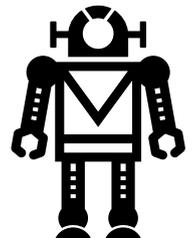
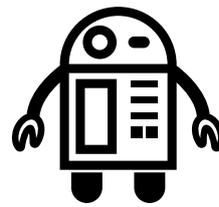
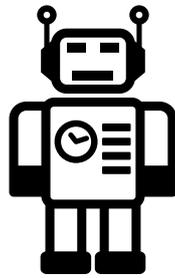
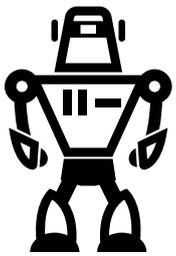
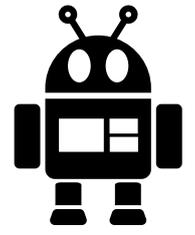
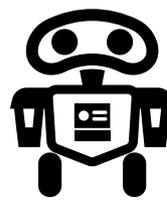
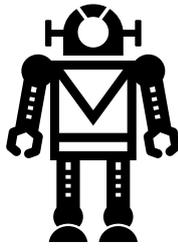
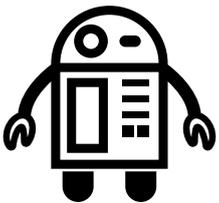
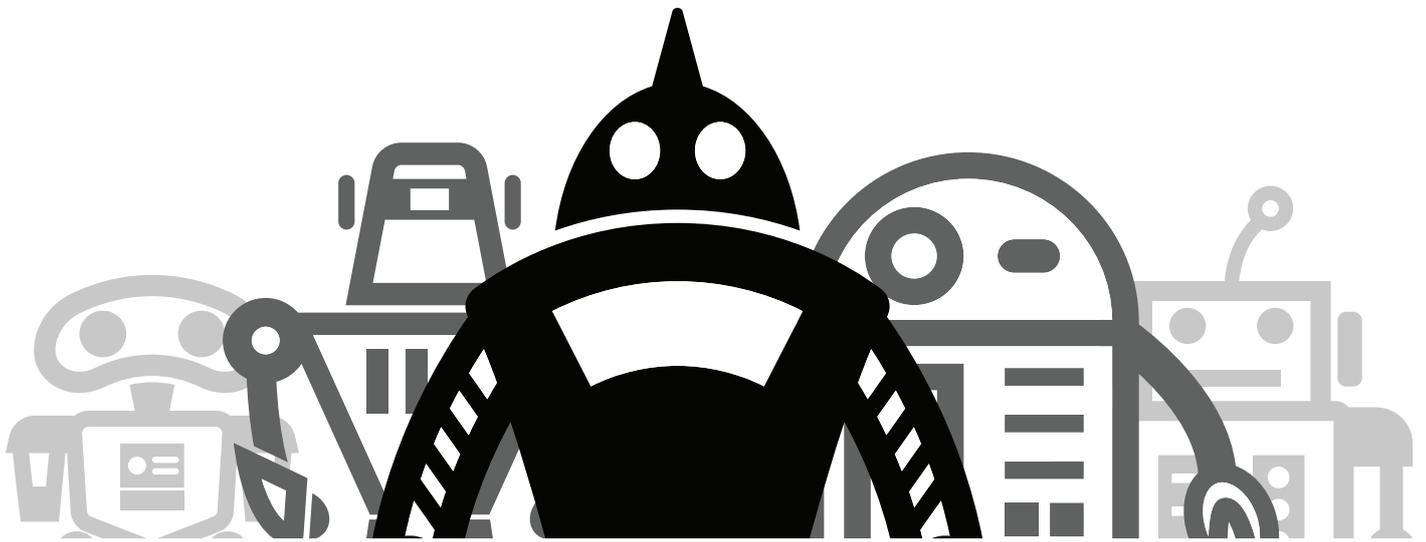


Lawyers and Robots?

Conversations around the future of the legal industry





Top of the Bots: the LexisNexis perspective

New technology is exciting, but we shouldn't let that cloud the fact that we work in an industry built on people. We took this simple position in deciding to produce this report, and it is one we believe underpins the successful deployment of any new technology.

Our aim is to shine some light on the narrative surrounding legal technology. What this report represents is our contribution to this debate; our attempt to refocus it on the relationships between the lawyer and their clients, a reflection on how technology has changed the way we work and a further discussion around how professionals at any stage of their careers can equip themselves for the future. Reading through the articles contained within this report, three key themes seem to keep appearing:

New technology presents exciting opportunities. Not only will we be able to collaborate to solve problems like never before, we will also be able to gain a deeper understanding of those problems through new forms of analysis.

It also presents a lot of uncertainty. The aim of this report is not to present answers, if anything it is to pose questions. We are on the cusp of huge changes to how we see work and employment and it is not hyperbole to suggest that the professional sector is on the verge of immense upheaval.

Those who are proactive stand to benefit the most from these changes. Whether this is small firms targeting the very specific problems they know how to solve, large law optimising their teams to make the most of investments in new tech, or trainees and newly qualified lawyers ensuring they gain exposure to the latest developments.

At the core of this is collaboration; understanding the problem you are trying to solve, collaborating with clever people and then deploying the appropriate tools. This is not a new way of doing things, but it is certainly the most effective. New technology will not change this; what it will do is present new ways of solving problems. This debate needs to be more nuanced than arguing about whose jobs will be replaced by robots.

I believe that we – technology providers, lawyers, law firms and trainees – need to come together as an ecosystem to participate in this debate. This report is our way of beginning to engage in that process; to be more open about our thoughts and to drive the process of change. I would like to extend my gratitude to those who have shared their views in this report. If you find the themes and insights in this report as exciting as we do please come and carry on the conversation on our

[Future of Law blog](#).

Nigel Rea

Director of Drafting, Forms and Precedents, LexisNexis

Share the report and join the discussion on Twitter by clicking here

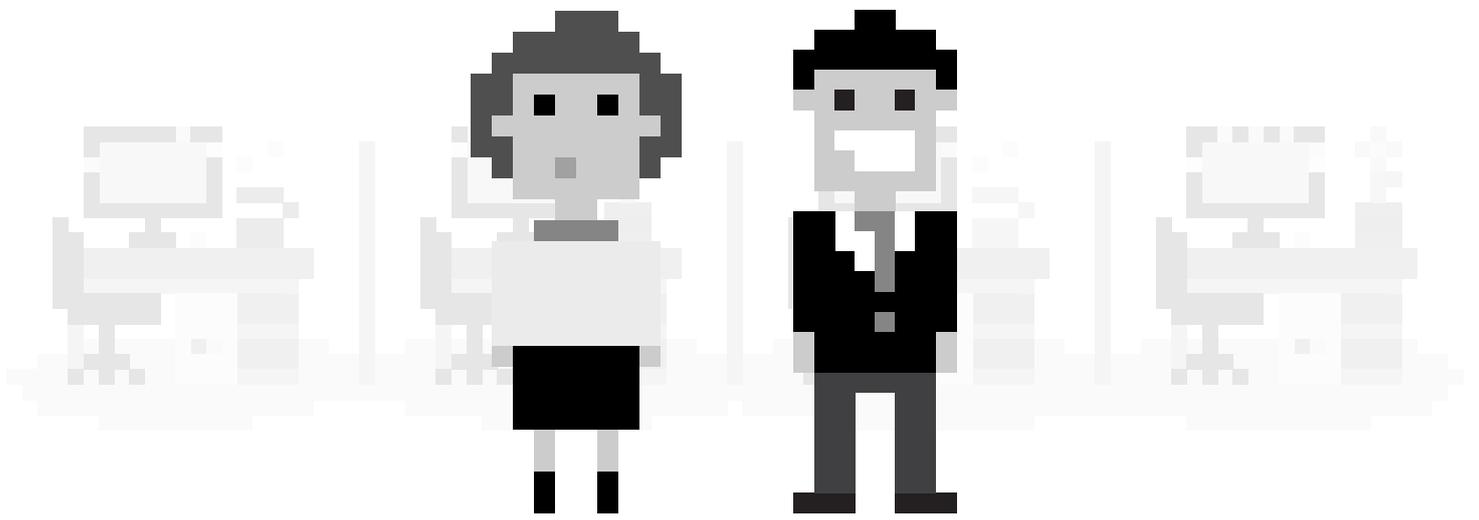


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All interviews in this report were compiled by our LexisNexis Current Awareness team. Journalists include; Nicola Laver, Jenny Rayner, Julian Sayarer and Duncan Wood.





