LEGAL TECHNOLOGY AS A NEW FIELD OF LEGAL RESEARCH

TECNOLOGIA JURÍDICA COMO UM NOVO CAMPO DE PESQUISA JURÍDICA

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Abstract

In the contemporary era, the rapid advancement of science and technology, along with the ongoing digital transformation, has exerted a profound influence across all domains of social life, including the legal sciences. Legal technology (LegalTech) is a relatively new concept that has been conceptualized and interpreted in various ways within academic and professional discourse. This article explores several theoretical and practical approaches to legal technology, analyzes its positive impacts as well as potential risks to legal science, and, on that basis, proposes policy and research implications for Vietnam. The integration of technology into legal systems represents a paradigm shift in how law is practiced, interpreted, and even created. LegalTech encompasses a wide range of technological tools and methodologies designed to automate, optimize, and innovate legal processes. These include data analytics for case prediction, natural language processing for legal document review, blockchain-based smart contracts, and artificial intelligence (AI) systems used to support judicial decision-making. In a broader sense, legal technology not only serves as a mechanism for efficiency but also functions as a transformative force that challenges traditional notions of legal reasoning, professional ethics, and human agency in the administration of justice (Susskind, 2019). The global expansion of LegalTech has been accelerated by the increasing demand for access to justice, transparency, and cost efficiency in legal services. In many countries, especially those undergoing digital transformation, LegalTech has become a cornerstone of reform efforts aimed at simplifying procedures, improving public trust in legal institutions, and facilitating international integration (Vinogradova, 2023). For example, the United States and the United Kingdom have witnessed the proliferation of automated legal advice platforms and online dispute resolution

Resumo

Na era contemporânea, o rápido avanço da ciência e da tecnologia, juntamente com a transformação digital em curso, exerceu uma profunda influência em todos os domínios da vida social, incluindo as ciências jurídicas. A tecnologia jurídica (LegalTech) é um conceito relativamente novo que tem sido conceituado e interpretado de diversas maneiras no discurso acadêmico e profissional. Este artigo explora diversas abordagens teóricas e práticas à tecnologia jurídica, analisa seus impactos positivos, bem como os potenciais riscos para a ciência jurídica e, com base nisso, propõe implicações políticas e de pesquisa para o Vietnã. A integração da tecnologia aos sistemas jurídicos representa uma mudança de paradigma na forma como o direito é praticado, interpretado e até mesmo criado. A LegalTech abrange uma ampla gama de ferramentas e metodologias tecnológicas projetadas para automatizar, otimizar e inovar processos jurídicos. Isso inclui análise de dados para previsão de casos, processamento de linguagem natural para revisão de documentos jurídicos, contratos inteligentes baseados em blockchain e sistemas de inteligência artificial (IA) usados para apoiar a tomada de decisões judiciais. Em um sentido mais amplo, a tecnologia jurídica não serve apenas como um mecanismo de eficiência, mas também funciona como uma força transformadora que desafia as noções tradicionais de raciocínio jurídico, ética profissional e agência humana na administração da justiça (Susskind, 2019). A expansão global da LegalTech foi acelerada pela crescente demanda por acesso à justiça, transparência e eficiência de custos em serviços jurídicos. Em muitos países, especialmente aqueles em transformação digital, a LegalTech tornou-se um pilar dos esforços de reforma que visam simplificar procedimentos, melhorar a confiança pública nas instituições jurídicas e facilitar a integração internacional (Vinogradova, 2023).

