LLM

The Lawyer's Guide to Legal Technology

How corporations and firms can build their business using the right technology tools

Technology has had a monumental effect on every industry, especially the legal world. The significant changes taking place — corporations wanting to cut costs and asking for more efficiency from outside counsel and firms rising to meet requests of cost reduction by using technology to achieve improved budget forecasting and efficient project management — are reshaping the industry. There's a tremendous opportunity for technology to play an even greater role in assisting law firms and corporate legal departments.

While technology's start in the legal workplace was modest and adoption of new technology was slow, outside forces such as the explosion in electronically stored information (ESI), new locations to collect that ESI and new laws, as well as significant advances in technology, have created a golden age of technology for the legal industry. With the modern world changing at a rapid pace, it's imperative to stay current with the latest tools available to legal professionals.

What follows are the tools available to you, their role in your daily work and what benefit they could provide to your organization.

FIRMS AND CORPORATIONS AGREE

Both reported that increasing efficiency is the primary benefit to incorporating new technology.

-The State of the Legal Industry

STEPPING BACK

Before we talk about the technology of today and tomorrow, let's take a step back and look at how far legal technology has come.

Historically, as counsel probably well recalls, law departments and firms dealt mainly with paper. One of the first steps into the digital world was in 1973 when Lexis invented the red "UBIQ" terminal, which allowed lawyers to search case law online versus in books. In the 1980s, the first word processors started gaining popularity in law firms, increasing the speed and efficiency of creating documents and spreadsheets. It was around this time that installed desktop applications targeting the legal market were introduced, which became the gold standard for reviewing documents for many years to come. While this was revolutionary at the time, information and paper populations continued to grow, and the loading and reviewing of documents in this manner was still a very manual, laborious process.

By the 1990s, email and the Internet began to be more prevalent which led to an explosion of data and meant the historical way of reviewing documents was too difficult and unmanageable. In response to this need, the first web-based review platforms came to market in the late 1990s.

The stock market crash in 2008 was a turning point for both the legal industry and legal technology. Faced with a reduced budget, corporate legal departments sought improved efficiency and the lowering of the cost of legal services. Around this time, as these needs intensified and the amount of ESI for review continued to grow, tools like technology-assisted review (TAR), targeted searching and analytics became more widely used. This was also the time we saw we saw the adoption of web-based cloud tools in the market skyrocket, as opposed to the traditional installed applications behind firewalls.

In more recent years, lawyers have had to consider the rise of the cloud, the implications of personal devices, social media, remote access from home-based computers, the Internet of Things, file-sharing, chat programs, virtual offices, smart phones/tablets and what effect they all have on the legal landscape. Most recently, artificial intelligence (AI) has played a role in automating certain tasks for legal professionals and will continue to do so.

Ahead, we dive into the various types of legal technology, and how they can assist counsel.

A CLOSER LOOK ... *thriving in the legal industry*

+ White paper: "The Agent of Change"

Legal Technology Timeline

1960s
- Origins of cloud computing begin with J.C.R. Licklider's work on ARPANET

1964
- Xerox invents first commercialized version of modern fax machine

1970s
- Store-and-forward messaging over networked computers evolves into email. Early use is on ARPANET (1971) with ongoing development to handle growth.

1973
- Lexis Nexis invents the little red UBIQ terminal, permits lawyers to search case law online
- Wang Laboratories introduces a microcomputer that includes word processing, becomes crucial for law firms

1980s
- Document management software is used so legal teams can instantly view documents from specific client or matter

1981
- IBM releases first personal computer

1984
- Apple releases first Macintosh computer

1985
- Microsoft releases Windows 1.0, a graphical user interface for MS-DOS
- Local area networks (LAN) begin to flourish

1989
- First World Wide Web (WWW) servers outside CERN switched on

Late 1980s
- First litigation support software programs, Summation & Concordance, introduced

1993
- Key early graphical web browser (Mosaic) is released, increasing ease of accessing Internet and resources

1995
- Microsoft releases Windows 95

1996
- Attachments to emails are now supported for non-text files as part of the MIME (Multipurpose Internet Mail Extensions) standards

1998
- "Spam" added to Oxford English Dictionary

1999
- First BlackBerry device (850) introduced as a two-way pager

Legal Technology Timeline

CONTINUED...

