**Legal Technology: Concepts and Opportunities**

**Giorgi Urtmelidze[[1]](#footnote-1)**

**Tallinn University of Technology, Estonia**

***Abstract:***

*Legal technology is commonly defined as the use of technology and software to assist individual attorneys, law firms, and medium- and large-sized businesses with practice management, document automation, document storage, and legal research. The paper examines the concept of legal engineering and the application of legal tech tools in legal practice. As technology advances, LegalTech methods such as artificial intelligence, machine learning, and automation are transforming many aspects of the legal profession. This paper focuses on the benefits of LegalTech, such as faster legal processes, improved document management, and increased legal research accuracy. It also investigates the potential stumbling blocks and ethical considerations associated with the usage of LegalTech. Legal technology startups have drawn significant investment around the world. According to Grand View Research, the worldwide tech industry was worth $17.02 billion in 2020 and is expected to grow to 39.6 billion by 2028.*

*In short, LegalTech promotes technological innovation while offering up new prospects in the legal profession.*

***Keywords: EU, Legaltech, Legal technology, LegalTech Start-up***

**Introduction:**

Legal technology is the operation of technology and software to the provision of legal services and the support of the legal sector. Although the sundries of Legaltech may appear to be new, Shepard produced a citation indicator grounded on the codification that applied to civil trial judgments in the United States as beforehand as 1873. The history of Legaltech spans several decades, starting with the colonist legal exploration databases similar as Westlaw and LexisNexis, which were introduced in the early 1970s. Initially, they offered digital access to legal cases and statutes. In the 1990s, after two decades, case management software was introduced, which helped lawyers organise case-related information. Only after 2010 did cloud-based platforms become popular, enabling secure storage, collaboration, and remote access to legal documents and data, which brings us to the present. Nowadays, Legaltech is continuing to grow rapidly with the help of AI[[2]](#footnote-2), and it is important to mention three stages of Legal Technology, which are indicated in the proposal by O. Goodenough.[[3]](#footnote-3)

LegalTech 1.0 refers to software and technology supporting drafting, online services, and expert systems such as online communication with the courts, video conferencing, etc. These solutions are implemented within the context of existing procedures and the typical legal work process. The only difference is the mode of communication.

LegalTech 2.0 relates to more advanced technology, which offers solutions in many different activities, such as fact assessment, automatic document drafting, and claim drafting. Smart contracts or tokenization of processes are also counted among the solutions belonging to this category.

Lastly, in LegalTech 3.0, decisions refer to using AI and advanced algorithms, where decisions will be made by a system, on the basis of independently acquired data. Smart contracts are also included in LegalTech 3.0 as they are based on AI-based oracles.

The explosive growth in the volume of documents (mostly emails) that must be reviewed for litigation cases has also greatly accelerated the adoption of the technology used, with the incorporation of elements of machine language, artificial intelligence, and cloud-based services by law firms.

**Chapter 1: Importance and Categorization of Legal Technology**

The legal tech sector is made up of law firms that provide legal services through technology as well as suppliers who create and offer technological solutions to such businesses. Apart from Legaltech, new concepts such as Fintech, Regtech, and Insurtech have emerged. They are tied to the use of information technology in their respective industries[[4]](#footnote-4).

Only 19% of in-house legal teams, according to Gartner, are well-positioned to support enterprise digital ambitions.[[5]](#footnote-5) Law firms perform even worse; according to the 2018 Georgetown Report, "most are still fighting the last war." Digital transformation is not only Tech but it also refers to a business paradigm shift that enables customers easier access, transparency, speed, and cost-effectiveness.