systems, while civil law jurisdictions such as Russia and Vietnam are exploring the digitization of normative legal acts and the potential use of AI in legislative drafting. However, the emergence of LegalTech also raises important theoretical and ethical questions. Scholars debate whether the increasing reliance on AI could undermine core legal principles such as fairness, accountability, and due process (Surden, 2020). Algorithmic decision-making, while efficient, may lack transparency and be vulnerable to bias, particularly when trained on incomplete or unbalanced data sets. Moreover, the introduction of LegalTech disrupts traditional legal education and professional formation, requiring future jurists to acquire interdisciplinary skills in technology, data management, and cybersecurity. In Vietnam, LegalTech remains an underexplored but promising field. The country's growing emphasis on e-governance and digital transformation provides a favorable environment for its development. Nevertheless, challenges persist in areas such as fragmented legal databases, limited institutional capacity, and the need for clear regulatory frameworks governing the ethical and technical standards of LegalTech applications. Against this backdrop, this paper argues that Vietnam should adopt a strategic approach that combines comparative research, institutional capacity-building, and legislative modernization. By examining the experiences of countries such as Russia, the United Arab Emirates, Brazil, and the United States, this study highlights both the opportunities and challenges of integrating technology into legal processes. Legal technology, if developed responsibly, can enhance the coherence, transparency, and accessibility of the legal system. Yet it simultaneously demands careful policy design, interdisciplinary research collaboration, and ongoing public oversight to ensure that the human dimension of law is not lost in the pursuit of technological progress.

Por exemplo, os Estados Unidos e o Reino Unido testemunharam a proliferação de plataformas automatizadas de aconselhamento jurídico e sistemas online de resolução de disputas, enquanto jurisdições de direito civil, como Rússia e Vietnã, estão explorando a digitalização de atos jurídicos normativos e o uso potencial de IA na elaboração legislativa. No entanto, o surgimento da LegalTech também levanta importantes questões teóricas e éticas. Acadêmicos debatem se a crescente dependência da IA poderia minar princípios jurídicos fundamentais, como justiça, responsabilização e devido processo legal (Surden, 2020). A tomada de decisão algorítmica, embora eficiente, pode carecer de transparência e ser vulnerável a vieses, especialmente quando treinada com conjuntos de dados incompletos ou desbalanceados. Além disso, a introdução da LegalTech rompe a educação jurídica tradicional e a formação profissional, exigindo que futuros juristas adquiram habilidades interdisciplinares em tecnologia, gerenciamento de dados e segurança cibernética. No Vietnã, a LegalTech continua sendo um campo pouco explorado, mas promissor. A crescente ênfase do país em governança eletrônica e transformação digital proporciona um ambiente favorável ao seu desenvolvimento. No entanto, persistem desafios em áreas como bancos de dados jurídicos fragmentados, capacidade institucional limitada e a necessidade de marcos regulatórios claros que regulem os padrões éticos e técnicos das aplicações de LegalTech. Nesse contexto, este artigo argumenta que o Vietnã deve adotar uma abordagem estratégica que combine pesquisa comparativa, capacitação institucional e modernização legislativa. Ao examinar as experiências de países como Rússia, Emirados Árabes Unidos, Brasil e Estados Unidos, este estudo destaca tanto as oportunidades quanto os desafios da integração da tecnologia aos processos jurídicos. A tecnologia jurídica, se desenvolvida de forma responsável, pode aumentar a coerência, a transparência e a acessibilidade do sistema jurídico. No entanto, exige simultaneamente uma formulação cuidadosa de políticas, colaboração em pesquisa interdisciplinar e supervisão pública contínua para garantir que a dimensão humana do direito não se perca na busca pelo progresso tecnológico.

Palavras-chave: *Tecnologia Jurídica. Banco de Dados Jurídicos. Legaltech. Lawtech. Regtech. Técnicas Legislativas.*

1 INTRODUCTION

The term legal technology—often referred to as "Legal Technology," "LegalTech," or "Legal Informatics"—represents an emerging and rapidly expanding field in contemporary legal scholarship and practice. Initially, its primary function was associated with the provision of legal services, yet it has increasingly extended to legislative drafting, law-making processes, and regulatory design.