Early 2000s
- First virtual law offices opened
- Cloud-based software first introduced to legal community

2001
- Gartner paper describes growing amount of accumulated data ("Big Data") with the 3 V's: Volume, Velocity and Variety
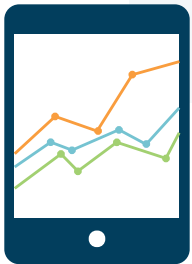
2003-2004
- Judge Scheindlin's Zubulake opinions (*Zubulake v. UBS Warburg*) establish duty of companies to issue legal holds and preserve electronic data to prevent spoliation and sanctions. Encourages ideas like data sampling to validate effectiveness of search terms and Seven Factor Test for cost shifting.

2006
- Federal Rules of Civil Procedure (FRCP) amended to address growing amount of discoverable electronically stored information (ESI) in litigation
- First version of electronic discovery reference model (EDRM) published
- Google and Amazon begin referring to hardware and software services over Internet as "cloud computing"

2007
- First iPhone released. Smart devices (phones, tablets) soon become standard for legal professionals and part of electronic devices that store information open to discovery

2008
- Stock market crash, a change-maker for legal industry and technology
- Satoshi Nakamoto introduces BitCoin, underlying blockchain concept

2009
- Business Intelligence a top priority among surveyed CIOs

Early 2010s
- Technology-assisted review (TAR) first used by legal professionals

2012
- Judge Peck issues first opinion endorsing TAR use

2013-2014
- "Smart contracts" begin to appear as protocols on top of blockchains to execute terms of a contract. Early work done by projects like Ethereum.

2016
- IBM introduces world's first artificially intelligent lawyer, ROSS, which is hired by Baker & Hostetler firm

E-discovery, Review and Litigation Tools

Given the rise of cloud-based software, increasingly complex collection sources, and the explosion and continued growth of ESI data, there are many types of software available to aid in your e-discovery, review and litigation work. Getting the right tool for the job is crucial. Some software platforms can combine multiple tools on this list, so it's important to clearly identify your needs before determining what software is right for you. Ahead, a breakdown of these tools and what they accomplish.

Legal Holds Software

When litigation is pending or anticipated and a company takes reasonable steps to preserve ESI, such as emails, voicemails and presentations, and hard copy documents by issuing a legal hold. In the past, this meant manually generating emails and recording custodian responses through spreadsheets. Now, legal holds software is imperative to automate and document this process. Through it, counsel can track the relationship between the custodian's hold and resulting discovery data, easily initiate new holds, re-issue or release, quickly gain updated on-hold status, plus review detailed history audits of holds and custodians. Additionally, legal can send custodian interviews and track responses to identify the relevant data in their possession.

BENEFITS
- ✓ Reduces time spent keeping track of holds
- ✓ Reduces chance for errors

A CLOSER LOOK ... *custodian interviews*

+ White paper: "In the Know: Purpose, Process and Benefits of Custodian Interviews"
+ Mini book: "Questions and Answers: A Guide to Custodian Interviews"

Collection, Preservation and Processing Services

Early stages of e-discovery are composed of identification, preservation and collection of ESI in response to a legal hold or specific production requests. These steps, as well as the culling and processing of the data population to more relevant documents for review, benefit heavily from software tools that aid in storing, searching and reporting on large quantities of data.

Processing technology helps ingest documents in different formats to extract text and metadata and, where necessary, output to a common viewable format. Many products handle aspects of processing directly in the tool itself. Collection and processing tools also use the extracted metadata and text to perform the greatest cost saver to review: data reduction. Eliminating common system files and exact duplicates and performing search filtering on the data greatly reduces the document population necessary for review. As part of the culling or even early case assessment (ECA), keyword search terms are applied to target the most relevant data, and the results will need to be sampled and analyzed for accuracy.

Software that makes this culling, analysis and reporting easy for both review and ECA purposes can give insight into deploying the necessary resources and costs for review as well as performing the actual reduction and processing of data.

BENEFITS
- ✓ Increases speed of e-discovery and defensibility
- ✓ Reduces size of preserved ESI to what is potentially relevant

$1,000,000

Median annual spend on corporate litigation expenditures

Timelines

A desirable software feature that gives counsel the ability to quickly associate people, organizations, locations, and notes to the facts of the case, chronologically. Additionally, technology gives counsel centralized access and visualization of this information with the ability to dynamically associate the facts with relevant documents. It helps present only the key facts counsel needs at that very moment, therefore helping get the team on the same page, communicate more effectively and easily share information.

