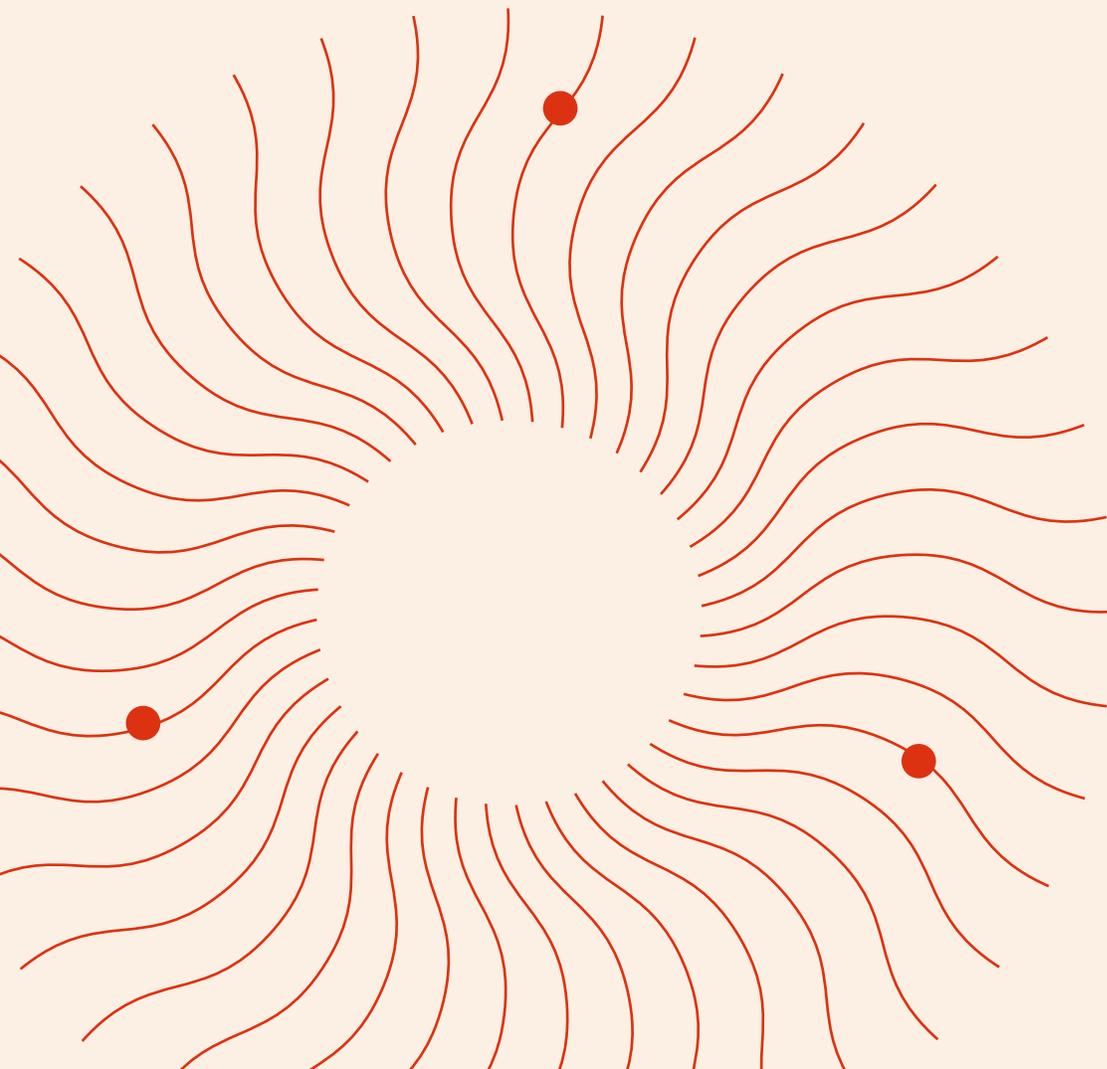




Stepping into the future: How generative AI will help lawyers improve legal service delivery

Technology has become essential to the practice of law, but the boundaries of technology's impact in improving legal services delivery continue to expand. More and more lawyers are using artificial intelligence (AI)-based tools every day. AI is a well-established part of lawyers' work in legal research, contract analysis, e-discovery, and predictive analysis, with tools that leverage machine learning techniques. Legal professionals see the potential in AI-powered technologies that help them quickly draft documents, automate routine tasks, and find what they need faster.

