ICCC paper to support AI panel discussion

# AI and law: what do in-house lawyers need to know?

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As a background to our panel on artificial intelligence (AI) and law, we present a discussion paper highlighting some of the important issues that AI raises for law firms and corporate legal departments.

## How do we define artificial intelligence?

Artificial intelligence (AI) is technology with the ability to perform tasks that require human intelligence, such as visual perception, speech recognition and language translation. There are two types of AI: narrow AI, which carries out specific, ring-fenced tasks, and general AI which creates software in response to user demands, and could, in theory replace a human in a complex role. Although we do not have general AI yet, multiple sectors have developed effective narrow AI to handle discrete but not necessarily repetitive tasks.

All software uses algorithms, or sequences of instructions, to process tasks. The core capabilities that differentiate AI algorithms from other automated processes are natural language processing and machine learning. Natural language processing enables the software to respond to requests using normal terminology, in text or audio. Examples are website chatbots, Apple’s Siri, Google’s Assistant, and Amazon’s Alexa. The ability to respond to natural language queries enables contextual search beyond key words and phrases. The ability to recognize sounds and images takes it further still.

Machine learning, which comprises deep learning, supervised learning, and unsupervised learning, means that following training on an initial dataset, the algorithm changes in response to experience and feedback, and adjusts and hopefully improves its performance when it is applied to new data. Like a human worker, the more experience it has in doing a particular task, the better it gets at it. Natural language processing and machine learning underpins AI’s productivity and effectiveness, but it also changes its risk profile, and that of the organization using it, operationally, and in terms of responsibility, accountability and liability.

Professional services are only now beginning to catch up with other sectors in terms of AI and intelligent automation. AI traders respond instantly to stock market changes 24/7 – creating more volatile markets. Autonomous vehicles bring together multiple AI applications including image recognition with sophisticated engineering techniques; retail AI applications harvest and analyze large volumes of consumer data respond to and predict customer preferences. In the health sector which uses AI to collect and analyze large volumes of patient data for accurate diagnostics and personalized treatment plans. AI powers physical process automation including robotic surgery and home care and remote healthcare. AI underpins the quantified-self movement and related tools and applications that measure individuals’ susceptibility to different conditions.

AI’s biggest benefits are scalability and consistency, and these factors underpin the speed of uptake in legal services, which is predicated around productivity gains. An AI engine can read an infinite number of documents simultaneously and in exactly the same way. An AI-powered decision tree will deal with an infinite number of inquiries simultaneously and consistently, 24/7/365.

## Why is AI so hot right now?

Although artificial intelligence has been a concept since Stanford Professor John McCarthy coined the term in 1955, only now do we have the technology to make it work for us! This is due to the alignment of three factors:

* Big data and predictive analytics – the ability to capture, anonymize and analyze large quantities of unstructured data.
* Advances in deep learning software and parallel processing hardware (the components of machine learning).
* Cloud computing – which makes scalable technologies accessible and affordable. AI brings together unlimited data, complex analytics and machine learning, so it requires massive processing power and connectivity.

## Legal AI

At the end of 2017, 40 of the top-100 law firms were reported to be using artificial intelligence (AI) software to automate elements of legal research and operations. AI is changing legal practice by automating law firm operations and creating self-service tools and resources for lawyers and their clients.

And it is facilitating access to legal services. Most entrepreneurs cannot afford a lawyer, so legal resources for start-ups and small and medium enterprises are helping them to manage the risks associated with starting a business.

On the consumer side, AI is supporting the ‘unlawyered’ – people who cannot afford legal representation, or whose case does not warrant the cost of one by automatically connecting them with appropriate resources to support their case. For example, legal chatbots like DoNotPay, which started by challenging parking tickets, provide free, self-service assistance with common issues. This development is happening in parallel to court digitization and the introduction of online courts and court services. For example, the UK courts service recently launched an online no-fault divorce application. This is admirable, but it also raises concern around fair access to justice, and ethical/societal issues around judgement, as well as data protection and security challenges.