In recent years, related concepts such as LegalTech, LawTech, and RegTech have been introduced in various jurisdictions. While these notions appear to share overlapping meanings, they embody distinct conceptual boundaries and should not be used interchangeably.In Vietnam, scholarly research on legal technology remains limited, and systematic studies in this domain are still in their infancy. This paper, therefore, examines the notion of legal technology from multiple theoretical perspectives to establish a more coherent conceptual framework within the context of legal theory. Furthermore, it seeks to elucidate the advantages, opportunities, risks, and challenges associated with the development of legal technology in Vietnam amid the current digital transformation and the emergence of the Fourth Industrial Revolution.

2 THE CONCEPT AND ROLE OF LEGAL TECHNOLOGY

At present, the processes of digitalization and automation are rapidly accelerating and exerting significant influence across all fields, including law. Legal technology has emerged as a novel and increasingly relevant subject of scholarly inquiry due to its important role in legal practice. This article aims to explore the effective and secure application of modern technological achievements to legal activities, as well as to propose the introduction of concepts related to this category into future legislative provisions. Establishing a clear and transparent conceptual framework is a crucial foundation for ensuring the coherence and consistency of the legal system—particularly in areas such as cybersecurity, digital technology use, personal data protection, and the impact of digital transformation on other branches of law (Vinogradova, 2023, p. 15).

In a broad sense, legal technology can be understood as encompassing all scientifically based tools and technical methods used in legal activities. Initially, however, the term legal technology is most often interpreted in a narrower sense—namely, as the

use of technology or software applications to deliver legal services. In this sense, terms such as Legal Technology or LegalTech are commonly employed. Within this domain, LegalTech functions as an automation tool that streamlines numerous legal tasks, thereby saving time and human effort. Examples include legal research, data analysis, contract drafting, generation of standardized legal documents, and the use of electronic signatures. Advanced algorithms can even analyze large volumes of documents and produce results more efficiently and accurately than humans. Activities within the LegalTech field primarily aim to automate the work of legal practitioners, optimizing service delivery for individuals, organizations, and enterprises through the use of technological resources.

Alongside the term LegalTech, the concept of LawTech is also frequently used in legal practice. LegalTech refers to a system of technological solutions that transform fundamental approaches to legal activities, whereas LawTech focuses on innovations designed to address issues not faced by lawyers themselves but by those requiring legal assistance (Qian, 2019). For example, LawTech applications may include chatbots that assist citizens in resolving relatively simple issues, such as minor disputes or parking fine appeals. While LegalTech seeks to optimize the work of lawyers by enhancing their technical capabilities, LawTech emphasizes providing accessible legal support directly to end users without the involvement of legal professionals. However, in practice, both LegalTech and LawTech remain undefined in the statutory legal frameworks of any jurisdiction.

2.1 The concept of RegTech and its relation to legal and informational space

The concept of RegTech (Regulatory Technology) also contributes to the formation of a unified informational and legal environment. It serves as a technological instrument designed to assist enterprises—particularly those operating in financial markets—and governmental agencies in efficiently monitoring regulatory requirements. RegTech employs technologies such as cloud computing, big data analytics, and blockchain, and is typically used to develop compliance systems that help businesses save time and costs in addressing legal issues. These include programs that enable document verification and customer identification, comprehensive transaction analysis to prevent fraudulent activities, and anti–money laundering (AML) functions supported by RegTech's integrated and adaptive technological capabilities.

Such functionalities play a vital role in ensuring both domestic and international security compliance, adherence to international treaties governing corporate operations, and the protection of cybersecurity. Beyond these concepts, a number of other technology-driven approaches have emerged, such as financial technology (FinTech), insurance technology (InsurTech), and educational technology (EdTech). Each of these sectors gives rise to numerous new forms of social relations that require appropriate legal regulation, including the development of legal frameworks to mitigate cybersecurity risks, safeguard consumer rights, and ensure an environment of innovation and fair competition.