As much as those tools have revolutionized certain types of legal work, another new generation of AI promises an even more significant transformation of legal work and better outcomes for clients. The new generation is sometimes called generative AI, and its power is based on the scale enabled by large language models or LLMs. These new tools, when combined with legal data and legal domain expertise, will likely change and enhance the work of lawyers for years to come.

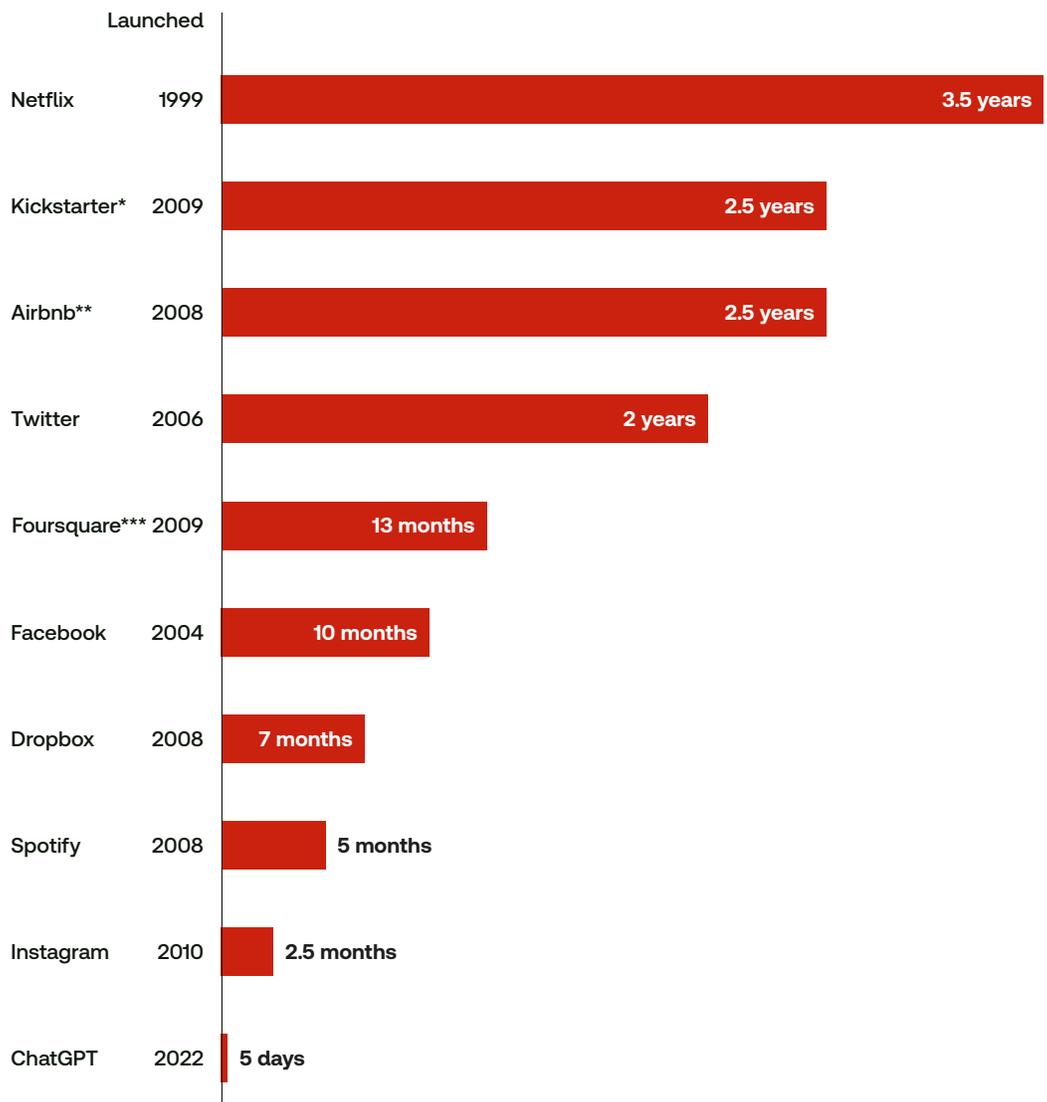


Generative AI: the latest phase in a rapidly evolving technology environment for lawyers

It has been hard to ignore the interest and excitement over new generative AI forms that have recently reached the market. One of those generative AI products, ChatGPT, quickly turned into a worldwide phenomenon. It reached a million users in less than a month, faster than any other popular online offering, including Instagram, Spotify, or Facebook. Two months in, it had reached 100 million users.