Planning for the future—law firms and new technology

David Halliwell, Director of knowledge and innovation delivery at **Pinsent Masons** and **Dan Wright**, Service Innovation Partner at **Osborne Clarke** discuss the uptake of new technologies for law firms, the opportunities and challenges it presents and predict exciting times ahead.

Why is it important for lawyers to understand new technology?

DW: Clients. New technology simply enables us to adapt what we are delivering to clients to better suit their needs. Client demands are changing, and at an accelerating rate. The market is rightly moving away from what firms want to sell, to what clients want to buy. New technology is key to enabling firms to meet those changing demands, and to ensure they have a client-centric approach to the development of future products and services. This includes going beyond law and helping build common sense solutions that in-house legal can take to other parts of their businesses, to further increase the value delivered by their teams.

DH: It [technology] has the potential to transform the majority of the work they do, and unless they really embrace the opportunities it presents they are going to be left behind. Some of the most challenging positions these days are in-house, and the new breed of in-house counsel are being required to transform their businesses. They have high expectations as to what technology can do for them, and they need to be creative, innovative

and demanding to achieve that. Unless private practice lawyers start to engage with new technology, they are not going to be relevant even to their clients.

DH: The other challenge for law firms is that they run the risk of being cut out of the picture by technology providers who will be able to go directly to in-house legal teams and provide them with solutions that don't need to be underwritten by a law firm.

DW: If lawyers aren't willing and keen to engage with new tools, they risk missing these opportunities to deliver what clients want.

'Unless private practice lawyers start to engage with new technology, they are not going to be relevant even to their clients.'

What factors motivate the adoption of new technology in law firms?

DW: It depends on what the law firm is trying to achieve. There can be a focus on improving the internal performance of the firm. That's clearly no bad thing, but I think process and performance improvements



will also generally be available to firms if they look more outwardly for their core motivation. Our approach is to be motivated by building what clients (and their stakeholders) want, and what will hopefully create us longer-lasting, successful relationships. As part of those new solutions we can build the opportunity for better execution by us, as well as by the client and others using the systems we put in place.

DH: We see people getting excited about the tools which improve their ability to work in a flexible and agile manner—not necessarily client-facing tools, but ones that let our lawyers advise and find out what’s going on while they are on the go. For example, we have been working on an enterprise social networking platform within Pinsent Masons, and have had to accept that take-up has not been good so far because we have not had a mobile interface for it. We are building that interface now, and we think that it will be the next stage in getting people to use the product as a better means of communicating internally and on the go. Ease of use and fitting seamlessly with the way people work is a big factor in helping uptake.

DW: The motivation is to enable the client and others to use, and benefit directly from, our technologies. On premise solutions made this challenging, but cloud-based solutions are allowing this leverage of our technological infrastructure in completely new ways. If the solutions we create with in-house teams involve other parts of their business and third parties, everyone benefits from a single process management system, using common data, and we should be able to produce really valuable tools. That gives us the best chance of the long term relationships that we’re after, not least as we can then continue to invest our time and effort in improving the solutions so they better fit the broader operational needs of the client.

‘In order for us to be distinctive and relevant to our clients, technology is a massive enabler.’

DH: Technology that gives our lawyers an opportunity to have different conversations with our clients is also valuable. We are slightly unusual among law firms in that we are developing, building and deploying a lot of our own technologies rather than using third party applications. I have lost count of the number of times we have presented to clients and they have told us that no other law firms are having these kinds of conversations with them and showing them the capabilities of new technology. In order for us to be distinctive and relevant to our clients, technology is a massive enabler.

And it is helping in other ways too. Because of our reputation for developing our own products, processes and technologies, we tend to get more applications from graduates who have a mixed tech/law background, because they want to use those skills within the business. They don’t see themselves as pure ‘lawyers’, rather lawyers who are able to use technology to help deliver services and advice to clients. It’s a great attraction for our trainee intake.

We have focused on building tools that help us deliver our services, but which also provide broader operational advantages to clients, that are independent of our legal work. This approach is helping to differentiate our offering, and to provide something new and valuable to clients.

What are the impediments to law firms taking up new technology?

DW: As well as being a generally conservative profession, there’s also the fact that firm performances have been good, which makes it challenging to spot the right time at which to make some material changes to the products and services on offer, and to how they’re delivered. Law firms are now becoming open to the notion of using technology to do completely different things to sell different products and services and to go beyond law and be willing to have totally different economic models for the performance of the business.



DH: The challenge I face is not persuading people to change what they do, but communicating to them all that we're doing. The potential of technology and the opportunities it can bring, equips them with the skills and knowledge to let them have these kind of conversations with clients.

There are all sorts of barriers to change, of course—one of which is that lawyers are busy people and don't always have the time to stop to think about embracing a new way of working. Billable hours still present a challenge in parts of the business, too. Between 40–60% of our work is done on a fixed fee at the moment, and in that environment all the technological efficiencies we are talking about are absolutely writ large. But we still have thinking to do about embracing technology in this space.

'Law firms are now becoming open to the notion of using technology to do completely different things to sell different products and services and to go beyond law.'

How can lawyers and law firms position themselves to take advantage of the benefits of new technology?

DW: Have a common sense approach to the design of new products and services. Historically, as an industry we haven't necessarily delivered all of our services in the most common sense way—we have gone back to square one each time, rather than working out innate process efficiencies. The more common sense you can build into what you are doing and why, the better and stronger solutions you will create.

DH: You must think first about the impact on clients. Unless you can articulate what that is, you are always going to struggle to support your business case. There are some things which are essential to the core infrastructure of a law firm. For example, you wouldn't necessarily think an accounting system would have a direct impact on clients, but clients are now expecting live online financial information for individual matters, eg how close they are to a capped fee, spend and progress across a range of projects. So even purely internal systems will have a client-facing aspect.

DW: Firms need to have the imagination, willingness and determination to work with their clients to create solutions with them. There is only so much you can achieve in terms of new ideas if you are coming up with all of them yourself.

You need to have people on board who can see what is likely to be useful in terms of tools which are currently available, but also those that are in development and gradually coming to market. Historically that was often the role just of the IT department. However, having both a technology and a practical legal input on this is extremely useful, and can be a very helpful way of knowing that the IT portfolio is going to feed directly into the production of solutions that clients want.

There is a lot of talk about 'sparkly' new legal tools, but they've got to be sensible, helpful, easy to use and deliver client value. Just because something is sparkly doesn't mean it's any good. I had a bike when I was a kid which looked great, and was very innovative. However, it seemed to weigh the same as my Mum's Mini, and so wasn't great going uphill, or keeping up with my mates (nothing to do with my cycling obviously). That was an early insight for me into how the things that look and sound the best aren't necessarily the best—unless you make them the best, that is.

Understand that the technologies you are using now cannot be the pinnacle of your abilities. As firms develop their tech roadmap, they need to have something they know they can 'step to' from where they are now. Otherwise they run the risk of everyone racing to the same level and playing musical chairs. The client is already expecting more by the time firms have finished fighting for the last chair. You have to be looking forward to the things that aren't ready now, but will become ready over the near term.

DH: It's also important to adopt an agile mindset where you can try things and get on with them quickly. If they work, brilliant. If they don't, move on. Accept that not every piece of tech will be a raging success. Continue to iterate and improve.

'There is only so much you can achieve in terms of new ideas if you are coming up with all of them yourself.'



Do lawyers have a lack of understanding about what is going to happen once technological advances currently in development have been fully adopted by the legal sector?

