure proper documentation and record-keeping, and stay informed of legal developments and industry best practices.

AI technology and legal regulations alike continue to evolve, it will be important for construction lawyers to stay informed of legal developments and industry best practices. Staying abreast of legal developments such as data protection laws, ethical and privacy standards, and best practices for AI-generated contracts will help lawyers use the technology more effectively and avoid potential legal challenges. Second, assess the risks; before using AI contracts, construction lawyers should conduct a thorough risk assessment. This includes assessing the accuracy and reliability of the data, compliance with legal and regulatory standards, and ethical and privacy concerns. It is also important that construction lawyers familiarise themselves with the nature of AI-generated contracts work, including where the data comes from and how the algorithms analyse and interpret it. This

understanding will help construction lawyers use the technology more effectively and competently.

## **The impact of AI on the standard form construction contracts: Step in the right direction in South Africa?**

AI is not a particularly new concept, however, as of late there have been significant advances in the capability of the technology which have made AI a lot more attractive to multiple industries including both the construction and other legal industries.

The most obvious benefit that AI offers is the ability to save time. An AI based application can sift through enormous amounts of information in a fraction of the time that a human being can. Further, if programmed correctly, it can sift through and sort this information with minimal error. AI may also assist construction lawyers to flag potential contractual issues during a contract negotiation, by flagging potential risk areas and/or areas which usually become points of contention. AI based applications may also be able to assist in identifying areas of potential risk in construction projects which in turn will enable construction lawyers to advise clients accordingly and potentially avoid disputes down the line.

Additionally, though not recommended, AI through the use of ChatGPT may also assist in the drafting of construction contracts and other related documents. However, these documents must be carefully scrutinised and proofed for approval prior to their use in contracting and will likely be of no-use as a client template. but may provide an idea to a construction lawyer of the general structure of a construction contract, if the parameters in ChatGPT have been correctly provided. A less surprising critique here is that such general construction contracts and related documents which are created through the use of AI applications are unlikely to cater for the individual/custom needs of a particular client. Therefore, while it might be tempting to entities to try and save money by using AI applications to draft contracts, and thus avoiding the cost of bringing on a legal team, care should be taken when signing any such contract or related documents. While AI may be able to enhance what attorneys already do and improve efficiency for employers, contractors and attorneys, at this stage, it would be premature to believe that they can replace attorneys in totality. At best, it may be possible to produce a first draft of a construction contract using AI applications such as ChatGPT, but thereafter an attorney should be consulted in order to customise the construction contract to cater for a particular project's unique requirements, specifications, and risks. Thus, legal contracts created by AI applications which have been specifically developed and coded to include natural language disambiguation can be truly free from linguistic errors in contract drafting. As an example of the possible benefits of AI applications, consider specialised document software which can enhance the organisation of documents and flawlessly maintain that organisation, including all internal cross-references, through the life of the document. Such software can also ensure that language is applied consistently, no matter how many attorneys had a hand in the drafting. Through document comparison and automatic learning,

software such as contract comparison tools can identify missing clauses or conditions, inconsistently used terminology or undefined terms, both within a single document and across a pool of similar documents. Whilst natural language algorithm included AI safeguards against ambiguous use of a word, by leveraging on the syntactic contexts surrounding the word in order to determine its correct meaning.

AI can also improve organisational and logical structure. With automatic document comparison and organisation, for example, with the correct AI application attorneys can more quickly identify holes or gaps in their documents and even in their legal analyses. This can be especially effective in contract analysis if attorneys are able to use programs that have learned through repeated analysis to identify missing terms or definitions in known types of contracts. Similarly, document analysis can uncover a logical connection that has not yet been firmly established in a legal memorandum, allowing attorneys to revisit and strengthen their weak points in the human-oversight phase of contract proofing.

Sole reliance on AI to generate the significant risk-shifting provisions is rife with problems, in ensuring efficiency and quality assurance, human-input is indispensable. For example, prompting ChatGPT to generate an “EPC (Engineering, Procurement, and Construction) contract for a complex construction project results in an EPC contract drafted from scratch within seconds. Like the mechanic’s lien waiver form example above, the resulting contract looks pretty good from a high level, with sections on the project description, responsibilities of the contractor and owner, compensation, warranties and guarantees, indemnification, limitation of liability, and termination.

Yet, upon closer inspection, the entire AI-generated EPC contract is shorter than two pages, it is not comprehensive and therefore it requires the specialised knowledge and intervention of a construction lawyer to fill in the significant gaps as EPC contracts are generally very long documents and addresses each of the necessary risks in a precise matter which cannot be achieved in a two-page document. The importance of human oversight is not limited to the final proofing stages but is equally significant in the pre-signature stage of the construction contract life cycle. In terms of contract negotiations, a construction lawyer will be required to negotiate the terms of the construction contract and AI will not be able to sufficiently assist in this regard. More so, there is so much uncertainty with regard to AI in South Africa as it is not regulated. Should AI be regulated, it could be a step in the right direction in regulating how AI will affect South African contract law. This will in turn have an impact on the construction contracts. AI is a step in the right direction as seen from the advantages discussed above. It has a positive impact on the construction contracts. However, employers and contractors need to tread carefully as human intervention is still required to ensure that their needs are catered for sufficiently.