ChatGPT sprints to one million users

Time it took for selected online services to reach one million users



* one million backers ** one million nights booked *** one million downloads
Source: Company announcements via Business Insider/LinkedIn



Why the interest?

Why have ChatGPT and other forms of generative AI received so much interest? First, ChatGPT is freely available for anyone to test out. By simply entering prompts or commands, it could seemingly address almost any question or execute any task that was asked of it. Users discovered that it could effortlessly help them perform a wide variety of familiar tasks, such as writing prose or poetry, creating a resume, drafting an email, and even writing computer code.

ChatGPT's simple format has democratized the public's access to machine learning tools. It takes instructions and allows users to respond with further directions in plain conversational language. This capability made it easy for people to see its value, which was suddenly available to anyone, not just those that work with machine learning.

Generative AI has entered the collective legal consciousness quickly. In [a recent survey conducted by the Thomson Reuters® Institute](#), ChatGPT and generative AI awareness is significantly higher among legal professionals, with 91% of respondents saying they have heard of or read about these tools.

And with that awareness comes the realization of potential use cases for using this technology in day-to-day work.

How does it work?

Why do new forms of generative AI seem to be so effective at reproducing human intelligence?

Machine learning systems are not “thinking” systems. They are language prediction systems. Many machine learning tools are designed to predict missing words in a sequence. When humans review those predictions for accuracy, the predictions are given a score for accuracy. The machine uses those scores to improve its predictions the next time.

We have known for some time now that, as the data sets that machine learning systems are trained on have become larger, their predictions and ability to provide accurate answers have improved only modestly. The big breakthrough with ChatGPT was that when the training data sets reached a certain size, there was an abruptly large leap in accuracy. That increase in accuracy is the leap forward that will likely push generative AI into the mainstream.

Generative AI in legal: risks and opportunities

The legal profession is in a key position relative to generative AI. First, legal work is primarily centered around texts, documents, and data. The work consists of finding, analyzing, and creating texts and documents, which are precisely the sort of tasks that generative AI is good at.

Second, legal is a field where accuracy and precision are essential. There is little room for error when legal processes and decisions can impact parties' important rights or financial interests in legal agreements or disputes.

Legal audiences are clearly impressed by the potential power of generative AI, but also concerned by the dangers, as seen in the recent [Thomson Reuters Institute report](#).

While ChatGPT can deliver answers that sound coherent and accurate, this type of AI is really just a sentence-completion engine. ChatGPT has little intelligence but is very good at drafting language that sounds like plausible responses to a user's prompt. But it's not always accurate. There are numerous examples of ChatGPT failing to provide accurate answers to questions in fields — like law — where accuracy is essential.

Those examples are called “hallucinations” and include the [now-famous case of a New York lawyer](#) who submitted a brief supporting a motion to a court that included arguments and citations based on the results of a ChatGPT session. The brief included citations of non-existent cases and other legal inaccuracies, but it sounded plausible.

Errors like that present an unacceptable level of risk for legal professionals. So how will lawyers effectively use generative AI while maintaining all their client obligations?

A standard methodology to improve generative AI results in specialized fields is called Retrieval Augmented Generation (RAG). In systems that use RAG, the user's prompts or queries do not pass directly through to the LLM; the question runs first as a search against a trusted body of content — for example, [verified legal content from a legal publisher](#) or trusted documents from the user's organization. Documents relevant to the question are retrieved first, and the question and the verified content are passed on to the LLM for processing. This ensures that the answers to users' queries are grounded in trusted domain-specific data and not just a sample of data from the wider internet.

The power of generative AI derives from the size and scale of the original data sets that the AI models are trained on — but in specialized fields like law, it's critical that training of the models takes place on trusted, verified, domain-specific data.

What’s driving the adoption of AI in the legal profession?