DW: I think as an industry we've become a lot better at looking forward, nowhere more so than around technological change and innovation. There has been a lot more talk over the last year about artificial intelligence (AI), for example, and the potential challenges and opportunities it gives for law firms. It's good that firms and clients are engaging to try and work out the best routes forward for them. None of us know what the answers will be, and they'll change over time anyway, but a willingness to engage and explore is a great start.

DH: Communication will be transformed. If you look at what is already being done in the volume law space around conveyancing, for example, the major law firms need to start to understand and replicate that for more sophisticated work, but it's some way off yet. The days of communicating via email will be behind us in five years' time I expect, or at least will be very narrowly defined as to the particular circumstances in which we would use email. Instant communication will come much more to the fore. I wouldn't be surprised if Microsoft Word was virtually redundant in how we present advice to clients. We are only just scratching the surface in terms of what machine learning can do in law firms. In five years' time we will look back and be astonished how we hadn't even considered some of the new and obvious applications we'll be using. At the moment, the applications for machine learning for reviewing contracts and datasets are interesting, but I think it's just the beginning. In general I think the scope for automation in the law is massively untapped. Machine learning is an opportunity for law firms to redefine the way they operate and provide different types of services in new ways. This is something we should all be excited about, not scared of.

'I wouldn't be surprised if Microsoft Word was virtually redundant in how we present advice to clients.'

DW: Certainly, it would be a lot more challenging envisaging how my career could pan out if I started as a trainee today instead of 20 years ago—not least as there are already a greater number of potential roles and inputs in the industry. We're in exciting times.

Are there any downsides to the effect that technology has had on the practice of law?

DH: Clients and lawyers have very high and serious expectations of what technology can deliver, because the technology they see on their smartphones and in the world around them is based upon a number of large, heavily-invested tech companies liked Google, Twitter and Facebook. Their expectations of what law firms can provide is judged against those. The majority of law firms are some way off being able to meet those aspirations.

What do you think will be the key IT development of the next five years?

DH: We will see some of our clients engaging directly with third party tech companies without engaging with a law firm in a traditional sense.

DW: The key IT development of the next five years will be the ways in which AI/Machine Learning is leveraged in the delivery of legal services. This is a great opportunity for firms now and we're in the best position to make something of that opportunity. For any industry facing disruption, the incumbents now know they need to move to protect the excellent relationships they have with their clients. There will be continued disruption around those relationships, but we have some of the best people and most willing minds to help firms evolve and make the most of the possibilities that this technology presents.

DH: Somebody will crack contract lifecycle management, which is a big untapped space at the moment. The majority of our clients are very excited about potentially revolutionary change in the way they manage their contracts and how they can convert them from documents to data, and how they can manage the risks and maximise the margins inherent in their contracts. There isn't a piece of tech out there as far as we can see that really does this.

And somebody will implement a different application for machine learning other than document review—I'm looking forward to that.



AI in law firms—a game changer in legal practice?

While the most forward thinking law firms are ready to embrace artificial intelligence (AI), robots are not taking over the legal world any time soon. That said, its utilisation is undoubtedly proving valuable for law firms who are investing in it.

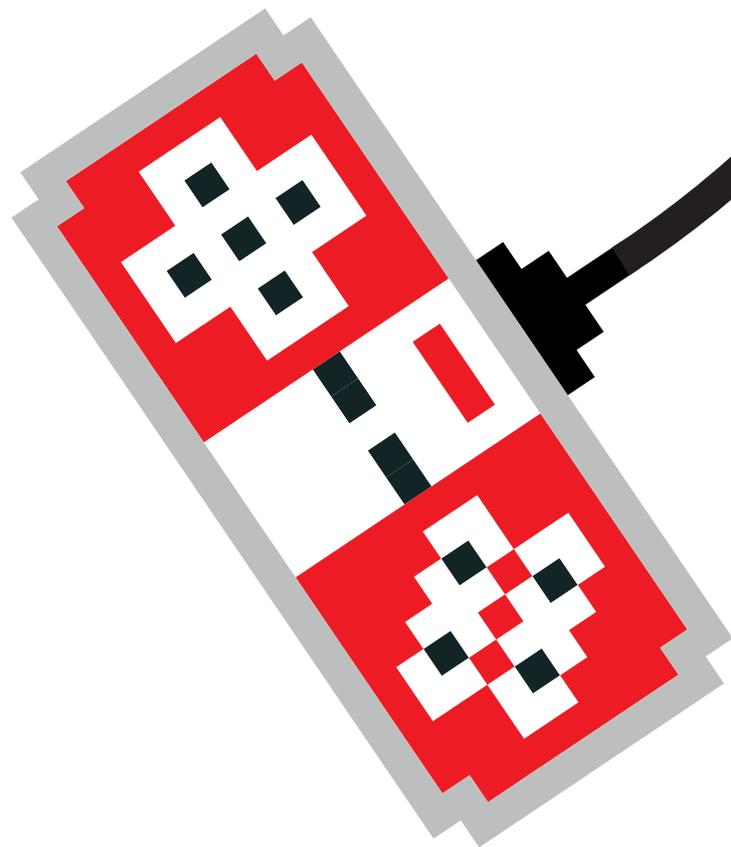
We talked to **Isabel Parker**, director of legal services innovation at **Freshfields Bruckhaus Deringer** and **Charles Kerrigan**, partner at **Olswang** (soon to be merging with CMS and Nabarro) and author of TMT Finance Law and Practice about the latest developments.

How have you seen technology change the way your law firm works?

Isabel Parker observes that the last 18 months to two years have seen ‘significant change within the sector in general and Freshfields in particular’. She explains, ‘Rapid changes to our clients’ businesses in every sector, many driven by technology, have compelled us to look at a number of different technologies and solutions, both to enable us to deliver greater efficiencies to our clients and to improve our internal organisation and access to know-how.’

AI can perform tasks which save the average associate solicitor hours in billable time—such as automating the drafting of lengthy commercial contracts, and undertaking due diligence and other time saving processes—allowing them to get on with the important legal work.

While such innovative breakthroughs in AI are groundbreaking in today’s legal context, new technologies quickly become the indispensable norm.



As Charles Kerrigan, says:

‘I’ve been working in law firms in London and New York for over 20 years now. Things have already changed very quickly. When you use it every day, new technology soon seems indispensable. Obvious examples are word processing and email—they have given us longer documents and more correspondence respectively. Of course, the disadvantages as well as the benefits are clear. Computerisation is topical now because the last five years have seen a greater focus on technology which assists and replaces lawyers. Technology has been in law firms for years, of course, but it has been more of a focus for managers and non-fee earners—until now. Lawyers invariably see the press stories about IBM’s Watson and driverless cars. The Oxford Martin Report on the future of employment has been in the mainstream and trade press so this question is now in front of mind for fee earners.’

So how has technology changed the way lawyers work—and how will it continue to change?

Kerrigan says while we have useful updates in technology from the last few years, ‘it isn’t yet game-changing stuff—but dashboards, process maps, analytic tools for transaction and bill management have all improved our processes’. He highlights electronic signatures and similar products that he believes have been a huge success, citing time and cost savings already experienced by clients of Olswang.

‘Adoption is increasing and the time and money saved in signing processes is huge. I’d expect electronic signing to be the usual way of signing large transactions within a few years. Issues relating to deeds, the Land Registry and other practicalities will be solved. This shows how well things can work if we identify the right tasks involving manipulating and transferring data. Smart contracts appear to be in a different bucket at the moment but we’ll see their adoption in simple trades, and then in ISDA-type contracts where master agreements provide optionality with fewer variables than other types of contract. From there comes blockchain technology. We should be looking at who will produce these contracts. If it isn’t law firms it will be someone else.’

Freshfields exemplifies how the legal sector can embrace AI to its full advantage. Parker explains: ‘we have a new function dedicated to legal services innovation, comprising lawyers, legal technologists,

continuous improvement professionals and project management capability’.