With regard to LegalTech and LawTech, several prominent automated reference systems are currently in use, such as ConsultantPlus, Garant, WRU, LEXIS, WESTLAW, JURIS, ELITE, INFOLEX, PRESTEL, POLIS, ITALGUIRE, CREDOC, Bundestag System, LEXinform, and Finlex. In addition, intellectual property management and smart contract development programs—such as ShakeLaw, smartlaw.de, Rocket Lawyer, and LegalZoom—have become increasingly prevalent.

A number of Online Dispute Resolution (ODR) platforms are also gaining popularity. In the United States, the legal technology startup Modria provides a service that resolves minor consumer complaints—accounting for up to 90% of the 60 million annual disputes on eBay—without court intervention (Author, 2024, p. 8). Similarly, in 2015, the DoNotPay chatbot was developed with multiple functionalities, such as assisting individuals in completing complex immigration forms, filing lawsuits against social networks for data leaks, submitting airline baggage claims, and addressing hundreds of other legal issues (Dev By Media, 2019).

Articles with headlines such as "A Robot Lawyer Has Been Created in the United States: Artificial Intelligence Will Help People Divorce" have been widely published across global online media platforms (Author, 2024, p. 8). The development of legal technology has immense significance for small and medium-sized enterprises. By reducing the number of in-house legal professionals and replacing them with automated tools or intermediary legal service companies that operate with fewer staff but higher efficiency and professionalism, businesses can reduce operational costs and foster opportunities for sustainable growth.

In Russia, since 2014, the Unified Information System of the Notariat (UIS) has been operating within the Russian Federation, storing information on more than 352.6

million notarized documents, equivalent to nearly 300 terabytes of data. A terabyte is a unit of digital storage capacity, equal to one trillion bytes or 1,000 gigabytes. This demonstrates the enormous data capacity of cloud storage systems. From 2017 to 2023, the electronic power of attorney verification service was used more than 15.2 million times. In 2022, the number of remotely notarized transactions increased 4.5 times (Federal Notary Chamber of the Russian Federation, 2024).

The use of technology in legal services has had a positive effect by reducing the time required to access legal information while still achieving work objectives. Currently, a general public trend shows a growing demand for faster, more accessible, and cost-effective legal services.

At present, legal technology is also being utilized in the judicial field. For example, some federal courts in Brazil employ artificial intelligence (AI) to rapidly classify similar cases, analyze content, and, based on a comprehensive legal database, formulate judgments for comparable cases. This approach allows simultaneous case processing and reduces the average handling time per case from 40 minutes to just 5 seconds (De Sanctis, 2021, p. 5).

However, legal technology should not be understood solely as the use of AI in adjudication but also as the development of existing software programs that assist in data analysis, storage, and processing. In Russia, for instance, legal technology supports the analysis of case materials, formulation of arguments, prediction of case outcomes, and many other functions. The growing automation process has led to a decreased demand for human resources within institutions and organizations. For example, in Shanghai, ten courts have replaced judicial clerks with AI assistants to process case materials, extract records, and present digital evidence, thereby significantly increasing court efficiency (Dai, 2020).

The application of legal technology in legislative drafting is now a topic of growing academic and policy concern, requiring careful consideration. To enable an AI system to replace human legislators in drafting a bill, substantial resources are required to develop such an AI model. First, the system must be trained with massive datasets including national normative legal acts, case law, international treaties, judicial rulings and decisions, as well as templates, comparative data, and empirical evidence. Moreover, challenges arise in cases adjudicated based on equity principles or involving social relations not yet regulated by law.

Finally, before an artificial intelligence system can be deployed in practice, it must undergo rigorous testing and evaluation, accompanied by a monitoring team throughout its operation to ensure accuracy, reliability, and legal compliance.