**Figure 1. [[6]](#footnote-6)** Reason for using advanced technology:

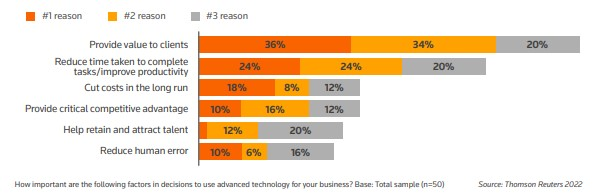


Figure 1 shows statistics on the reasons why law firm CEOs use advanced technology. It is important to acknowledge that for 70% of respondents, providing value to clients was their first - or second- ranked reason. Furthermore, 48% of respondents identified increased productivity as a primary or second-ranking factor. This demonstrates that advanced technology is more than just deploying technology; it is also satisfying clients' needs and increasing productivity.

Lawyers nowadays must deal with the challenges of changing markets, data overload, and the rising complexity of information while satisfying clients' expectations and remaining productive. Most of the challenges stem from the fast-changing regulatory environment. A perfect example of this are the recent regulations in the European Union affecting digital services, like GDPR and DSA. In addition to European Union regulations, national content monitoring laws like the German NEtzDG generate further legal obligations for tech organisations. It is important to point out that the regulatory burden has increased across industries in the past couple of decades.

In order to resolve a legal question, we may need to study thousands of pages of legal information if we evaluate EU-level legislation alongside national-level legislation in a specific situation. Certain legal responsibilities or procedures (for example, due diligence and compliance investigations) necessitate the evaluation of vast amounts of data by lawyers. As businesses collect more data and use digital tools, the number of documents that must be examined grows inexorably. This is where deploying tech solutions will be more efficient and cost-effective in the long run.

Legal technology is important for a variety of reasons, including:

1. Cost-effectiveness:

* Routine Task Automation: Legal technology applications can automate repetitive and time-consuming operations like document screening, contract analysis, and legal research. These technologies can manage massive volumes of data and execute activities that would normally require significant human effort by employing artificial intelligence (AI) and machine learning algorithms. This automation reduces manual labour expenses while increasing operational efficiency.
* Workflow Streamlining: Legal tech platforms offer streamlined workflows and standardised methods for legal tasks. These platforms frequently include document management, collaboration tools, and project management capabilities, allowing legal practitioners to operate more efficiently and spend less time on administrative responsibilities. Legal technology saves time and costs by eliminating inefficiencies and decreasing the possibility of errors or misinterpretations.
* Legal technology solutions provide comprehensive document management systems that enable efficient organisation, storage, and retrieval of legal documents. Legal practitioners can access vital information more quickly by digitising and centralising records, decreasing the time spent searching for physical files or outdated versions. Improved document management saves money by boosting productivity and lowering the risk of document loss or duplication.
* Remote Work and Collaboration: The COVID-19 pandemic has hastened the adoption of remote work practices, and legal technology has played an important part in easing this transition. Cloud-based platforms and collaboration technologies enable legal practitioners to operate from anywhere, lowering overhead costs associated with physical office space, commuting, and other expenses. Remote work also allows law firms to recruit legal professionals from a larger talent pool without the necessity for physical closeness.

1. Facilitating audits

* Compliance Monitoring: Legal technology solutions can help track and monitor compliance with legal and regulatory standards. These tools assist auditors in determining if an organisation's operations are in accordance with applicable legal obligations by integrating relevant laws, rules, and compliance frameworks.
* Data Analytics: Legal technology includes data analytics capabilities that allow auditors to quickly assess vast volumes of legal data. These technologies can extract important information, discover patterns, and provide insights for audit purposes by utilising machine learning and natural language processing algorithms. E-discovery, contract evaluation, and compliance monitoring are just a few of the applications for data analytics.

1. Increasing efficiency and productivity

* Time and Billing Management: Legal technology platforms frequently offer time tracking and billing features. These applications automate timekeeping, allowing for the correct recording of billable hours and expenses. This automation improves the invoicing process and ensures billing transparency, resulting in increased productivity and client satisfaction.
* Legal IT platforms frequently include project management features that assist legal teams in tracking and managing projects, deadlines, and milestones. These solutions increase project visibility, task allocation, and overall workflow optimization, ensuring effective resource usage and project completion on schedule.