BENEFITS
- ✓ Provides the big picture of the case
- ✓ Increases collaboration and speed of locating case facts

A CLOSER LOOK ... *timelines*

+ Article: "Timelines on Your Side"

Transcript Management

Transcript management software enables you to manage transcripts related to a case in a digital format. Through the software, you can create a searchable database of depositions, hearings or more and add notes, create reports or cull key passages. It also allows you to make annotations and categorize documents. All related exhibits can easily be linked and viewed alongside the transcript for optimal convenience.

BENEFITS
- ✓ Save time by having access to all documents and notes in one place with exhibits linked beside transcripts

BinderBuilder™

A software feature that compiles documents in a single PDF to be electronically filed with the court, shared among users to prepare for deposition or trial or printed for attorney review.

Data Analysis/Analytics

The amount of data in litigation and investigations continues to grow rapidly. Analytics features like clustering, concept search and correspondence mapping allow counsel to identify key concepts, manage their data by reducing and prioritizing documents, and improve review efficiency to save time and money. Greater insight to the content of what was collected and the connections between documents also ensure early assessment of risk and allocation of resources. With these features, counsel can identify key concepts, reduce and prioritize documents, and improve review efficiency to save time and money.

BENEFITS
- ✓ Increases speed and efficiency of managing and culling data
- ✓ Saves time and money

A CLOSER LOOK ... *data analysis/analytics*

+ Case study: "Search: Intuitive, Efficient, Productive and Convenient"
+ White paper: "Creating Effective Search Queries for Foreign-Language Documents"

Technology-Assisted Review (TAR)

TAR is a process that can greatly trim down counsel's review time resulting in cost reduction and faster identification of key information. With TAR, you can tag a portion of your documents, training the system to recognize tagging patterns. Once trained, relevant tags are applied to terabytes of documents in an amount of time that far surpasses human review capabilities. It is especially desirable when TAR is combined in the same platform as review, versus another product or a separate module of the product, saving counsel time and money.

A CLOSER LOOK ... *TAR*

+ Mini Book: "Clearing the Confusion: TAR"
+ White paper: "A Comprehensive Guide to Technology-Assisted Review (TAR)"
+ White paper: "On the Same Page: TAR for Asian Languages"

Review

Minimizing review time and maximizing efficiency are crucial in litigation. Therefore, software platforms that implement timesaving workflows empower firms large and small to handle large amounts of ESI and move through review faster. Counsel can spend more time with the documents that matter.

As review software has evolved throughout the years, many time-savings features have been developed and added to various platforms in the industry. These include features like email threading, near duplications, native file review, native redaction and persistent highlighting. Near duplication presents highly similar documents together for faster review. With native file review, there's no need to spend time imaging all discovery files. The application can process hundreds of different types of native files, including entire e-mail accounts, such as Outlook, Lotus Notes and GroupWise. Persistent highlighting automatically highlights a defined search term in a particular set of documents.
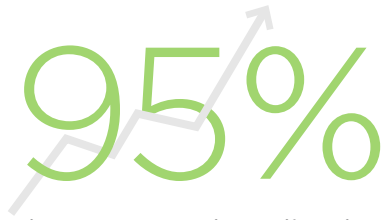
Counsel can redact confidential or privileged information from all case files and documents, plus automate and duplicate redactions to save even more time.

Automatic or auto-redaction reduces the pain-staking process of reviewing documents, like email and social media, for passages that must be redacted.

BENEFITS
- ☑ Saves time and money due to the efficiencies gained in review

Outlines

Creating outlines is a crucial part of witness prep and depositions. Using software to create the outlines gives the case team a place to review and collaborate on documents needed for depositions, hearings, trial, arbitrations and more. You can also use the software during the actual depositions or hearings and attach all documents to their relevant points in the outline for ease of use. Some outlines software is available on tablet apps to use directly in the deposition.

BENEFITS
- ☑ Easily collaborate with the case team on documents, saving time
- ☑ Mobile versions of the software provide ease of use during depositions

Production

Production software can electronically Bates-stamp production documents. The automated tool allows counsel to specify characteristics of each stamp, including intelligently attaching confidentiality designations based on flags. All stamping is done online, reducing moving parts and saving time. As technology continues to evolve and advance, so does the need to produce different types of information.