‘Smart document generation will enable the production of a high quality tailored first draft much more quickly and accurately—meaning lawyers can concentrate on more nuanced drafting and negotiation.’

The firm is currently focusing on five main areas:

- The use of AI for contract analysis
- The use of technology assisted review (TAR) to conduct document review in a litigation or global investigations context
- Creation of ‘smart apps’—using expert logic either to create internal efficiencies or to deliver advice to clients in digital format
- Smart document generation, and
- Smart knowledge management

Parker says:

‘Using AI for contract analysis is a new way of working and has required a lot of thought. TAR is an umbrella term for a number of technology solutions for organising and analysing very large unstructured data sets in a litigation/investigations context. The data sets can run to many millions of documents. TAR is changing the way we approach litigation or investigations for a client—in all but the most sensitive cases, ‘eyes on’ review is not the default approach for document review. Clients expect us to leverage technology to deliver in the most cost effective way, which will always involve some level of TAR. Freshfields uses TAR, in one form or another, as standard to reduce costs and reduce risk.’

The firm is also looking at using expert systems to create more agile databases and potentially to develop new client facing product lines. Expert systems,



explains Parker, are a type of AI which use software to emulate the decision-making ability of a human expert using simple logical rules which are then applied to a knowledge base to deduce new facts. Expert logic is the technology that underpins many ‘information as a legal service’ offerings. She adds:

‘We are currently using expert logic software to automate a very manual and labour-intensive part of the multi-jurisdictional filing process for ACT. We are building an app to perform multi-jurisdictional filing analyses by checking thresholds across 230 jurisdictions globally, streamlining a process that is currently performed manually by a junior associate.’

Freshfields is also looking to use smart document generation to drive efficiency and de-risk document drafting. She explains that smart document generation will enable the production of a high quality tailored first draft much more quickly and accurately—meaning lawyers can concentrate on more nuanced drafting and negotiation.

How can AI assist the integration of a firm’s knowledge?

As Parker points out, a firm’s most valuable asset is their internal knowledge. So ‘as with many other law firms,’ she explains: ‘knowledge within Freshfields currently resides in different databases and systems across the firm, most of which are not integrated. Our knowledge can be difficult to access and, because of the necessary limitations imposed by client confidentiality obligations, effective global search is a challenge.’

The firm is therefore working with the computer science school at the University of Manchester on a knowledge transfer partnership that aims to use semantic web technology to enable effective universal search. Parker explains: ‘The aim of the semantic web is to extend the principles of the internet to data—creating a common framework that allows data to be defined in a common way and shared across the firm, even where systems do not talk to each other.’

This will facilitate better knowledge access and sharing across the firm, and enable it to derive deeper client and market insight for the benefit of clients.

‘There won’t be robots sitting at banks of desks where the human lawyers are now. Specific AI is intelligence to perform particular tasks.’

What are the costs implications of AI for law firms?

Kerrigan says that while there is a view that technology is expensive, ‘law firms still spend around five percent of their budgets on IT, and that hasn’t changed in some time’. He questions whether this means more than this is actually being spent on all the new opportunities, or there is less to invest in than we think, or that there is scope for more investment. He suggests that if it’s possible for all of these things to be true at the same time—then that is the conclusion we should reach.

Budgetary constraints are not the only challenges. While the likes of Freshfields are not limited financially to the extent smaller law firms may be, Parker highlights other challenges Freshfields are facing:

‘Freshfields’ information security regulations are among the most stringent of all law firms. Consequently, use of cloud software as a service has been a challenge for us. We have had to work hard with our Information Security team and with third party providers to achieve the right balance that allows us to be agile while respecting at all times the confidentiality and security of our clients’ data.’

This challenge will continue, says Parker, with the introduction of the General Data Protection Regulation in May 2018. She says the firm has therefore had to establish ‘very close relationships with the vendors we select’—many of which have changed their data policies to make them more robust as a result of the firm’s feedback.

So is AI the way to go for law firms?

Kerrigan, a big believer in AI, says, ‘the really good technology which is imminent is artificial intelligence. In AI, there’s a distinction between general and specific AI. Artificial general intelligence involves robots thinking, feeling and joining in like people. No one thinks we’re near there yet, so there won’t be robots sitting at banks of desks where the human lawyers are now. Specific AI is intelligence to perform particular tasks and this



is a reality in many industries. The advance here is a result of developments in natural language processing and machine learning. This gets us closer to robots performing or assisting on some lawyers' tasks.'

In Olswang's case, because the firm is a technology platform we have clients who are technology firms and lawyers who understand tech deeply. The firms start-up practice also acts for legal and tech firms who gravitate towards a law firm that is known in their sectors. You have to have lawyers who understand the products to use them in development and to advise on them.

The question for lawyers, he says, is how can we understand AI well enough to know how it will best be applied? As AI relies on knowing what you want to measure, and having data to be able to do so, he is unconvinced that practicing lawyers can answer these points yet. Though data analytics is 'the most promising offshoot of this for lawyers', he says:

'Part of a lawyer's role is now to be a communicator—clients want to be given clear information.'

'I'm interested in data visualisation as an aid to clients understanding transaction structures, documents and parties' responsibilities. Part of a lawyer's role is now to be a communicator—clients want to be given clear information. Many of them like graphics when these are well presented and fairly show the right information—AI is certainly good at these type of tasks.'

Kerrigan cites one of the benefits of the attention lawyers are now paying to AI is the fact that it opens up interest in ways of working more generally, and while 'we'll go down some blind alleys, overall, I expect we'll see improvements'.

Parker says it is unquestionable that these tech advances have been beneficial. She says, 'we are seeing high levels of efficiency gains through the use of the firm's provider for general corporate M&A due diligence and other contract analysis. We are confident that smart document generation will substantially de-risk the drafting process. Smart search technology is revolutionising the way we access our know-how and will allow us to derive greater market and sector insights for our clients.'

She adds:

'Our clients always come first, and the rise in digital technology is having a profound effect on clients in each of our sectors. Technology is transforming the way customers consume services and allowing new entrants into the market, forcing clients to rethink their operating models.'

The shift towards utilising technology to drive innovation is undoubtedly going to continue, and Parker highlights the forces driving the exponential growth in new technology:

'The rise of cloud software as a service (making new technology much more affordable and accessible), big data (which can be 'mined' to improve client service and performance through, for instance, AI) and opensourcing.'

Parker believes that as these forces continue to democratise access to new technologies and facilitate the production of new service lines and products, clients in all sectors will be compelled to change the way they operate—and the legal services sector is no exception.

What does the future hold?

Parker believes that the successful law firms of the future will be those embracing technology and over the next five–ten years, we can expect to see an increasing amount of 'traditional' legal work being automated. She says:

'Clients (and recruits) of the future will expect a top tier legal firm to be technology enabled and its lawyers to be confident in working with legal technology. Clients will expect closer collaboration, aided by technology and will be unwilling to pay hourly rates for any legal process that could be automated.'

While the use of AI is proving a slow but certain game-changer in legal practice, what's clear is that legal practice—and clients—will always need the human touch.

'Clients will expect closer collaboration, aided by technology and will be unwilling to pay hourly rates for any legal process that could be automated.'