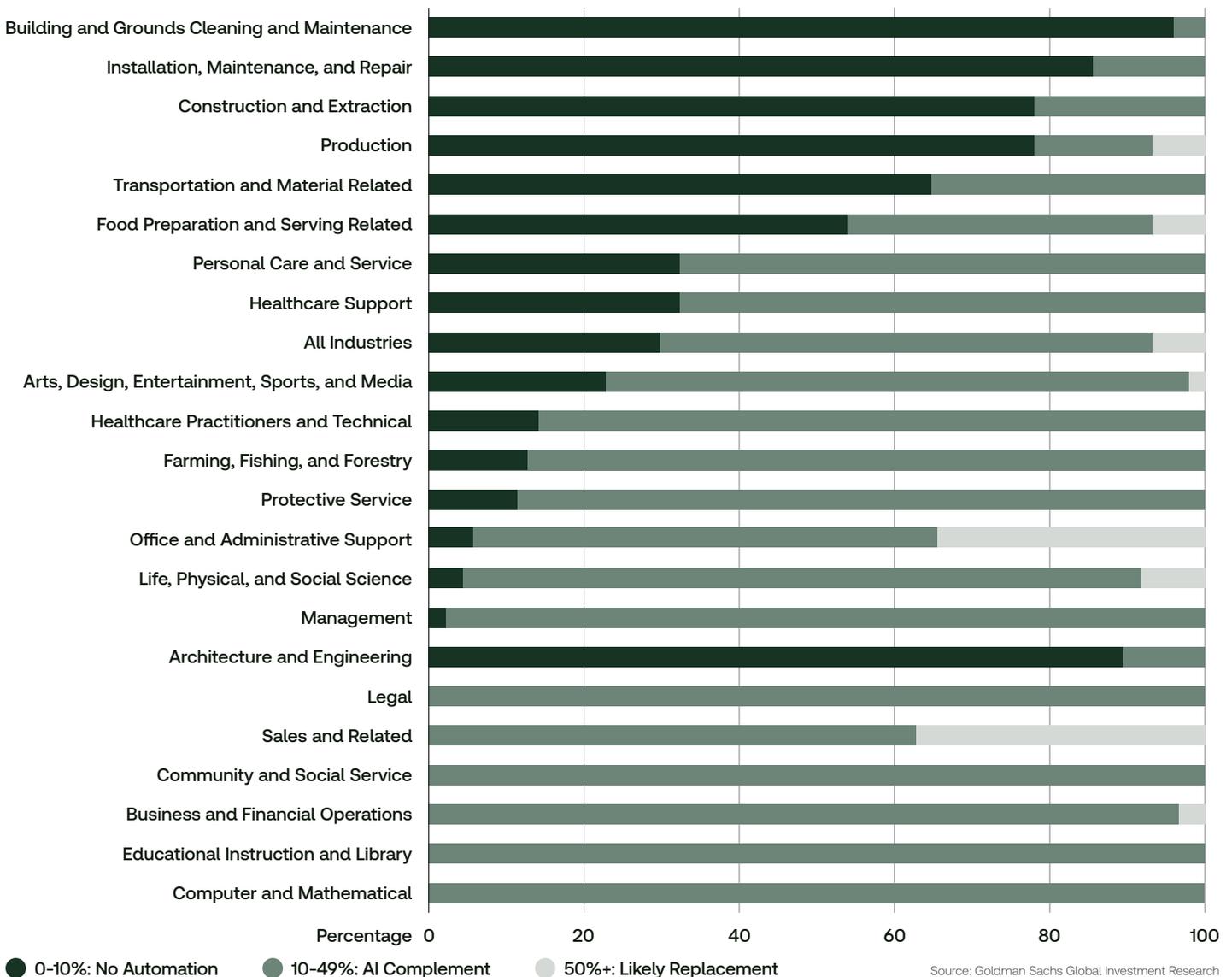
A “perfect storm” of factors is pushing lawyers and legal organizations toward greater adoption of AI-based tools in their work. The main drivers of adoption include:

Tasks centered on documents and data are likely candidates for automation

AI will likely have the least impact on labor in fields rooted in the physical world that can’t easily be digitized. Think in-person healthcare delivery, construction, and food service. Conversely, it has the most significant impact in fields that involve lots of documents and data and where the work outputs tend to be in the form of more documents and data, like banking and finance, media, design, and legal.

Goldman Sachs has evaluated the potential impact of AI on jobs in numerous industries. Because it is such a data- and document-centric profession, legal is considered one of the industries in which AI will complement or replace a large share of work. Indeed, some tasks will be automated, but the fundamental transformation will be how legal work is reimagined and improved. AI presents an enormous opportunity for legal because so much of what lawyers do today can be further enhanced with AI, and client outcomes can be improved.