For example, the United Arab Emirates (UAE) is a pioneering country in researching and implementing artificial intelligence (AI) in legislative drafting. According to the UAE Artificial Intelligence Strategy 2031, AI is projected to have a global market value of approximately USD 15.7 trillion by 2030, and by leveraging the potential of this technology, the UAE aims to reduce national budget expenditures and enhance administrative efficiency (UAE Ministry of Artificial Intelligence, 2017). The UAE demonstrates a strong ambition to experiment with innovative approaches to legislation that replace the traditional parliamentary model, which has often been constrained by lengthy debates and multi-year approval procedures. The application of AI in legislative work allows for faster drafting and provides multiple functional advantages, including identifying gaps in existing legislation, conducting comparative analysis of foreign legal systems, and generating multiple draft versions simultaneously that are tailored to the UAE's legal and cultural context. The UAE legal system also features ethnic and linguistic diversity, which makes the integration of AI-assisted drafting particularly valuable.

Based on the analyses above, the concept of legal technology can be defined as follows: *Legal technology is a broad concept of fundamental importance to the establishment of a modern legal and informational environment. It represents the effective interaction between legal practice and scientific innovation in developing creative solutions that contribute to both law-making activities and the implementation of law in practice. Legal technology encompasses the totality of technological tools and solutions applied in legal activities.*

3 ADVANTAGES AND RISKS OF LEGAL TECHNOLOGY

Based on the preceding analysis, several distinct advantages of legal technology (legal tech) can be identified:

Operational efficiency: Legal technology enables more efficient execution of legal tasks, reducing both time and human effort in legal and judicial activities (Susskind, 2019).

Functional expansion: The scope of legal tech applications is expanding beyond legal service provision to include judicial activities — and, prospectively, legislative drafting and law-making — as part of an integrated digital transformation (Surden, 2020).

Socio-economic impact: Legal technology plays an increasingly significant role in shaping a modern legal environment in the context of globalization, supporting socio-economic development, dispute resolution, and investment attraction, particularly in nations prioritizing technological modernization (World Bank, 2023).

Legislative application: Among the core functions of legal tech, its instrumental role in legislative activity demonstrates promising potential. Owing to its capacity to aggregate massive datasets and perform high-speed analytical processing, it can effectively assist in regulating complex social relations and developing evidence-based legal norms (Đinh, 2021). Moreover, AI-powered systems can integrate advanced methods such as modeling, social impact assessment, and machine learning to emulate human reasoning and argumentation (Surden, 2020).

However, despite its potential, the field of legal technology also presents several risks and challenges that require careful consideration:

First, in the domain of legal service provision, the construction of legal argumentation — traditionally a highly creative and intellectual process — risks being replaced by artificial intelligence. Core responsibilities of lawyers such as client consultation, litigation strategy formulation, and advocacy could gradually become dependent on automated systems (House of Lords Library, 2023).

Second, the successful deployment of a legal AI system demands the collaboration of experienced legal scholars and skilled software engineers to ensure technical accuracy and legal soundness. Given that science and technology are inherently dynamic and rapidly evolving, maintaining such systems' reliability and ethical integrity poses an ongoing challenge (PDPC, 2019).

Therefore, while legal technology presents a transformative opportunity, it remains a high-stakes and long-term research area that requires prudent legislative planning, rigorous testing, and strong interdisciplinary cooperation.

Secondly, in order to apply legal technology within the judicial process, it is essential to overcome the limitations and gaps in legal databases that are closely tied to the specific characteristics of each legal system. For instance, the Russian Federation follows a civil law system, where the principal source of law is normative legal acts, while

case law is not officially recognized as a source of law (Виноградова, 2023). The system of normative acts in Russia is diverse and complex, involving multiple levels of legislative authority — from federal to regional entities. Although digitization has been accelerated in recent years, the integration of these digital systems into judicial decision-making or court rulings remains limited (Дорофеева, Самусенко, & Гонгорова, 2024).