The mindset of the legal profession

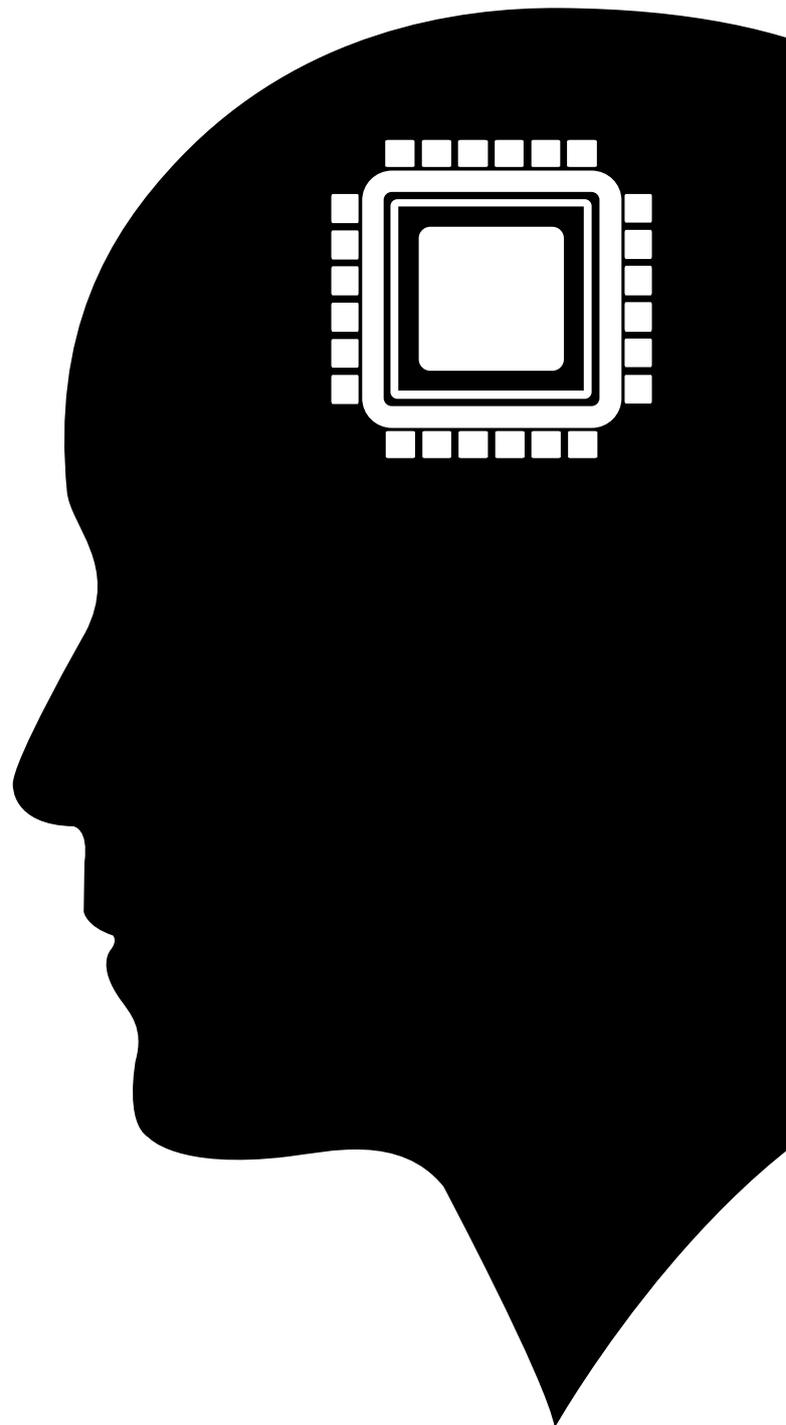
How is the legal profession embracing modern technology and the automation of services? We speak to early adopters and pioneers of new technologies in the legal world.

Steeped in procedure and synonymous with a high degree of human expertise, the legal profession is not an industry that would seem naturally sympathetic to the adoption of modern technology. Accordingly, and given the differences that exist between firms of very different sizes and specialisations, perhaps also unsurprisingly, the profession is far from uniform in its embrace of the future.

The largely tech-free venue of the courtroom is perhaps also emblematic of the broader profession. While stereotypes of sceptres, wigs and robes are not representative of the majority of what takes place inside a modern court, when the culture in which a discipline is practiced remains so imbued with tradition, it perhaps stands to reason that there will be some inertia that stymies change.

Simon Harper, Co-Founder of **Lawyers On Demand**, reasons that creating a tech-based project within a law firm relied on ideas that often in fact had very little to do with technology itself.

'The most important element when originally starting LOD was a philosophy rather than any one particular process. We set about trying to establish an openness to new ways of working; a focus on the personal needs and motivations of individuals, and a willingness to experiment and iterate in an agile way.'



Choosing change

As the pace of change in the world outside law accelerates, will there always be the luxury of a choice between traditional or modern? For now the more pertinent question, however, is arguably whether the two are so mutually exclusive to begin with. Much discussion of technology—from the ‘gig’ economy outwards—presumes that society is undergoing a seismic change, when often the change is only in the platform or the tools being used, and from which the same institutions, often very traditional, emerge undisrupted or even strengthened.

One person well-placed to comment on how mindset can further technological adoption is **Mary Bonsor**. A former property litigator, Bonsor went on to found the legal start-up **F-LEX**, which provides on-demand paralegal services—thus easing the complexities associated with thousands of fixed contracts across the industry. Bonsor still practices part time and says that continuing to do so has only assisted her understanding of the needs F-LEX must respond to. Moreover, like many, she does not see the arrival of technology as a zero-sum development in law.

‘Tech will be very helpful in creating opportunities for lawyers to focus on interpreting law, doing their legal role rather than an administrative side of things that currently occupies a lot of time,’ says Bonsor. ‘Client relationships and interpretation of law will be hard for machines to master, even if they can help humans in doing so. The arrival of tech will certainly promote legal analysis, but it will not replace much of law as we know it.’

Big and small

The version of technological adoption most commonly reported is perhaps partly responsible for shaping the gloomy outlook some have on the arrival of technology in law. Eye-catching, multimillion pound arrangements have seen Norton Rose Fulbright take up an automated management system, or Slaughter & May working with an automated due diligence process that will save vast numbers of hours on, for instance, complex mergers

and acquisitions. While some of the large sums being spent give an impression of a recent wholesale shift in the industry, an openness towards technological change has, for some time, been used by smaller organisations driven by the necessity of making limited means go a long way. The circumstances might be different, but the hurdles and benefits can have a lot in common.

On the south coast of the UK, **Advice Brighton & Hove** uses an online platform to offer a range of legal advice in the city. A network of community groups have collaborated in creating an online resource where residents of the city can receive legal advice through a webcam conversation, select whether they prefer to communicate via email, phone, or in-person, and refine their legal needs—before appointments—through an online check.

Simon Whitwell is one of the key people behind the Advice programme. His experience of developing the service offers a valuable breakdown of the core quandaries law firms will need to address in the integration of technology. ‘Perhaps the biggest obstacle to providing legal advice via digital means is the level of trust both clients and partner organisations place in technology.’

Many people are fearful of technology and the potential data risks that accompany using technology. As well as this, some workers, especially within my sector, are uncomfortable with accepting new practices simply because they are so used to the old, traditional methods of working.’

‘Perhaps the biggest obstacle to providing legal advice via digital means is the level of trust both clients and partner organisations place in technology.’

As well as technophobia, Whitwell addresses problems arising from missed appointments, where the ease of online booking—with barriers to access set purposefully low—can by the same token lead to appointments



being missed or forgotten. While website filtering endeavours to identify the specific circumstances of a case—steering and refining individual needs so as to make most use of human time—there can be cases of misdirection whereby people contact Advice despite being ineligible for their locality-constrained service, or not having accurately identified their legal needs.

The second big issue for Whitwell, again drawing on the uncertainty technology can inspire in people, is that of data security. 'Most advice cases involve clients divulging a large amount of sensitive personal data,' says Whitwell. 'This is received via (1) the website booking form and (2) the Skype appointment. Both can pose a significant data breach risk. Ensuring that systems are safe requires constant review and vigilance to a level that probably exceeds that of conventional face-to-face advice.'

Whatever substantial deals are being signed to order and organise the systems of large firms, the experiences of Advice are likely to be much closer to that of most law firms. Lawyers on high streets up and down the country will be utilising technology not in managing sprawling M&A due diligence, but in maintaining effective and human client relationships.

At what cost?

As technology comes to define more and more of our life, the expectation that it should also revolutionise the legal industry grows harder to ignore. Legal institutions and practices—whether the entity of a firm or the concept of billable hours—which have been honed across great periods of time, are set to be tested by an industry that has a penchant for disruption and a creative view of failure stuck hard to its core. Technology

will inevitably save costs where it works, and add to them where it flounders. Its mere presence—and an assumption that it is synonymous with efficiency savings—will from the client side likely see an expectation of legal work being subject to pricing that is reduced, but perhaps also more transparent. One thing, often forgotten, but of which we can be no less sure—technology's effects will not be homogenous.