Categorization according to Rackwitz and Corveleyen

1. Platform: Access to legal services, given by IT technologies such as Neulexa, Lawkick, the Ask-a-Lawyer component of the Rocket Lawyer website, and LegalZoom.
2. Network: Network providers are great for dealing with a sudden increase in work volume, meeting a need for specific expertise, or temporarily replacing a team member. Their expertise in selecting, preparing, managing, and supporting temporary personnel or managed teams adds value." 2017 (Rackwitz and Corveleyn)
3. Software suppliers can boost efficiency by facilitating and assisting with time-consuming operations such as information access, overview, collaboration, document processing, and document preparation.
4. Know-How: Managing, generating, and disseminating information, as supplied by Bloomberg Law, Thompson Reuters Practical Law Company, or Wolters Kluwer (including their recent acquisition of Smartlaw), which essentially provide tools to legal practitioners to facilitate legal research.

**Chapter 2. The Landscape of Legal Start-Ups**

* What is a LegalTech startup?

A legal tech startup is an up-and-coming business that focuses on using technology to develop and deliver solutions in the legal industry. These startups create and provide software, platforms, or services aimed at streamlining and improving various elements of legal practice, such as legal research, document management, contract analysis, litigation support, compliance, and more. Artificial intelligence, machine learning, automation, data analytics, and cloud computing are common technologies used by legal tech businesses to change legal procedures, enhance efficiency, and address difficulties encountered by legal practitioners and organisations.

They frequently cater to law firms, in-house legal departments, legal service providers, or even individual clients, delivering innovative tools and services that optimise processes, expand access to legal information, and transform legal service delivery. Legal technology startups are critical to fostering innovation, transforming the legal business, and meeting the changing needs and wants of legal practitioners and clients.

1. The LegalTech Startup Market

Whether the growth is explosive or not, we are seeing an increase in the number of well-funded legal businesses. This, in turn, increases the industry's image and provides additional validation for businesses seeking their first clients in a traditionally risk-averse market.[[7]](#footnote-7) When it comes to knowledge acquisition, the legal services sector has been seen as difficult to penetrate, as liability, and hence costs, can escalate quickly. The introduction of marketplace models and document-focused entities is helping the problem. Increased transparency creates opportunities for startups to compete with more established firms.

In the last decade, there has been a huge increase in the number of legal startups. In April 2012, there were about 400 legal startups listed. According to Tracxn, by January 2022, LegalTech will have over 6,000 startups, including firms that provide technological solutions to law firms and corporate legal departments. LegalTech is one of the most active sectors, with overall funding of USD 10.3 billion.

1. [[8]](#footnote-8)Why are legal startups emerging?

Legal startups have the potential to meet the unmet legal needs of individuals and small businesses. They make legal solutions more accessible and affordable, allowing consumers to manage legal difficulties more efficiently and affordably.

* Self-Service Platforms:

Legal companies create simple systems that enable small enterprises and individuals to fulfil some legal obligations on their own. These systems include templates, guidance, and step-by-step instructions for common legal needs such as contract creation, company formation, and legal document filing. Legal startups save time and money for small enterprises and individuals by empowering users to handle fundamental legal concerns on their own. [[9]](#footnote-9)

Providing an example from Estonia: Avokaado, a LegalTech start-up, which offers lawyers a digital workspace to create dynamic workflows. By automating documents for quick drafting, sharing, and signing, you may collaborate on contracts and legal knowledge with your team and clients.

Legal startups, in general, drive industry revolutions by making legal services more efficient, inexpensive, and accessible to a wider variety of customers.

**Chapter 3. LegalTech in Germany: Courts and Law Firms**

The phrase "Legal Tech" is frequently used to refer to legal advice delivered by lawyers employing cutting-edge technology. In Germany, legal tech refers to the application of cutting-edge technology such as artificial intelligence and blockchain/DLT to assist the legal professions and the judiciary. [[10]](#footnote-10) Promoting the application of artificial intelligence is also a main emphasis of the German government's agenda. The German government's national AI strategy[[11]](#footnote-11) has three main goals: making Germany and Europe leading centers for AI and ensuring Germany's future competitiveness, integrating AI in society in ethical, legal, cultural, and institutional terms; and encouraging responsible development and use of AI for the good of society.