Moreover, in countries such as Brazil and the United States, which have begun experimenting with artificial intelligence (AI) in judicial activities, new challenges have emerged concerning the interpretability and transparency of algorithms. There are still unresolved questions about how these algorithms operate, whether their internal logic structures can autonomously evolve, and the fact that, as artificial entities, AI systems cannot bear legal responsibility before any judicial authority. These concerns pose serious challenges to ensuring transparency and fairness within judicial proceedings (De Sanctis, 2021).

Thirdly, the rapid development of legal technology also presents significant challenges for legal education. The inclusion of courses on legal technology and artificial intelligence in law schools remains relatively new. Building training programs that effectively integrate these subjects requires developing legal reasoning and argumentative skills among future legal professionals, who are increasingly dependent on digital tools and virtual professional environments (Susskind, 2019). Furthermore, technology itself is a complex and ever-evolving field, changing at a pace that far exceeds traditional educational adaptation cycles. Consequently, all legal sectors influenced by technological progress must develop a strong capacity for continuous adaptation to remain relevant and effective (Surden, 2020).

4 COMPARATIVE ANALYSIS: LEGISLATIVE AI MODELS IN THE UAE, THE UNITED KINGDOM, AND SINGAPORE

4.1 Introduction

The integration of artificial intelligence (AI) into legislative processes has emerged as a key indicator of digital transformation in governance. Among pioneering jurisdictions, the United Arab Emirates (UAE), the United Kingdom (UK), and Singapore represent three distinct yet complementary approaches to incorporating AI in the law-

making process. This comparative section aims to analyze their strategic orientations, regulatory safeguards, and operational practices, drawing lessons applicable to Vietnam's emerging legal-tech development framework.

4.2 Methods

This analysis employs a comparative legal research methodology grounded in documentary review and policy analysis. Primary sources include official government strategies (e.g., UAE National AI Strategy 2031, UK National AI Strategy 2021, Singapore Model AI Governance Framework), supplemented by academic commentary and legal-technical reports. The comparison focuses on three analytical dimensions:

Strategic orientation and institutional context,

Applications in legislative drafting, and

Governance frameworks and accountability mechanisms.

4.3 Results

a. Strategic orientation

The UAE adopts a state-led, innovation-driven strategy in which AI is treated as a national priority across all governmental sectors, including legislative work. Its Artificial Intelligence Strategy 2031 envisions AI as a driver for efficiency, economic growth, and fiscal sustainability, aiming to reduce government expenditure and accelerate public-sector digitalization (UAE Ministry of Artificial Intelligence, 2017).

The United Kingdom, in contrast, follows a balanced governance model, emphasizing accountability, ethical deployment, and research competitiveness. The National AI Strategy (UK Government, 2021) and the House of Lords' reports on AI policy underline the importance of human oversight, transparency, and risk management in legislative and administrative applications (House of Lords Library, 2023).

Singapore applies a governance-first and principle-based approach through the Model AI Governance Framework (PDPC, 2019), focusing on explainability, transparency, and sectoral adaptability. This framework has become a global reference for responsible AI regulation, encouraging iterative deployment rather than immediate statutory codification.

b. Applications in legislative drafting

The UAE experiments with AI-driven drafting tools that can analyze legal gaps, compare foreign legislation, and generate multiple versions of draft laws. This experimentation benefits from its centralized governance structure and executive agility.

In the UK, AI applications remain experimental and are subject to strict regulatory oversight. The government prioritizes the development of AI auditing, ethical codes, and human-centered review processes before any autonomous legislative drafting tools are institutionalized.

Meanwhile, Singapore integrates AI within regulatory sandboxes and encourages public–private collaboration to test and refine AI-assisted drafting tools within clearly defined governance boundaries.

c. Governance frameworks

The UAE prioritizes implementation speed and national-scale adoption. However, this raises potential concerns about transparency, bias mitigation, and human accountability (UAE Ministry of Artificial Intelligence, 2017).

The UK's framework offers a robust system of checks and balances, aligning with the principles of administrative law and parliamentary sovereignty.