On the question of whether or not the much-sought change in mindset from the legal profession will spell the end of law as it is known, Mary Bonsor is upbeat:

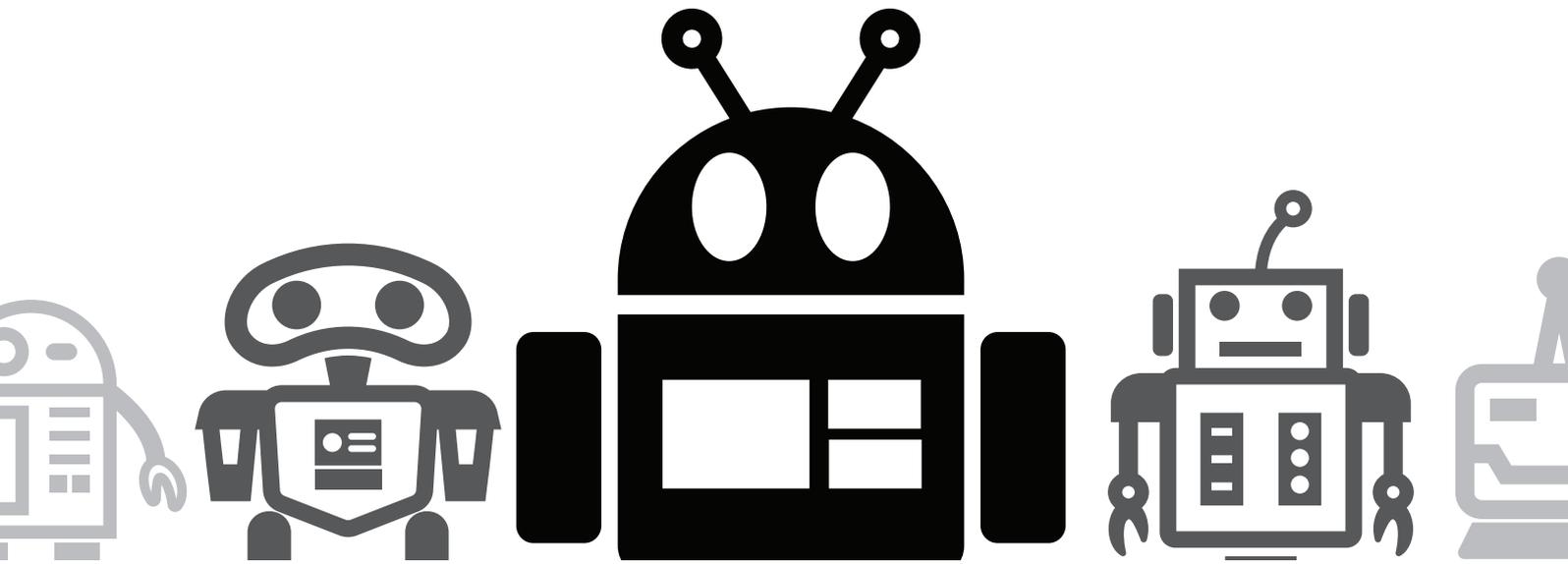
'The legal industry looks likely to change in ways that are similar to medicine—with an emphasis on learning through work experience. Machines will help with standard documents like leases, and firms are beginning to realise that things are coming.'

'The Solicitors Regulation Authority have had a big consultation on the importance of work experience and whether it is admin or paralegal work, just the idea of being in an office and part of a team is very important to becoming a qualified lawyer.'

Given its ability to handle chores so that human talents can gravitate towards affairs of more importance, with an open mind and managed well, technology could indeed have an effect of making law, ironically, more human.

'Lawyers on high streets up and down the country will be utilising technology not in managing sprawling M&A due diligence, but in maintaining effective and human client relationships.'





The legal profession for millennials

Technology is changing the legal profession, and the next generation of lawyers will practise law in very different ways. We talked to a range of experts to find out how young lawyers can best position themselves.

Emerging lawyers, emerging technology

Developments in technology are shaping every aspect of modern life and the legal profession is by no means immune from this. In all likelihood, 'law' as we know it will be significantly changed for the next generation of lawyers. There are already reports that the increased use of tools such as artificial intelligence (AI), predictive coding and automated contractual drafting to carry out routine legal services will result in fewer junior lawyers being needed for this work in future. While this may bring increased opportunities for related roles such as legal technology professionals, lawyers themselves will need to be doing a very different job from their predecessors.

'Millennials may be good at consuming single-purpose applications, such as social media, but no one gets a free pass when it comes to complex, multi-purpose commercial software...'

There is a tendency to assume that the intellectual make-up of lawyers will evolve naturally as technology moves on, but this is not necessarily the case, as **Matt Ballantine**, consultant at **Stamp London**, explains

'there's a cheap analysis today that millennials 'get' tech in a way that earlier generations don't. This is nonsense—it's like saying I should 'get' (and now drive) cars in better ways than my parents.' **Stephen Turner**, founder of **Lawyers of Tomorrow**, agrees, 'millennials may be good at consuming single-purpose applications, such as social media, but no one gets a free pass when it comes to complex, multi-purpose commercial software where the user has to do something productive, or progress through various stages.'

The changing face of law

Some might argue that advances in technology are only relevant to practitioners in certain areas of law, but it is only a matter of time before developments mean that all lawyers will need to get to grips with what technology can do. **Andrew Moir** is head of the global cyber security practice at **Herbert Smith Freehills** and believes that lawyers, whatever their practice area, have an obligation to keep up with technology, 'there have always been areas where an understanding of both the law and technology is helpful, such as patents, IT contractual disputes or cyber security. But now we're increasingly being instructed on the legal aspects of cutting edge technology, such as blockchain, electronic signatures, artificial intelligence and data analytics to name a few. Before we can advise on these sorts of developments,



we really need as lawyers to understand the technology behind them.'

Technology is already changing the way that legal services are being delivered, streamlining processes and bringing greater efficiencies. By passing these savings onto clients, firms can gain a competitive advantage in the market place. But could this technology also reduce the need for legal services altogether? Matt Ballantine explains, 'If I buy commodity software services with a credit card from Salesforce or Google, there's no contractual work to do. If I license content with Creative Commons I've negated the need for an IP lawyer. If I'm sealing my deals with blockchain then, well, who knows what a lawyer will still need to do?'

'And then there are swathes of emerging technologies, from the Internet of Things to autonomous vehicles, to augmented reality and no one quite knows the impact they'll have on general business. Lawyers need to understand these things to help spot opportunities, not just waiting for what happens to happen.'

A new skill set

Some have suggested that lawyers will require a new skill set. Intellectual rigour, attention to detail, and tenacity, alongside analytical, communication and people skills—traditionally seen as the bench-mark of aspiring young lawyers—while still vital, are beginning to look insufficient, and will need to be accompanied by a range of new skills, not least a working knowledge of technology. Stephen Turner identifies five core aptitudes that the next generation of lawyers will need in order to be successful:

- Think like a business person
- Acquire soft skills, emotional intelligence and technology skills
- Communicate your knowledge, ideas and value
- Develop a personal brand and profile
- Form strong relationships with clients and employers

And not only is it a skill set that is needed to change. Matt Ballantine argues that there is a mental shift that also needs to take place:

'A recent report claimed that lawyers as a group have a lesser ability to deal with uncertainty than other professions. That's the thing that needs to change more than anything else. The future is uncertain and in many ways unpredictable. Coming to terms with that, and developing strategies to take advantage, is key to success.'

