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Framework for the implementation of a BIM-Based Data Analytics approach for Construction Adjudication within the United Kingdom

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Introduction and Background

- Resolving disputes in the construction industry
- The adjudication process

Data Analytics in Legal Sector

- Using AI-based legal applications
- Online Dispute Resolution (ODR)
- Case-based reasoning
- Natural language processing
- Text mining

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- This paper presents a framework for the implementation of a BIM-based Data Analytics approach for Construction Adjudication
- The framework will help digitising and improving the adjudication process to deal with the identified problems of the current adjudication process.

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Methodology and Data Collection

- Using thematic analysis of interviews conducted with professional adjudicators and solicitors.
- The sample was drawn from a range of professional backgrounds, including legal practitioners, arbitrators, adjudicators, and experts in construction disputes resolution.
- The responses of adjudicators provide insight into how data analytics affects the effectiveness and need for it in construction adjudication.
- The questions were designed to explore the use of data analytics in construction adjudication, the benefits and challenges associated with its use, and the factors that influence its implementation.

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Data Analysis

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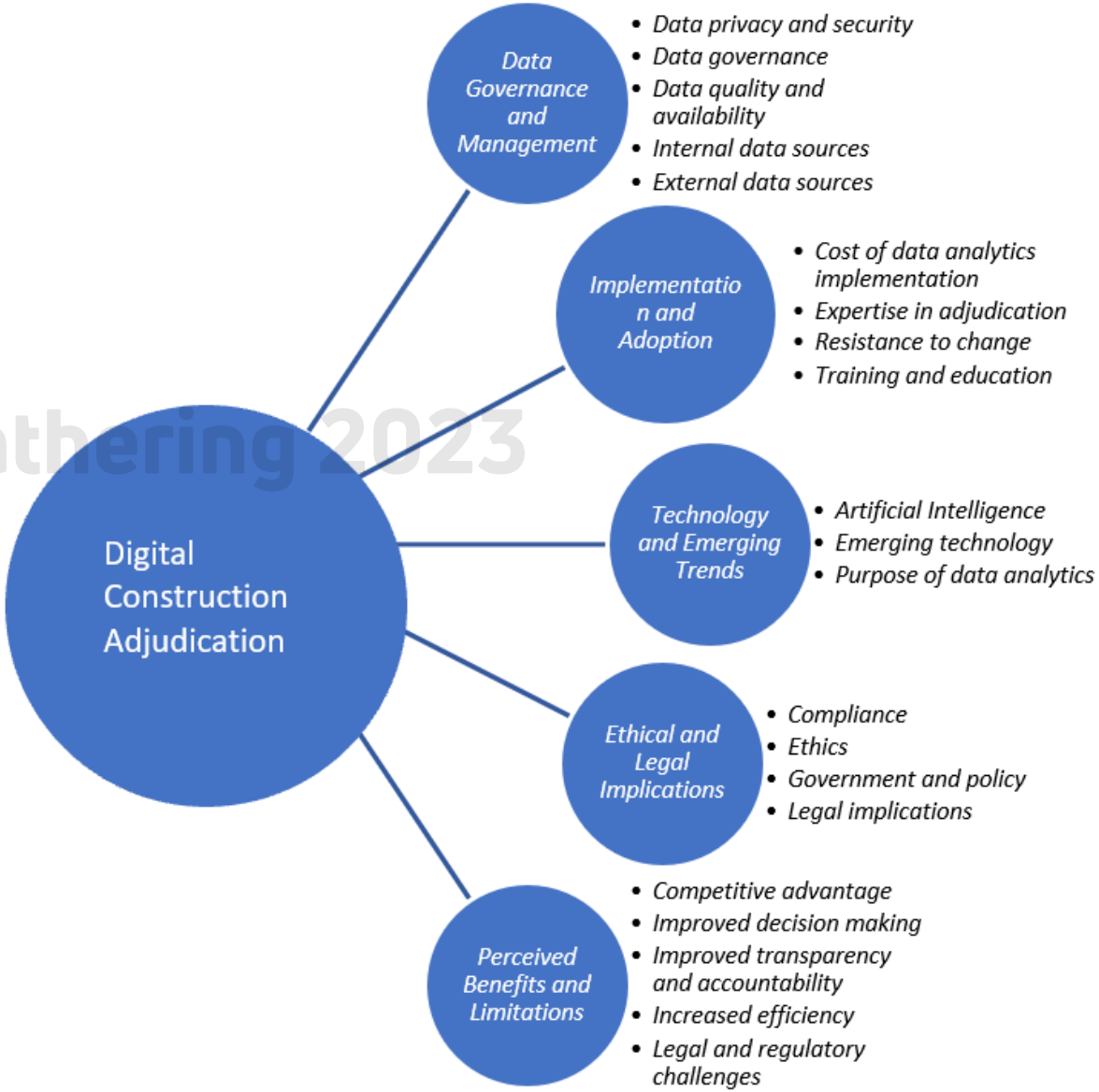