Share of Industry Employment by Relative Exposure to Automation by AI



Lawyers themselves see the possibilities for AI-based automation of legal work

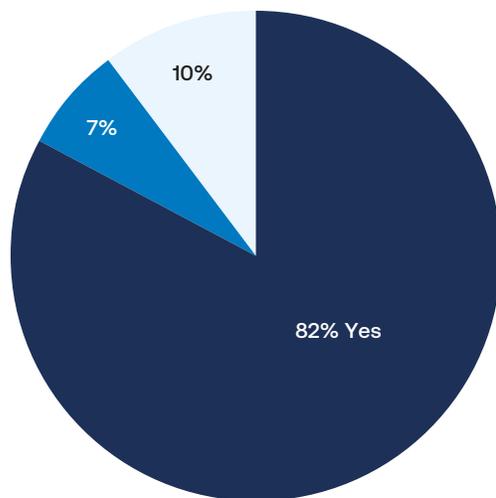
Lawyers are no longer being dragged into the digital age, kicking and screaming. ChatGPT, perhaps more than any of the new technologies that have swept over the legal services industry in the past decade, has caught the attention of lawyers, and most see generative AI as part of their future.

The Thomson Reuters Institute conducted a significant survey of lawyer attitudes towards ChatGPT, **ChatGPT and Generative AI within Law Firms**. While lawyers are skeptical of the accuracy of generative AI and cautious about confidentiality and security concerns, ChatGPT seems to have opened the profession’s eyes to what might be possible. “The realm of the possible has sort of shifted in a monumental way,” as one law firm representative put it in the report.

Fully 82% of survey respondents see that generative AI can be applied to legal work, and a smaller but significant share, 51%, think it should be applied to legal work.

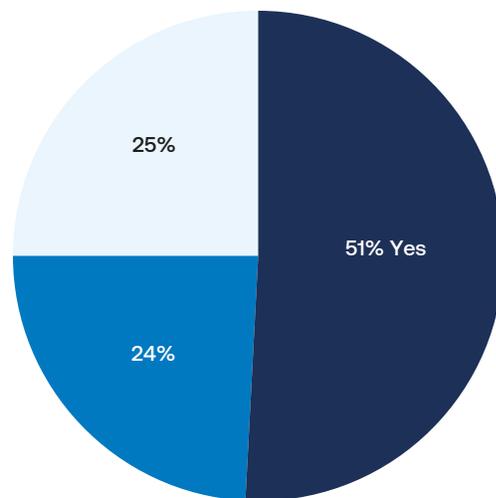
Attitudes towards ChatGPT and generative AI for legal work

Can ChatGPT/generative AI be applied to legal work?



● Yes ● No ● Don't know

Should ChatGPT/generative AI be applied to legal work?



● Yes ● No ● Don't know

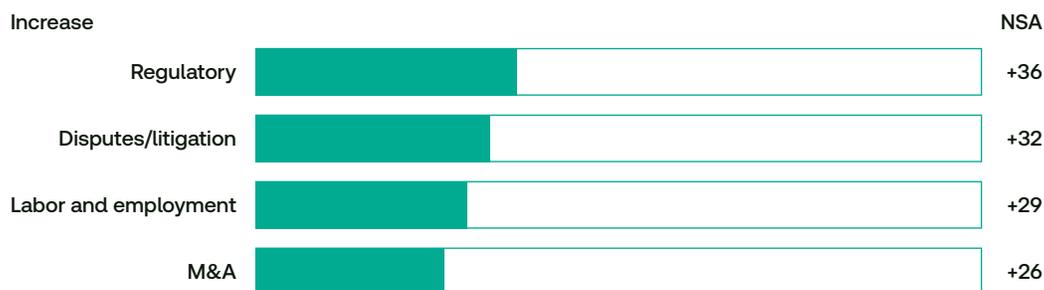
Corporate legal departments are spending more, particularly on practice areas involving large sets of data...

The prospect of a recession and general market uncertainty presents many risks to corporations, and their law departments expect those risks to lead to higher demand for legal services. This is reflected in data from the [2023 State of Corporate Law Departments](#) (SCLD) report from Thomson Reuters. This survey of law department leaders shows that the percentage of them planning to increase total legal spend is more than two times the number planning to decrease spending (41% vs. 20%).

The focus of all this anticipated demand for legal services is not evenly distributed among practice areas. Law department leaders see more demand coming from four practices in particular: Regulatory, Labor and Unemployment, Disputes/Litigation, and M&A.

Projected change in legal spend by practice

Legal spend forecast Q3 & Q4 2022 by work type



Number of responses: (721)

Source: Thomson Reuters 2023

What do those four practice areas have in common? Legal matters in those fields typically involve large amounts of data, including analysis of a company's financial or operational data, large e-discovery projects, or large-scale due diligence reviews. So it's no surprise that law departments are turning to technology to carry an increasing share of the load in those areas.