AI in law firms and corporate and commercial legal services is concentrated in five main areas:

* Contract analytics/automation
* Document review for eDiscovery and M&A due diligence
* Expertise automation/expert systems
* Legal research
* Prediction engines

These are not all the possible applications of legal AI, but they are a good starting point. Contract automation and analytics and AI-powered document review for eDiscovery and due diligence increase productivity by expediting routine processes, freeing up lawyers to focus on achieving the best possible outcome.

Expert systems automate operational efficiency, by introducing triage and self-service applications. The legal research element is about maximizing individual lawyers’ productivity by putting the information resources they need at their fingertips. Prediction engines brings together multiple factors to predict case outcomes.

The take-up of these technologies is driven at least in part by corporate legal teams. Law firms are using AI to deliver on expectations of productivity and cost efficiency while maintaining their margins, with the side benefit of reinventing themselves as ‘legal innovators’ who offer emerging technology as part of their service offering. Another important element in the legal AI equation is the lawtech start-up dynamic, which is sharply focused on contract automation and analytics.

## AI applications for in-house counsel

AI adoption by corporate legal is predicated on productivity. Many large organizations have relatively small legal teams that handle large volumes of contracts, for sales, procurement and human resources. Intelligent automation such as UK start-up Juro’s design-led contract management platform, which uses algorithms to process the data within legal contracts, as well as supporting data visualization and e-signature features, saving corporate lawyers’ time and/or the cost of outsourcing this work. Other applications designed specifically for corporate legal include LawGeex which analyses incoming contracts against a company’s legal policies, and ThoughtRiver, which adds triage and risk assessment to contract analysis.

AI contract automation and analytics offers standardized scalability, consistency and speed, at checking contracts against legislative changes such as GDPR, creating contracts that combine templates and personalization, such as employment contracts, and analyzing them to uncover insights, such as patterns of procurement, or recruitment. The same benefits of standardization and scalability apply to document review and analysis for deal due diligence and litigation e-discovery, where consistency is 100% and accuracy is generally the same or higher than completing the task manually. After the initial investment in selecting, implementing and training the software, it also provides ROI and cost-effectiveness.

## Legal AI trailblazers

If corporate legal departments are using AI for routine work, they will expect their external legal counsel to do so too.

The fastest growing branch of legal AI is contract analytics, where the lawtech start-up market is producing an ever-expanding choice of offerings. Intelligent contract analytics is used to support corporate and commercial transactions, for deal due diligence and for content creation and re-use to speed up the deal process. Automated contract analysis and drafting is taking off in law firms and corporate legal departments. Popular suppliers include Kira Systems, which handles contract review, analysis (including clause extraction) and creation. Thomson Reuters recently partnered with contract analytics platform eBrevia to add AI contract generation to its Contract Express offering, which now includes amendments, approvals and digital signatures.

Document review, for litigation support or M&A due diligence, was the obvious launchpad for legal AI. In the three years since the first use of AI-powered document review hit the media, the choice of vendors has grown exponentially. RAVN, one of the first commercial legal AI start-ups, was purchased by popular document management vendor iManage, enabling iManage RAVN applications, which cover data extraction and classification, to interface directly with the iManage DMS, providing a relatively straightforward first step into legal AI for iManage customers. Luminance, a stand-alone/cloud-based document review and analysis system, does not require training and can be applied to any document set as it reads structured and unstructured data and identifies anomalies and similarities.

Expert systems make a firm’s specific expertise scalable, through self-service client-facing applications that involve AI-powered apps, either developed in-house or using an intelligent platform such as Neota Logic. The AI element is about blending NLP (so inquiries do not require particular terminology) with machine learning (so that the output becomes more accurate as the system gains experience and feedback). AI powered compliance tools incorporate external regulations (and potentially expertise) into internal workflows.

These can relate to specific legislative changes, or health and safety regulations, or they can apply more generalist provisions into all incoming work, for example, to ensure that enquiries are allocated quickly, correctly and securely.

For example, ThoughtRiver uses machine learning to interpret contracts and assess them for business and financial risk – against an organization’s corporate policies and other risk indicators. The software reads all the contracts, flagging up clauses and issues that the legal team need to concentrate on and visualizing the results via an online dashboard.