Specialised programs in the judiciary provide templates for various jurisdictions, such as organising a hearing, inviting witnesses, and text modules for judicial opinions. The use of computerised text modules and calculation algorithms to assist judges in the application of specific legal norms is one of the most essential features of this text. These applications can be used to assess a court's local jurisdiction, and information technology can also make suggestions for substantive legal decisions. However, it is legally questionable to what extent a judge may have automatic decision ideas provided to him by an automated system. Furthermore, due to complex algorithms, the suggested decisions are opaque to the judge, which could be interpreted as an attack on judicial independence. The employment of AI-supported programs in court service offices is becoming more frequent in Germany, as it allows judges to justify their decisions without having to resort to proposals given by an opaque AI-supported program.

Automation also benefits judicial officers, particularly when processing register matters. Since 2007, most registry courts have used the "electronic court and administrative mailbox (EGVP)," an encrypted platform with an integrated signature function. Individualized texts can be entered into dynamic document templates by lawyers, who can occasionally assign individual facts to predetermined categories or input answers in selection boxes. Expert systems (Legal Process Automation) assist lawyers in semi-automating recurring legal review steps for the purpose of advising clients, beginning with a simple deadline and fee calculations, and progressing to more intensive subsumption of common case constellations under the appropriate legal norms. Furthermore, legal digital platforms run by firms are expanding in Germany, allowing citizens to have their legal rights evaluated without having any legal knowledge of their own.

Individual legal advice is only permitted under the German Legal Services Act (Rechtsdienstleistungsgesetz) if supplied by a licensed lawyer. The Federal Court of Justice, on the other hand, recently determined that a platform that could be used to compute the allowable amount of apartment rents did not represent an illegal legal service[[12]](#footnote-12). A working committee of the German Bar Association (DAV) is conducting an in-depth discourse with its 63,000 members, as well as AI suppliers, to examine the existing and potential usage of AI. Changes to the BRAO (Act on the Legal Profession) and the RDG (Legal Services Act) are among the options.

Conclusion:

Advocates, legal advisers, judges, and prosecutors are all confronting a dramatic revolution in their operations, such as operating law companies, as well as in the substance and legal aspects of the legal help supplied, including court procedures. The transformations are already taking place. For some lawyers, they are evident and noticeable, and they willingly participate in them; for others, they are a problem, resulting in a denial and an attempt to retain the current status quo. Many people do not see the changes coming.

Technology is reshaping industries around the world, changing how businesses work, and paving the way for extraordinary developments. Artificial intelligence and machine learning, as well as automation and data analytics, are transforming industries such as healthcare, banking, manufacturing, and transportation. The integration of smart devices, cloud computing, and the Internet of Things (IoT) has resulted in increased efficiency, productivity, and connectivity, as well as the streamlining of operations and the creation of new opportunities. Technology's ability to collect, analyse, and interpret massive volumes of data enables businesses to make data-driven choices, tailor customer experiences, improve supply chains, and drive innovation. As industries embrace the digital revolution, technology drives them to increased competitiveness, sustainability, and growth in an ever-changing global landscape.

The digital transformation of the legal industry is crucial, while it is not only Tech but the adaptation to satisfy the necessity of customers. LegalTech shall be seen and used as a tool that provides significant help to lawyers who are burdened with various time-consuming tasks, such as document management, contract drafting, and legal research. In addition, as we can see, in Germany, the use of computerised text modules and calculation algorithms can assist judges in the application of specific legal norms.

In short, as Esther Salmerón-Manzano described: “Legaltech offers us the opportunity and challenge to promote a just and equitable society and to empower individuals. Thus, giving greater access to legal services and the possibility of achieving the goal of universal access to justice.”

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1. Project Assistant, Tallinn University of Technology, Ehitajate tee 5, 19086 Tallinn, Estonia,

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