All on board

For junior lawyers it may not always be that easy to find a culture of adaptability in the workplace from which to learn. There can be huge scepticism that the benefits a new technology will bring will outweigh the effort required to learn how to use it. Many UK law firms, particularly when compared with the US, have a tendency to be slow off the mark in the area of technological change, often playing catch up rather than forging the way. Stephen Turner recalls his early days as a lawyer, 'I can remember going to an interview in 1994 at a firm that did not have a fax machine—as a matter of policy. The partner interviewing me said that if the firm had a fax it would allow clients to contact them any time of the day and this was something to be firmly resisted.'

Not all law firms are in the technology-resistant camp, with some actively seeking to increase their technical expertise, such as Herbert Smith Freehills which runs a recruitment programme specifically aimed at scientists. Andrew Moir explains:

'We've long been recruiting lawyers from a range of backgrounds. Some will have technical backgrounds (mine's in physics and software engineering, for example). All bring different skills to the profession and we pride ourselves on our diversity.'



'I can remember going to an interview in 1994 at a firm that did not have a fax machine—as a matter of policy. The partner interviewing me said that if the firm had a fax it would allow clients to contact them any time of the day and this was something to be firmly resisted.'

The change in the way the profession works is making law an increasingly attractive option for those seeking a career with technology, and the more tech-savvy lawyers there are, the more the culture of an entire firm will change.

Room for improvement

But what about those who enter the profession through the 'traditional' route? **Paul Maharg**, Professor of Law at the **Australian National University College of Law**, believes that law schools must embrace technology in both course content and methods of teaching. However, this is rarely seen, as Paul explains:

'for their part, most law schools continue with the structure and content of mid-twentieth century educational programmes...caught between print-bound cultures that depend on large lecture theatres, 50 minute lectures, unwieldy lecture and tutorial models, cumbersome forms of written exams and elderly admin systems.'

He believes that far from training young lawyers to be successful in the twenty-first century, law schools as they stand are in fact doing their students a disservice and placing them at a disadvantage, both when seeking employment and throughout their professional lives. 'We do so little in our law programmes to enable students to understand and shape digital technologies, for their own education and that of others. Nor do

we help them understand the profound effects that digital is having on society in general, and not just on the economy but on how it is redefining qualities such as professionalism, and the effects it is having on our personal and emotional lives.'

Stephen Turner agrees, 'there is a real danger that the next generation of lawyers could have a tech skills deficit, so my suggestion is that we act now to help the next generation achieve their full potential by offering them training in the new technologies.'

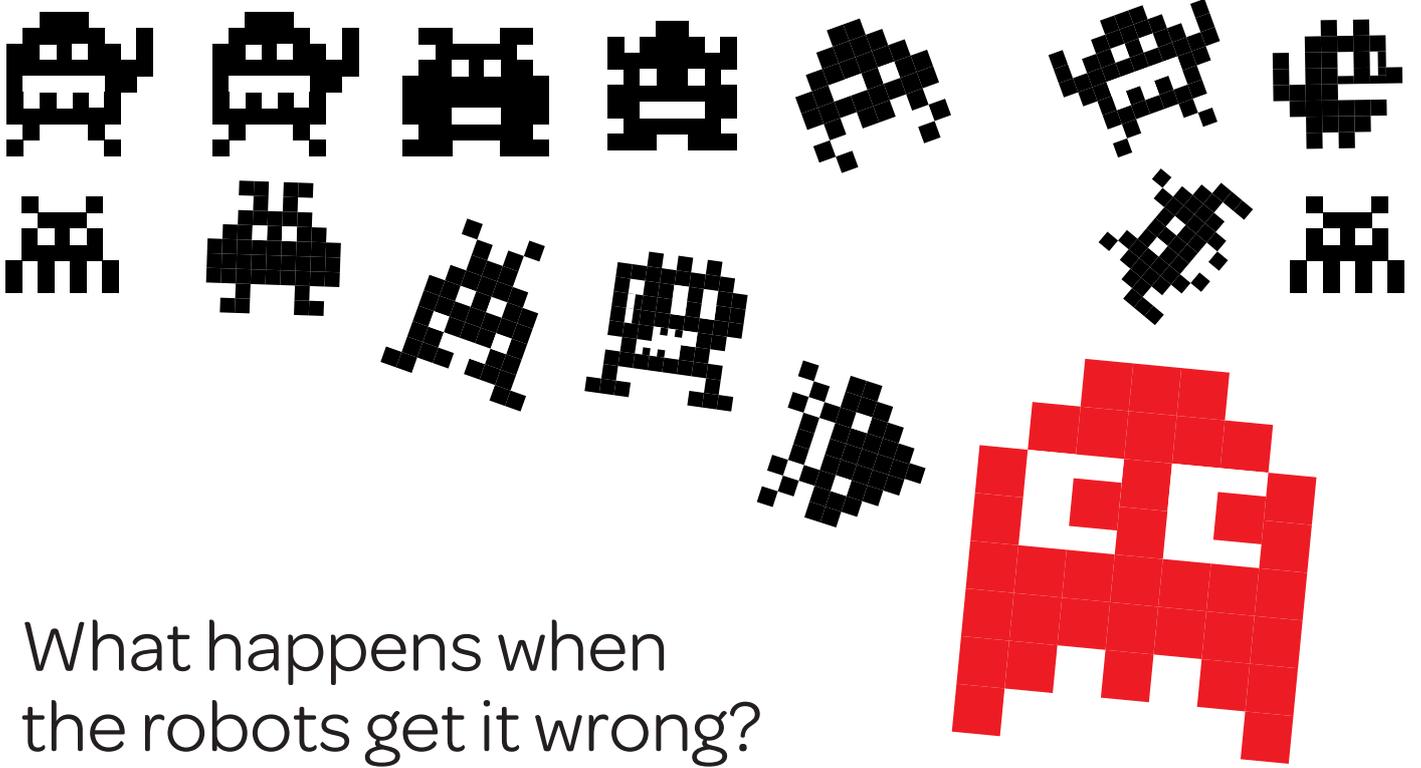
A legal playground?

All this points towards the fact that, unless things change, the lawyers of the future, as with the lawyers of today, will have to be proactive in keeping up with the latest trends and technological advances, making the most of every opportunity for training. Ultimately, it is likely to be those who not only understand technology but—more importantly—have a grasp of its possibilities and how it can be used to shape the legal profession that will ultimately be successful. Matt Ballantine explains what this might look like:

'I don't think it necessarily means everyone needs to code (although that might be useful). But understanding the art of the possible with emerging technologies is vital. The established professions are being reshaped by technology, and those that can help shape the future direction will be those who can forge a successful future.'

'Having a strong network, and a network that is diverse in skills and industries is a good start. As is nurturing a curiosity in the new, which is something I haven't seen in great spades in the profession. Finally, developing a willingness to experiment and explore new technologies, starting with an attitude of 'what could I make this do?', rather than just 'what does this do?'. I talk about this as fostering a spirit of play, although I'm not sure many law firms would regard themselves as playgrounds!'





What happens when the robots get it wrong?

As new technologies and automation start playing an ever more important role in the legal world, what are the risks in relation to negligence?

Technological progress always has about it a sense that change is happening at an unprecedented rate. In the case of automation, that notion seems to have about it an unusual sense of accuracy. As robots and algorithms take over responsibility for more and more daily tasks our lawyers, policymakers and software engineers are having to give increasing attention to the implications of these developments.

A significant reason for the scrutiny, and ever a key question in law, is what happens when things go wrong? Automation and technology brings with it uncharted understandings of human agency, and with these new understandings of agency we are beginning to see the potential for new kinds of negligence.

Unlimited liability

A central concern in understanding negligence is where ultimate fault might be said to reside. Much thought is already being given to the idea that the buck could stop with the developer of the programme. While it might seem abstract to consider that a programmer could be held liable for unintended consequences within a

‘So could developers be held responsible for damage suffered by a law firm using their technology?’

line of code, the thinking perhaps rests only on the intangible nature of code and software. We readily expect tangible goods and systems, such as cars or electronics, to be serviced and in full working order, without our understanding the intricacies of the software personally. So could developers be held responsible for damage suffered by a law firm using their technology?

