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The rise of AI in construction

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In recent years the **construction industry** has witnessed a transformative wave driven by **artificial intelligence (AI)** technologies. Looking ahead, the use of AI in 2024 is expected to become even more sophisticated and widespread in the market.

From automated design software to predictive analytics for project scheduling and risk management, AI's integration in construction processes promises to significantly boost efficiency, enhance safety, streamline operations, foster innovation and sustainability, and minimize human errors. Yet, amid the promise of increased efficiency and precision, AI also presents a range of legal challenges and potential pitfalls.

Navigating these complexities demands proactive mitigation strategies and redefinition of responsibilities and liabilities right from the start. The intersection of traditional legal frameworks and emerging AI technology will necessitate a fresh perspective on how contracts are drafted, procurement models, insurance arrangements and internal policies.

AI contract drafting considerations

Detailed provisions will need to address issues such as:

1. Liability

As AI takes on more autonomous roles in construction processes, determining liability in case of errors, accidents, or failures becomes a challenging task. Contracts must explicitly outline roles, obligations and responsibilities among stakeholders in respect of AI tools used on the project.

2. Data protection

AI can store and analyse vast amounts of data, optimizing planning and project management. However, this comes hand in hand with concerns regarding data protection. Contracts must explicitly detail the handling of personal data, shedding light on the specific data collected by AI tools.

3. Intellectual property

With new technologies the amount of intellectual property (IP) being registered in the construction sector is accelerating. It is therefore important for construction companies to get their IP strategy right and for contracts to cover issues such as ownership of data and designs generated by AI systems during the construction process, the use and ownership of algorithms and the underlying technology, copyright-related issues and licences, and ownership of innovations developed during the course of a project.

AI and procurement

Traditional contracting arrangements and risk allocations may discourage the implementation of untried processes and technologies.

Addressing this issue could involve integrating key performance indicators and mechanisms that balance risks and rewards, to incentivise innovation. Implementing these contractual models, alongside thoughtful drafting considerations and open dialogue among stakeholders

to establish precise guidelines, standards, and regulatory frameworks specifically tailored to AI in the construction sector, has the potential to cultivate innovative, safe, and legally compliant practices.

AI and insurance

AI's adoption will need to be backed by appropriate insurance policies designed to cover the risk of potential errors, malfunctions, and liabilities arising from AI-driven operations within the construction sector.

Contracts must clearly delineate the agreed insurance arrangements. Parties should review the available insurance policies carefully and account for the risk that suppliers of AI solutions, particularly if they are start-ups, might not have sufficient assets or insurance coverage to satisfy a claim. This means that collateral forms of security may be required, or other stakeholders may need to take out the required insurance instead.

AI and internal policies

The integration of AI in construction, especially within decision-making, sparks ethical considerations.

Concerns about bias, transparency, and accountability necessitate attention. Companies must set robust internal ethical standards. Seeking legal advice when crafting internal ethical frameworks that prioritize responsible AI usage is important to ensure alignment with relevant regulations. Further, open algorithms, audits, and continual industry dialogues serve as vital avenues to tackle these concerns and foster reliability and trust.
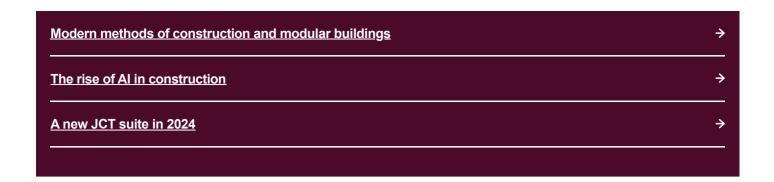
AI and accuracy of data

Whilst AI offers a more efficient means of pinpointing on-site issues, it also raises complex challenges in the realm of data accuracy and relevance, particularly in legal proceedings. Pertinence and admissibility of AI-generated data has emerged as a critical concern, due to the lack of explanation and verifiability in AI-generated conclusions, which cannot undergo scrutiny and challenge. Furthermore, the use of diverse programming algorithms may yield conflicting or divergent results, complicating the reliance on AI-generated data.

AI and the construction industry summary

While the interaction between AI and construction presents exciting prospects, collaboration between legal experts, AI developers, policymakers, and industry stakeholders becomes pivotal. Fostering dialogue and interdisciplinary cooperation can pave the way for a legal framework that not only accommodates AI's potential but also finds a balance between innovation and risk mitigation, safeguarding against potential legal pitfalls, and in the pursuit of a technologically advanced and legally compliant construction industry.

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