BENEFITS
- ☑ Simplifies process
- ☑ Saves time

A CLOSER LOOK ... *source code production*

+ White paper: "Source Code: Receiving, Reviewing and Producing"

Review Predictor

This tool can alert administrators whether a specified review deadline will be met based on current review rates and calculates how many reviewers are needed to meet the goal based on review rates. It helps provide better accuracy of cost estimates and time to completion.

Business Intelligence

Business intelligence (BI) is defined as the "set of strategies, processes, applications, data, technologies and technical architectures which are used to support the collection, analysis, presentation and dissemination of business information."[1] The tools that follow provide insight into how a corporate legal department or firm is running and either allow for increased efficiency from the organization or highlight areas where there is an opportunity for even greater improvement.

Project Management Software

From project planning and scheduling to resource allocation and change management, project management software enables project managers and users to manage resources and their time, in addition to the status of projects.[2]

BENEFITS
- ✓ Control costs, manage budgets, quality and documentation
- ✓ Increases collaboration and communication

Knowledge Management Software

Considered a subset of enterprise content management software, knowledge management includes a range of software that specializes in the way that information is stored, collected and/or accessed.[3] Knowledge management involves capturing prior work product and insight from lawyers' collective knowledge and organizing it in a central, searchable repository, ensuring that legal staff do not have to reinvent the wheel every time, therefore boosting their productivity. Examples can include a corporation's intranet or Microsoft's SharePoint.

BENEFITS
- ✓ Capability of integrating with existing internal system
- ✓ Easily scales information for an organization, large or small

87%
of partners are changing delivery of legal services to provide greater value, not just reduce rates

-The State of the Legal Industry

Legal Research/Analytics

Also known as "big data analytics," it allows lawyers to gather information and insights about judges, jurisdictions, firm and attorney success and settlement rates and other details. "For instance, analytics platforms allow attorneys to view their judge's complete history, including every decision issued and every case cited, to identify the legal precedent the judge finds most persuasive."[4]

Another example of research is rate comparison. This is typically used by corporate counsel for identifying and analyzing the breakdown of charges by rate type, timekeeper, etc.

BENEFITS
- ✓ Enables counsel to make strategic decisions based on historical data analysis

Time and Billing Management Software

Takes the guesswork and paperwork out of billing and budget preparation by organizing time management, budgeting and client billing online. Tracks billable time, generates invoices, provides immediate access to client's balance, records payments, invoices to vendors and more. It provides a secure web portal to access this information and also provides reporting, allowing for predictability and forecasting.

BENEFITS
- ✓ Automation reduces time and effort, organizes and tracks financial information, increases security

Budget/Time and Forecasting Tools

These tools are necessary to give firms and corporations the transparency and predictability they need. They allow corporations to plan, project and be smarter about how they spend money. From the firm's perspective, these tools make them more competitive with proposals and transparent on spend throughout projects. It allows a firm to provide knowledge-based recommendations to corporate regarding risk/reward of various strategies like settlement versus going to trial. Finally, these tools allow counsel the ability to compare pricing models and case types against each other.

BENEFITS
- ✓ Delivers more financial certainty and accuracy

A CLOSER LOOK ... *budgeting*

+ White paper: "Making It Count: Budgeting Success for General Counsel and Legal Departments"

+ Infographic: The Big Picture: Budgeting Infographic

+ Webinar: "Better Budgeting Analysis, Better Predictability"

Practice Management Software

This software gives counsel a centralized database for managing client and case information, such as contacts, calendaring, documents and other specifics by facilitating automation.[5] It's a collaborative tool for attorneys and helps avoid duplication of efforts and data. Accessible anytime, counsel can manage a case wherever they are.

BENEFITS
- Centralized, automated center that increases efficiency

Matter Management

Matter management software is essential to efficiency and cost-cutting efforts and is most typically used by corporate counsel. It offers counsel a unique insight into litigation, investigations, disputes, arbitrations and regulatory investigations and also increases opportunities for inside and outside collaboration. Desirable features include the ability to encourage scheduled status entry with reminders, upcoming events, and collaborative review and updating. You can also search, filter and report across multiple matters for a corporation, law firm or client.

BENEFITS
- Quickly track and report status of matters
- Easy collaboration for inside and outside counsel

Shiny, New Technology

There's an exciting energy around emerging technology. What's now, what's next, and what can it do for me? For example, AI's potential in several areas continues to grow: reducing data (ECA) and automating tasks like review, mapping of judicial predispositions to predict rulings or analyzing opposing counsel tactics to help prepare defenses.