Another type of expert system is the chatbot, which automates straightforward legal advice by connecting inquiries to information. 2017 saw the development of stand-alone legal chatbots DoNotPay and Robot Lawyer LISA. In the UK, Billy Bot is a chatbot that does the work of a barrister’s clerk – taking inquiries, making appointments, answering straightforward questions and allocating complex ones to the relevant expert.

Legal research applications like ROSS Intelligence apply AI directly to knowledge management, by delivering information to lawyers when they need it. These incorporate internal and external sources including subscriptions to Practical Law and/or LexisNexis, and other external sources, such as government sites in order to flag up and manage legislative changes. This is combined with interrogating the knowledge and expertise within the business. ROSS Intelligence recently launched EVA, a free product which analyses briefs in a similar way to Casetext’s CARA. These products are currently available in the US.

eDiscovery tools are applied to commercial litigation where there are large volumes of documents to analyze. Whereas manual e-discovery reviews a sample of the document set, AI can review all the documents simultaneously. This reduces the risk of inaccuracies in document review, due diligence etc. For example, document review application Luminance regularly uncovers unexpected anomalies in data sets. Here we are seeing overlap between eDiscovery and other legal tech offerings. Bespoke eDiscovery software such as Relativity uses algorithms to identify patterns and concepts, and offers additional features including visualisation tools that support litigation strategies, e.g. whether to pursue a claim through the courts. Relativity is extending its platform beyond eDiscovery to create an app store for co legal tech partners.

Prediction engines are another litigation support tool, where publicly available information is used to forecast the likely outcomes of cases and inform decisions whether or not to settle a case, for example. This includes legal precedents, as well as records of judges’ decisions for particular type of case, the lawyers representing the parties and even the time of the hearing. Online tools are accessed via subscription, so although they use AI and big data technology, this is not about introducing AI into legal operations; it can be used to inform decisions whether or not to settle a case, for example.

Other facets of legal AI include access to justice applications and practice management tools and platforms that apply AI-powered data analysis to business and management information.

## What’s happening now?

The latest developments in law firms involve bringing together multiple AI products – sometimes requiring some in-house development – with other lawtech platforms, tools and applications to create portfolio systems and client offerings. Some examples of those products are set out below.

*Specialist offerings:* at the end of 2017 insurance law firm Keoghs launched Lauri, an AI lawyer that communicates between claims handlers at insurance companies and lawyers at Keoghs via email. Lauri comprises a coded solution and an API to iManage RAVN, for document extraction and classification. It reads emails and unstructured case documents and automatically extracts the important information. It interacts with the firm’s case management system and automates relevant processes, sending the results back to the client via email.

*Narrow offerings with a broader reach*: Clifford Chance combines Kira Systems to create branded ‘standard’ documents, which are accessed via a Neota Logic platform. Freshfields Bruckhaus Deringer has trained Kira Systems to work on its German healthcare contracts following a change in regulations. At Freshfields, Kira Systems also works on German real estate contracts and leases.

*Automated workflows:* Seyfarth Shaw has brought together multiple systems into a workflow that handles volume real estate work, comprising BluePrism RPA (robotic process automation) for matter intake; iManage (RAVN) Extract for data extraction and categorization, an in-house document automation tool, SeyfarthLink for generating lease summaries, and a data visualization tool for trend analysis – so the outputs are used for multiple purposes. It is important to note, however, that there are built-in checkpoints at each integration point, where lawyers review the outputs for accuracy and quality control. Notwithstanding that AI applications are used throughout the process, there is still human supervision.

*Investing in innovation and reputation:* Another way in which firms are building their reputations as innovators is investing in AI start-ups and incubators. This is not limited to magic circle and international firms. UK mid-market firm Taylor Vinters in Cambridge has a highly successful tech investment program that has nurtured two game-changing start-ups, Wavelength Law and ThoughtRiver. Established legal technology vendors are also upping their game – investing in R&D such as Thomson Reuters Labs which includes the Center for Cognitive Computing, which developed an AI-powered product for data privacy law, and acquiring or partnering with game-changing AI start-ups. LexisNexis acquired Lex Machina and Ravel and launched Lexis Answers. Bloomberg Law launched Points of Law.