Singapore's framework, while non-binding, provides comprehensive practical guidance — including risk-based assessment, documentation standards, and explainability protocols — ensuring adaptable governance across public institutions (PDPC, 2019).

4.4 Discussion

A comparative analysis reveals that each jurisdiction offers valuable insights for countries developing their legal-technology infrastructure:

UAE's model demonstrates how strong political commitment can accelerate AI deployment in governance but must be accompanied by data governance and ethical safeguards.

The UK's model underscores the necessity of accountability and human oversight, ensuring that legislative legitimacy remains intact.

Singapore's model shows that soft-law mechanisms and iterative governance can foster innovation while maintaining regulatory flexibility.

For Vietnam, an optimal path may lie in combining the UAE's experimental agility, the UK's accountability principles, and Singapore's governance toolkit. This hybrid model would enable Vietnam to pursue digital transformation in law-making while ensuring legal integrity, transparency, and social trust.

5 NEW DIRECTIONS IN LEGAL TECHNOLOGY RESEARCH IN VIETNAM

5.1 Discussion

The interconnection among various functions of legal technology (legal tech) signifies that its components do not operate in isolation but rather create a mutually reinforcing system. The development of one functional tool — for instance, AI-assisted legal text analysis — can generate positive spillover effects across other domains such as legal drafting, compliance, and legal service delivery (Susskind, 2019).

In Vietnam, the existing regulatory landscape is highly complex and fragmented, consisting of a vast number of legal normative documents (văn bản quy phạm pháp luật). Policymaking bodies often encounter difficulties in identifying overlaps, inconsistencies, or obsolete provisions during the processes of legislative drafting and review (Nguyễn & Phạm, 2022). Meanwhile, enterprises face increasing challenges in complying with regulations on taxation, licensing, real estate transactions, credit, and intellectual property disputes — creating obstacles to both domestic business operations and foreign investment attraction.

The advancement of legal technology offers dual benefits for both law-making and law enforcement. On one hand, it simplifies access to and analysis of legislative documents, thereby facilitating the application of new regulations in business and public administration. On the other, it strengthens the capacity of state agencies in legal drafting, evaluation, and dissemination, contributing to greater efficiency and transparency in governance (World Bank, 2023).

In Vietnam, legal technology remains a relatively new and underdeveloped field with diverse interpretations and limited institutional infrastructure. The development of foundational legal-tech knowledge is essential not only for innovation and market creation — such as law firms, startups, and advisory services — but also as a scientific domain underpinning the modernization of the legal system (Đinh, 2021). This aligns

with global trends where legal tech is recognized as a multidisciplinary science linking law, informatics, and public administration (Surden, 2020).

5.2 Policy context and recommendations

Vietnam has begun preparing the human and institutional groundwork for integrating AI into legislative research and drafting. According to Article 69 of the Law on Promulgation of Legal Normative Documents (2025), the State shall adopt special mechanisms and policies to attract and employ high-quality human resources in law-making. It also guarantees budgetary support for training, capacity building, and engagement of experts in policy analysis and impact assessment (Quốc hội nước CHXHCN Việt Nam, 2025).

Furthermore, Article 70(1) emphasizes that the State shall ensure and prioritize investment in facilities, digital infrastructure, and AI-based technologies to modernize legislative research and policy development. This marks a significant institutional commitment to digital transformation and AI integration in Vietnam's legal system.

To translate these provisions into tangible outcomes, the following recommendations are proposed:

Establish a National Legal-Tech Program focusing on developing AI-based tools for legal drafting, codification, and legal information management.

Encourage cross-sectoral collaboration between law schools, IT universities, and private technology firms to build an interdisciplinary ecosystem.

Adopt a governance framework for ethical and transparent use of AI in law-making, drawing inspiration from Singapore's Model AI Governance Framework (PDPC, 2019).

Invest in training programs to enhance digital literacy and AI competence among legal officers, judges, and policymakers.