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Discussion

a) Data Governance and Management
b) Implementation and Adoption
c) Technology and Emerging Trends
d) Ethical and Legal Implications
e) Perceived Benefits and Limitations

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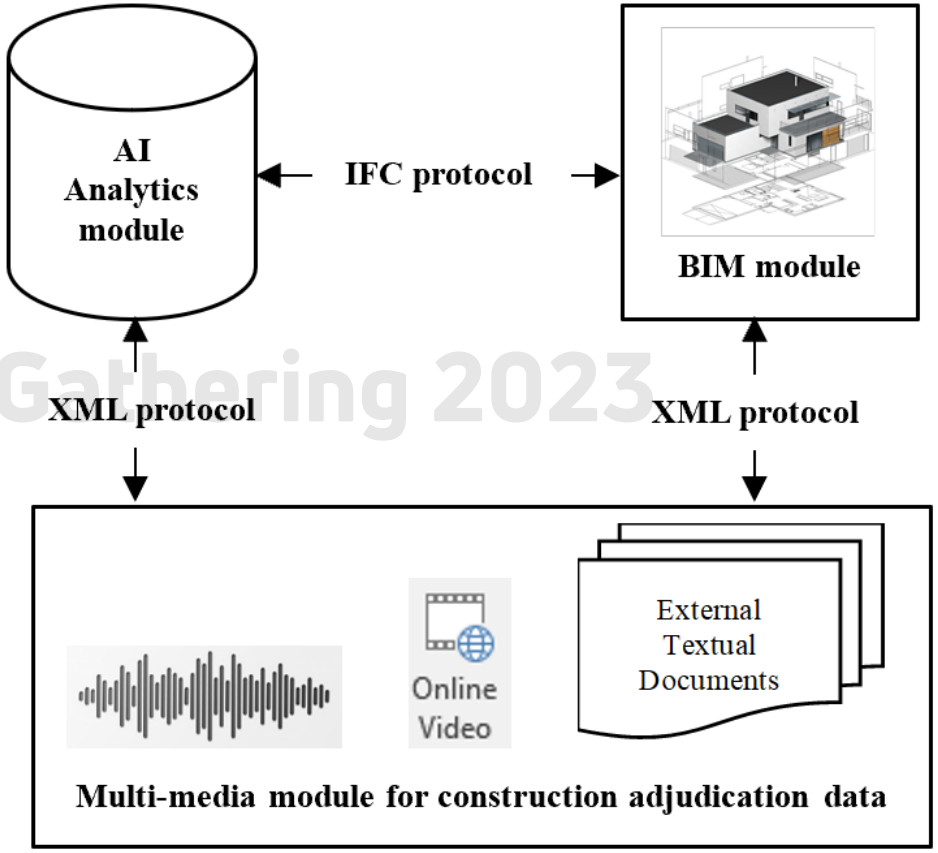

Fig. 2: Architecture of a proposed BIM-based data management system for Construction adjudication.

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Conlusions

While data analytics has the potential to benefit construction adjudication, most adjudicators do not currently view it as a means of improving their process. This could be due to a lack of familiarity with the technology and a preference for traditional decision-making methods.

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It is important to note that the industry may not be entirely ready for the implementation of data analytics at present. Some stakeholders may require additional education and time to fully understand the capabilities of data analytics and how it can be used to improve dispute resolution. Therefore, it is essential to recognize that the implementation of new technology requires careful consideration and planning, particularly when it comes to ethical and legal considerations such as data privacy and algorithmic bias.

Moreover, the industry should also take into account that data analytics implementation requires also technical expertise and investment. It is important to ensure that the implementation of data analytics is appropriate for the specific context and needs of each case. This will require a collaborative effort among stakeholders to develop best practices and guidelines for its use.


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