## Potential/future uses of AI for in-house legal departments

This is driven by the focus on innovation throughout the legal sector, and the global lawtech start-up movement. According to the In-House Counsel’s LegalTech Buyer’s Guide 2018, published by LawGeex, the number of AI intelligence companies catering to the legal sector has grown by 65% in the past year, from 40 to 66. It is likely that law firms will utilise AI-powered business tools for managing internal processes such as HR and using the data they hold to produce additional client-facing services and for predictive trouble-shooting – i.e. flagging up legal developments that may impact particular clients. Currently there are concerns about applying AI to judicial decisions because of inherent bias in data and pattern recognition. For example, the COMPAS algorithm that some US states used to predict recidivism and guide sentencing was found to include racial and other biases. This runs counter to the ethical and practical obligations inherent in professional codes of conduct for lawyers.

Market consolidation is a key factor for the future of legal AI. For example, EY’s acquisition of Riverview Law will combine professional and legal consultancy with a significant platform for outsourcing corporate legal services.

## The end of lawyers: hype vs. fear?

As legal AI hits the mainstream, there is a lot of discussion about the impact on legal services and law firm headcount. The inevitable reduction in paralegal and business support roles is currently veiled by the creation of new positions as law firms recruit data scientists, data analysts, coders, legal automation specialists and so on. There are compelling new job titles such as legal engineer and legal innovation manager to bridge the gap between technologists and lawyers. But it may be a different picture when AI has an established place in the new normal of legal technology and legal services delivery, by which time it will have surely replaced legal process outsourcing, and possibly offshoring and nearshoring too as automation replaces human efforts. This is also about shifting price points – while lawyers charge by time, firms will have to find new ways of charging for services which are provided or augmented by AI. On the plus side, they will be able to monetize automated client-facing services, which will produce additional ROI once the initial investment has been covered.

Every legal event seems to have a mandatory discussion about the impact of AI on law firm structure and operations. Will AI invert law firms’ organisation structure from its current pyramid structure, perhaps to a diamond, with fewer entry level and junior roles as tasks, processes, and decisions are automated? How will legal training need to change as automation takes over the routine work that is now done by trainee and junior lawyers?

What about the reassuring comments that lawyers’ trusted advisor status will prevent their being replaced by automation, that firms should use the tech they have before looking at ‘shiny new’ tools, and that in the end AI will augment and extend legal services and produce more work for lawyers? The latter may well apply to lawyers who handle major transactions and disputes, as AI cannot handle the strategic thinking that underpins corporate acquisition or disposal programs or complex organisational schemes, or deal with the human dynamics that lie behind commercial decisions or disputes. Nor will it replace specialist legal expertise. But the ‘shiny new’ tools need to be monitored, to avoid the legal equivalent of a ‘Kodak moment’.

AI is already being used successfully in the medical profession for diagnostics, surgery and even personal care, and doctors and patients trust its superhuman reliability and accuracy. Ethics is a key point of interest: in law, as in medicine there are ethical and societal considerations that mean that even if a machine is capable of making certain decisions, in some cases this may not be appropriate or acceptable.

## Corporate legal departments: the conscience of the organisation

Most corporate legal departments handle routine work – contracts and agreements – as well as troubleshooting legal issues as they arise. But it should not be forgotten that the corporate legal function’s core purpose is to manage the company’s legal accountability. So, as well as protecting it against legal risk and ensuring compliance, the corporate legal function underpins the company’s mission, vision, and culture, and reinforces its brand values. Philippe Coen, Vice-President and Director, Legal, the Walt Disney Company in France, recently likened the GC role to the Disney character Jiminy Cricket, the top-hatted insect who is Pinocchio’s conscience in the movie. “In-house is the conscience of the organization,” he said. “And technology should not compromise one inch of our professional standards and ethical principles.”

When it comes to corporate governance, there is a lesson to be learned from aviation, which has long relied on automation for critical processes – autopilots and navigation. To paraphrase a law firm managing partner who is also a pilot, managing the risks involved in AI is like supervising the autopilot. Treat AI as a valued team member with a defined role, who needs supervising, monitoring and managing – and correcting and retraining, if necessary – just like any other team member, because your business is responsible for its outcomes. [ENDS]

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