Promote open legal data platforms to facilitate machine-readable access and support innovation in public and private legal services.

Ultimately, the research and development of legal technology is not merely an innovation trend but a strategic necessity for Vietnam's future legal reform. Integrating AI into legislative processes will enable Vietnam to enhance the efficiency, consistency,

and accessibility of its legal system while aligning with the global movement toward digital governance.

6 RECOMMENDATIONS FOR THE DEVELOPMENT AND APPLICATION OF LEGAL TECHNOLOGY

To fully harness the advantages and functions of legal technology while minimizing its potential limitations and risks, several measures should be undertaken as follows:

First, it is necessary to continue in-depth research on the content and scope of legal technology to establish a coherent and unified body of knowledge on this concept. This serves as a foundational step for developing both theoretical and practical bases in formulating and improving policies and laws related to legal technology tools in the future. In particular, research should focus on enhancing the role of legal technology in ensuring access to legal sources, especially through the automation of preliminary procedural stages in judicial processes to help reduce case-processing time. Legal technology should also be utilized for data synthesis, selection, and analysis of relevant case materials, precedents, and legal provisions. Furthermore, comparative studies and cross-national learning experiences are essential to foster the effective adoption of legal technology in different jurisdictions (De la Vega, 2022).

Second, further exploration of legal technology solutions in lawmaking activities is required, particularly regarding the role of artificial intelligence (AI) in supporting legislators throughout each stage of the lawmaking process. For example, AI can assist in evidence-based policy formulation, technical review and consistency checks to avoid duplication or overlap among draft laws, and social impact assessments through platforms that collect feedback from organizations, enterprises, and citizens (Mak, 2023). Determining the appropriate tools and the degree of technological intervention at each legislative stage requires a high level of professional competence, experience, and flexible judgment from lawmakers.

Third, the transformation of legal education and training should focus on developing three core competencies: argumentation skills, legal reasoning, and critical thinking. While the ability to search for information through modern legal technology tools is crucial, legal professionals such as lawyers and judges must also retain the

capacity to perform effectively without excessive dependence on AI. Therefore, legal education should prioritize developing reasoning and legislative thinking skills from the university level. Moreover, curricula should emphasize issues such as professional ethics, information confidentiality, and technological adaptability, which are increasingly vital in the digital era (Susskind, 2019).

Additionally, integrating legal technology into legal education may take several forms: as extracurricular courses, elective or compulsory modules, or embedded content within other skill-based subjects. Theoretical instruction should be complemented by practical training through internships in law firms or enterprises. Furthermore, there should be an increase in empirical research projects and studies addressing the specific functions and practical applications of legal technology (Surden, 2020).

7 CONCLUSION

In conclusion, legal technology remains a relatively new and controversial topic within legal practice. Continued research on this issue is essential, requiring the participation of experts and scholars from both legal science and information technology fields. Such interdisciplinary collaboration will enhance the effectiveness and safety of applying technological achievements in legal practice. At the same time, it is crucial to ensure the coherence and consistency in the development and adoption of legal regulations related to this matter in the future.

Furthermore, the sustainable development of LegalTech depends on a clear vision that balances technological innovation with ethical responsibility and human oversight. Governments should prioritize the creation of adaptive legal frameworks that promote innovation while preventing risks associated with data misuse, algorithmic opacity, and digital inequality. Universities and research institutions must also play a proactive role by establishing academic programs that integrate law and technology, equipping future legal professionals with interdisciplinary skills.

For developing nations such as Vietnam, the strategic application of legal technology could become a catalyst for improving legal governance, judicial transparency, and public trust in state institutions. Yet, this process must be guided by principles of fairness, accountability, and respect for human rights. In the long term, the success of LegalTech will not be measured solely by its technical sophistication, but by

its ability to serve justice, strengthen the rule of law, and foster equitable access to legal resources in an increasingly digital society.

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Data availability
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