> "Technology, machine learning, artificial intelligence, and system process improvements are making some types of legal services more accessible and reducing (sometimes even eliminating) the cost of those services."
>
> -"Report on the Future of Legal Services in the United States," American Bar Association

Self-Filing/Compliance Management Software

Simplifies and streamlines the often complex and overwhelming regulatory compliance process by automating it. Counsel can self-file with the Securities and Exchange Commission and create a library of reporting documentation for future reference. Some software options can also help analyze compliance issues and risks.[6]

BENEFITS

- ☑ Increased control, flexibility, efficiency and accuracy

ROSS

Built on IBM's cognitive computer Watson, ROSS is known as "the world's first artificially intelligent attorney." It was designed to do a number of tasks, including reading and understanding language, postulating hypotheses when asked questions, researching and generating responses, plus references and citations. In addition, ROSS also learns from experience, gaining speed and knowledge the more counsel interacts with it.[7]

When firms automate the more tedious tasks with technology, it allows for more time on strategy and case preparation and to extend their expertise to their clients.

Smart Contracts

Smart contracts are defined as "computer protocols that facilitate, verify, or enforce the negotiation or performance of a contract, or that make a contractual clause unnecessary." They often emulate the logic of contractual clauses.[8] According to one provider, LawGeex, they can save users about 80 percent of the time they would normally spend on contract review.[9] In fact, 2017, has been called "The Year of the Smart Contracts."[10] The emerging technology has been referred to as the "killer app" to blockchain, the distributed ledger for data.

79%
of case outcomes are predicted correctly by artificially intelligent "judge" by analyzing fact portrayal

BENEFITS

- ☑ Increased efficiency and security
- ☑ Reduction of transaction costs

RELATED READING

LLM, Inc.'s white paper "Bitcoin: A Time for Change"

Looking Ahead: The Future of Legal Technology

Legal technology has made great strides in the last decade — and that pace is increasing rapidly. The 2014 American Bar article "How Technology Is Changing the Practice of Law" predicted that computing power would soon double, even triple to what is available now.[11] This power increase coupled with the release of new devices would help propel "current lawyering technologies like document automation, decisions engines, e-discovery tools, communication and collaboration tools, legal research tools, and legal expert systems" forward. It's a trend that is already well underway.

But we don't only have to future technology for exciting possibilities. Current technology can also evolve and adapt. For example, the document-clustering feature often used for ECA and litigation document review prioritization is now also being used for patent portfolio assessment by one of LLM, Inc.'s firm clients.

TIME TO BUILD

Now that you know the top technology tools available to you, it's time to take action. As history has shown, resisting technology will only impede a department or firm's progress and viability. As the legal landscape continues to shift, counsel must secure its position by using the technology available, thereby improving efficiency, saving money and increasing profitability.

REFERENCES

1 https://en.wikipedia.org/wiki/Business_intelligence/.

2 https://www.techopedia.com/definition/13132/project-management-software/.

3 https://en.wikipedia.org/wiki/Knowledge_management_software/.

4 http://www.americanbar.org/groups/departments_offices/legal_technology_resources/resources/charts_fyis/casemanagementcomparison.html/.

5 http://www.ipwatchdog.com/2016/08/09/big-data-future-legal-tech/id=71675/.

6 http://www.capterra.com/compliance-software/.

7 https://futurism.com/artificially-intelligent-lawyer-ross-hired-first-official-law-firm/.

8 https://en.wikipedia.org/wiki/Smart_contract/.

9 https://futurism.com/an-ai-law-firm-wants-to-automate-the-entire-legal-world/.

10 http://www.pcmag.com/article/350088/blockchain-in-2017-the-year-of-smart-contracts/.

11 http://www.americanbar.org/publications/gp_solo/2014/may_june/how_technology_changing_practice_law.html/.

Connecting corporations and law firms

throughout an entire case, in a single platform

LLM
LIQUID LITIGATION
MANAGEMENT, INC.

LLM, Inc. unifies the legal process by combining legal holds, case strategy, matter and budget management, review and analytics in a single, web-based platform. We connect legal strategy to tactics in a way no one else can, so every part of the process is actionable. Our product scales to help corporate and law firm teams gain cost-savings and eliminate inefficiencies.