Using AI-based tools to augment lawyers' work where large volumes of data are involved has already become mainstream in some of those practice areas. What's new today is that awareness of new forms of generative AI has inspired a higher level of interest in creative ways that lawyers can apply AI in legal practice to increase the efficiency and quality of their work.

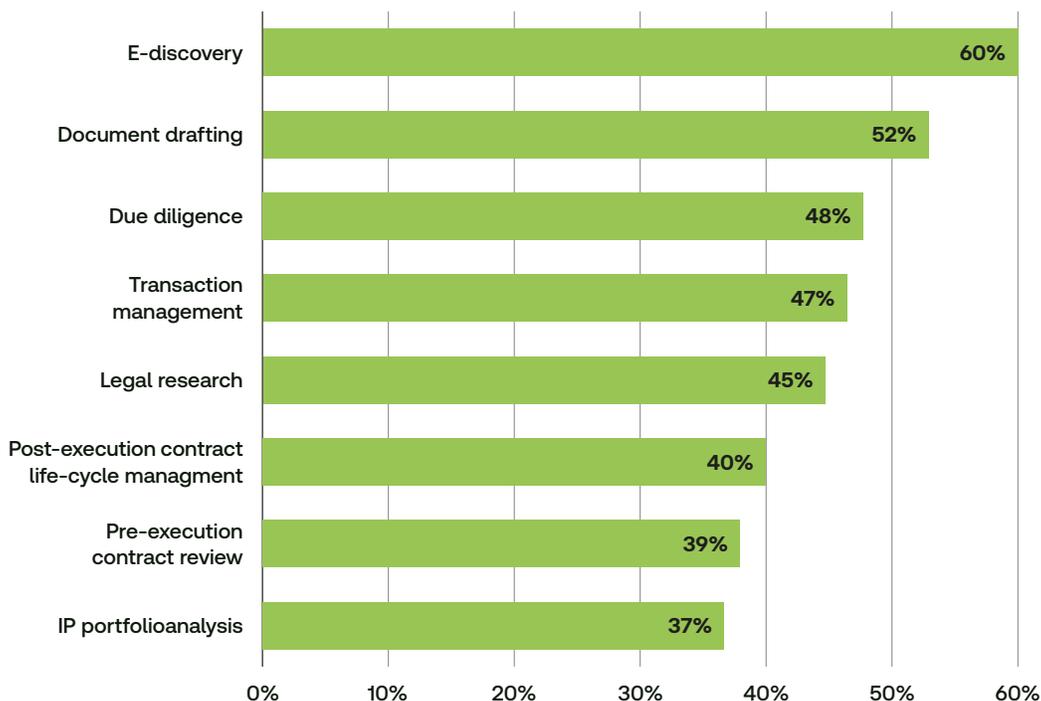
... but not all are responding to the challenge

Law firm Thompson Hines has tracked clients' views on their outside law firms' ability to innovate in their delivery of legal services. According to the 2023 edition of the **Thomson Hines Innovation Survey**, there is still a significant gap between the innovation clients expect from their law firms and what they are getting. The survey respondents include law department leaders but also legal operations staff, who are often the personnel most in touch with leveraging modern technology in innovative ways.

Where are clients looking for innovative technology from the law firms they work with? Results from the Thomson Hines survey largely align with the practice areas identified above as sources of increased legal spend. Clients are looking for innovations and efficiency in data-rich practice areas and legal tasks like e-discovery, document drafting, due diligence, transaction management, and legal research.

How important is it for your law firms to use innovative technology in the following ways?

Percentage of respondents who rated the importance as a 4 or 5 on a 5-point scale.



Source: 2023 Thompson Hine Innovation Report

Because they involve large data sets, these practice areas are precisely where various AI-based tools, including generative AI, can make the most difference for law firms. As the Thomson Hines data shows, firms are not yet meeting client expectations.

According to the report, 96% of respondents wish their law firms would use innovation to save them money, yet only 12% say their primary outside law firms have done so. And the most significant gap is in new technologies to improve processes or drive efficiency, which 72% of respondents want, but only 15% say law firms deliver.

This is the most significant opportunity for law firms to leverage AI: using data and technology to improve the quality and efficiency of the legal services delivered to clients. Leveraging technology has the biggest impact in areas where the capacity of humans to perform legal work has not kept pace with the explosion of data.

Human expertise is critical to the success of AI in the legal field

It's common to hear concerns that AI and other technologies will cost lawyers jobs or diminish the value of their work. Generally, while AI might entail a shift of some specific tasks from humans to machines, the idea that AI will diminish the contributions of human lawyers could not be further from the truth. The opposite is true: AI requires legal domain expertise and skills to function correctly.

It's common to think of AI as a technology. But it's more helpful to think of AI as the convergence of three resources: the data on which AI operates, the technology that makes it work for specific applications, and the **human expertise that directs the technology** to practical applications and solutions and informs training and error analysis.

AI won't work in a specialized field like legal unless all three of these components are present, and none of them alone is more important than the other two.

- **Data or content** is critical because it is often both the input and the output of the process. Data is necessary to train machine-learning algorithms. AI-based legal technology solutions are built on large volumes of current, accurate, comprehensive, and enhanced content. Our legal system is driven by data — the statutes, regulations, case law, and other legal and administrative opinions that collectively represent the data that lawyers and judges must research, analyze, interpret, and reason over. Without trusted, lawyer-created content, no reliable machine-learning tools would be possible.
- **Technology** drives AI solution design and development, which typically requires robust, complex solution architectures that can work at scale. AI scientists combine expertise in AI tools and technologies, analytical and problem-solving skills, and a solid understanding of the target domains.
- **Subject matter expertise** is crucial as it ensures that AI tools solve the correct problems and capture the nuances of the domain in a way lawyers can understand and analyze. Experts inform the creation of AI training data, validate the performance of machine-learning algorithms, and play a critical role in error analysis. They help computer scientists and engineers understand the domain and the data attributes responsible for errors so that they can be corrected.



Domain expertise

Legal domain expertise comes from legal professionals, who can imbue AI software solutions with their real-world experience and add the relevant metadata, tags, and other information to provide context and connections.

AI experts

AI experts add the final component. With their technical expertise, they can ensure the user experience is streamlined and intuitive by applying the technology and AI techniques to quality data and domain expertise.

Quality data

An effective legal AI solution must be built with data from trusted sources, metadata provided by attorney editors, and data about the solution's intended users and their needs.

Experienced lawyers with a comprehensive knowledge of legal workflows and the needs of their clients are in an excellent position to leverage AI to expand their role and deliver value. Lawyers spend their careers learning the law and delivering solutions to clients. AI can help them amplify that knowledge and experience if they are willing to see the opportunities.

How modern lawyers are putting AI to work

All three elements — data, technology, and legal domain expertise — are assembled in various configurations in today’s legal AI solutions. Here are some examples of how AI supports lawyers in their work today. These are mainstream applications of AI today, not some long-off future state.

Contract management and analysis

AI is increasingly expanding lawyers’ ability to organize, monitor, manage, and negotiate large volumes of contracts. A modern contract management system enables lawyers to draft better contracts faster, and simplify the review and analysis process by identifying critical risks, opportunities, obligations, and rights in agreements.

Reviewing and analyzing legal documents and contracts is both time-consuming and critically important. The stakes are high, and mistakes can be costly. Legal expertise and interpretive ability are essential to the task.

Lawyers must separate the noise from the key facts and clauses, find variations in documents from negotiating parties, analyze single, stand-alone agreements, and assess numerous contracts that are part of large, complex transactions, mergers, and settlements. Sometimes, passages written differently mean the same thing; other times, adding or deleting a single word dramatically alters meaning.

Automating **due diligence and compliance review through AI**— and machine learning-powered solutions can save time, reduce costs, and avoid errors.



Ingest

Convert documents into machine-readable formats and classify the documents.



Define & extract

Access and customize the review task lists for automatic fact.



Review & analyze

Navigate, edit, and annotate the machinegenerated results and compare documents, comment, and flag issues or risks.



Report

Review results and onward workflow in contract management platform, and create reports and visualizations.

By reviewing and extracting information from large volumes of contracts and tracking similar information across documents, AI-driven tools relieve lawyers of unrelenting administrative work, including hours of cut-and-paste extraction of clauses. This frees them to spend more time assessing and mitigating risk, identifying opportunities, and delivering essential insights to their companies and clients.

The **2023 Thomson Reuters Institute Dynamic Law Firms Report** found that firms who focus on fostering agility, making strategic investments, adapting to changing market demands, and prioritizing client centric approaches experienced 5.7% growth rates in profit per lawyer calculations over the last 10 years, whereas those firms who did not take similar actions averaged a 0.8% decline.

Legal research

Another cornerstone of sound legal practice — research — is also being transformed by artificial intelligence. Modern legal research platforms, utilizing intelligent search and document analysis capabilities, can save time, improve results, and inform advice and litigation strategy.

AI-powered legal research solutions, like intelligent document analysis, can review a lawyer's or opposing counsel's brief, compare it with arguments from past cases, identify weaknesses, and suggest additional highly relevant citations. They also can warn litigators about citing cases that have been implicitly overruled or abrogated but have no direct citations flagging them as invalid.

Legal research platforms have gradually enhanced question and answering capabilities so that research has become less of a search-and-retrieve process and more of a dialog between lawyer and machine, with more opportunity for nuance and focus in search results. ChatGPT and other forms of generative AI are set to further accelerate that development.

E-discovery

The first mainstream use of AI in law was in e-discovery, in which hundreds or thousands of pre-trial documents can be analyzed to identify relevant sources of evidence for litigation. Machine learning has enhanced e-discovery by creating the ability to model relevant data and to train the machine to identify relevant information, learning from existing data and feedback from subject matter specialists. It does this in a fraction of the time and generally much more accurately than manual review.

Data-driven litigation analytics

Informed by court dockets, and sometimes **case law** and other legal information, some research tools can display statistical information by judge, lawyer, law firm, company, and case type. These identify factors that impact outcomes and help guide legal strategy. Because AI-powered technology can access more relevant data at fast speeds, it is better equipped to predict the outcome of proceedings, ensuring lawyers are empowered to provide the best possible strategic and tactical advice.

Billing and timekeeping

AI technology can **simplify billing and timekeeping** by identifying line items in clerical and administrative tasks, such as time entry, invoice submission, and review. It can also review entries, verify them for accuracy, and highlight duplicate entries. This technology is also powerful enough to analyze billing data and answer questions such as “What is the likelihood a corporate client will pay for a particular piece of work” or “What type of expenses are routinely paid and which are commonly rejected?” This capability can be a valuable operational, planning, and budgeting tool.



Generative AI: the new imperatives for law firms and law departments

How should generative AI change how lawyers think about applying AI in their work? Here are some implications and imperatives that generative AI will require legal organizations to address.

- **Trust.** The best relationships between lawyers and clients are always built on trust and confidence. Because generative AI is built on data and content, the transparency and provenance of data sources have become even more critical. Lawyers need to be able to demonstrate that the outputs from the AI systems they use are run on authoritative content and to work with technology providers who understand this. Large language models built on massive, diverse data sets work well for many general tasks, but lawyers require answers and outputs grounded on verified authoritative data. Generative AI “hallucinations” are not an option for lawyers.
- **Security and confidentiality.** Like other forms of legal technology that involve client data, using generative AI will entail certain risks. Organizations will need to have policies in place that govern the use of client data in deriving new work product. Processes and data governance policies will be needed to ensure that only authorized users have access to client data. The use of copyrighted material to build the models behind LLMs such as ChatGPT is giving rise to emerging intellectual property issues.
- **Integration of tasks.** One enhancement that generative AI is likely to bring to the legal field is the integration of tasks that once were considered separate parts of a workflow. From a document draft, lawyers will be able to launch into a research question without leaving their draft. Or conversely, while researching a point of law, lawyers will be able to instruct their research tools to initiate a draft. The boundaries between research, analysis, and drafting will become more fluid.
- **Exploit legal domain expertise.** The winners among lawyers will not be the ones who passively wait for generative AI tools to come their way. Successful lawyers will understand that their domain knowledge is a competitive advantage as they help deploy AI systems that embody and amplify that knowledge. Lawyers will find new roles and opportunities to blend their legal knowledge with process management and service design. Lawyers’ work product will continue to provide the authoritative data on which their organizations’ AI systems run.
- **Greater interactivity.** Anyone who has used ChatGPT understands the new paradigm it presents. Generative AI allows lawyers to engage in a dialogue with data and technology in new ways. Research tasks will entail backand- forth refinement of results as the lawyer and machine learn from each other. Drafting will be faster and allow lawyers to quickly adjust and get the machine’s help changing tone, emphasis, or scope.

Step into the future

In a wide range of applications, AI-powered tools are leveraging data, sophisticated analytics, and subject matter expertise to transform the practice of law. Modern, forward thinking law firms and corporate law departments use this technology to improve their results, unearth insights that minimize risk, and identify opportunities — doing it all with greater speed, accuracy, and efficiency.

Generative AI adds a new dimension to the successes already seen in applying technology to legal work. The machines are getting more powerful in the tasks they can accomplish, but the real story is the opportunity for lawyers to extend and amplify their legal expertise with the help of technology.

Learn more about [the future of AI at Thomson Reuters](#) and how it can redefine your ways of working.