Karen Yeung, of **King’s College London**, is sceptical. ‘This is a question about proximity, and causation,’ she says. ‘My gut feeling at this stage is that it is unlikely, but that depends upon whether the damage meets the test of reasonable “foreseeability” in negligence—as with a firm being accused of overreliance on automation, it would depend very much on the facts.’

Artificial intelligence (AI), however, is renowned for putting the subject of foreseeability onto very shaky ground indeed. The power of machine learning, and specifically its potential to work through near-infinite scenarios and points of removal, creates problems in defining what precisely constitutes ‘foreseeable’. A robot



that trawls through data is equipped to discern patterns, connections—and thus foreseeability—that stretch human-scale understandings of negligence.

Gary Lea, an academic working on the regulatory impacts of AI, is pragmatic in his assessment of developer liability.

‘This will depend very much on the nature of the technology supplied and the circumstances of that supply—if, for example, the technology is encapsulated in software which is custom written for a law firm and supplied under agreement, it might be treated as supply of a service under the Supply of Goods and Services Act 1982 (SGSA 1982). If that were the case, reasonable care and skill in supply would naturally be required per SGSA 1982, s 13.’

The awareness of the risk of negligence, and its quite stark realities, is certainly affecting the way programmers do business. One programmer, who didn’t want to be named, suggested that he and others in the industry—who often work alone, in pairs, or as small groups—are increasingly registered as limited companies, and paying themselves by use of dividends, rather than setting up under self-employed status. The latter is often seen as preferential for its flexibility, but remains open to the risks of unlimited liability should there be mishaps that affect the large and valuable businesses they routinely undertake work for.

Casting her eye forward, **Kristjana Çaka**, a colleague of Yeung’s at **King’s College London**, assesses the difficulties at hand.

‘There are lots of conversations taking place, but identifying liability is always a sticky issue. Perhaps another path that might be explored is the idea of associating AI systems with a particular set of responsibilities.’

‘Following this, it could well mean we can identify who is to be held responsible when a particular issue does arise. This line of thought allows you to come across various issues such as the difference between a system and a

product and whether, from a legal perspective, there should be a difference between the two and whether we should, in some sense, personify such systems with responsibilities accordingly.’

Robot-watching

If developers are concerned at the consequences they face in the event of being found negligent—should legal professionals be similarly conscious of the ramification if their oversight of AI is found wanting?

Gary Lea furthers the notion that standards we already have should, if applied correctly, also remain of use in the future. He highlights that the Solicitors Regulation Authority, in its existing Code of Conduct (2011) outcomes, urges at O7.2:

‘you have effective systems and controls in place to achieve and comply with all the principles, rules and outcomes and other requirements of the handbook, where applicable;’

‘It is conceivable that relying too heavily on AI could open a solicitor to a charge of negligence,’ says Lea. ‘Solicitors are expected to exercise their own independent skill and judgment in giving legal advice to clients. The expectation is seldom departed from.’

However unsettling the notion of negligence by AI, as with much technology, it becomes less so when reconsidered not as the dawn of a new, robotic era, but in human terms.

‘Concerns about negligence will apply when relying on advice given by counsel, except where counsel has specialist legal knowledge that the relevant solicitor does not. The 2009 *Fraser v Bolt Burdon* case is a good example of as much, and how by parity of reasoning, reliance and overreliance on automated systems could be treated as failure to exercise independent skill and judgment.’ If the notion of how to provide oversight to an automated system seems troubling, perhaps the answer lies in reapplying that which we already have’.



‘Solicitors are expected to exercise their own independent skill and judgment in giving legal advice to clients. The expectation is seldom departed from.’

Double standards

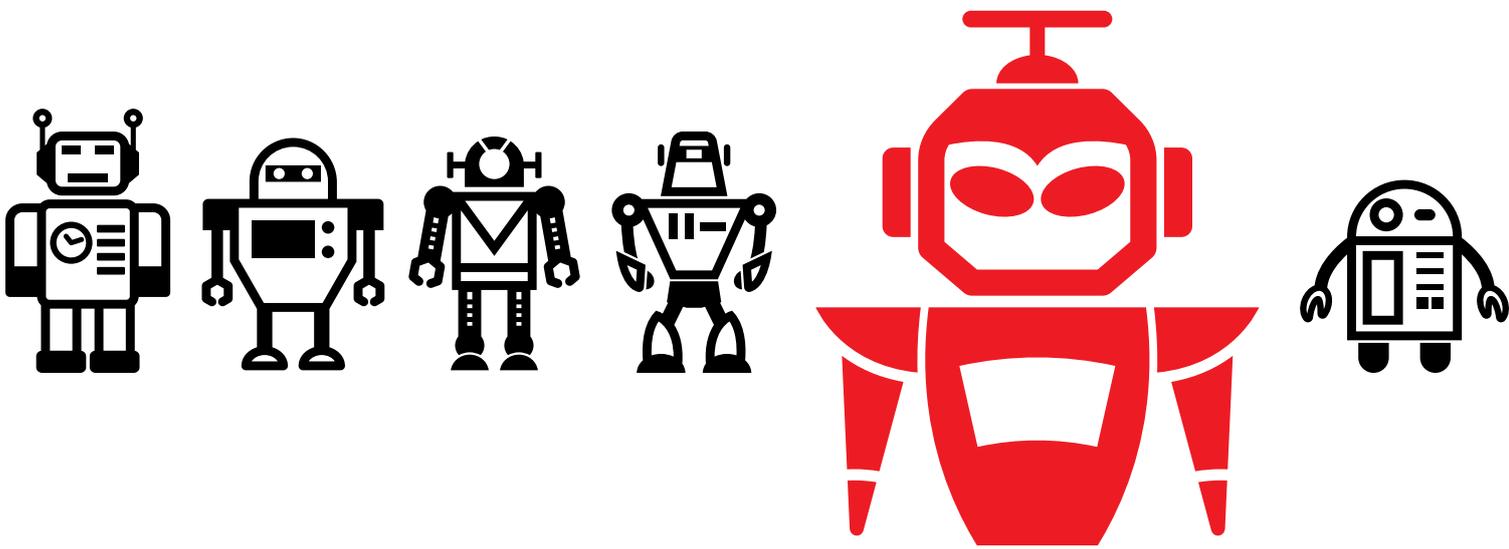
It is beyond doubt that automation and machine learning will affect standards in legal proficiency. Most obviously, this will be because of a need to ensure that automation can meet existing human standards, but its impact will also be felt in the opposite direction, based on a premise that automation can be used not to replace but to enhance the competency of human lawyers.

Roger Brownsword, who sits on the Royal Society’s working party on machine learning, makes the point clearly:

‘There will be a need to figure out a workable legal approach if lawyers find themselves sued for professional negligence where—in the first instance—they are claimed to have over-relied on machine learning but also—in a second plausible scenario—where they are claimed to have under-relied on the AI that is available.’

As outlined in Richard and Daniel Susskind’s book, *The Future of the Professions*, we are set to see white collar work redefined in ways that have already taken place among the blue collar of the western world. If software does to law what mechanical automation has already done in factories, we are entering a phase in the history of employment in which even lawyers—no matter their skill, training and traditional social status—will face new pressures.





Regulating the new world

Regulation of new technology is always a question of chickens and of eggs and the legal profession is no exception to the rule. Regulatory bodies are adapted to the particularities of the world as we know it, but technology creates shifts that in turn create the need for new regulation.

How and where to strike balance in managing these shifts is the complex part of the question. Regulations are put in place in response to a need for protection of practitioners and their clients; while technological innovation might undo those safeguards, it might equally alleviate workloads and create efficiencies to the good of all.

Clear thought on the matter first of all requires an understanding of what is meant by 'technology'; the word could equally apply to data storage—and other forms of technology that now seem comparatively traditional and familiar—as to automating time-intensive processes such as due-diligence. This latter application of technology, which takes us into areas of artificial intelligence (AI), is consistently accompanied by concern that we could soon enter a world of unknowns, where deskilled humans and emboldened robotics create new problems that we are no longer able to manage or to control.

It is understood across business that too much regulation can be as problematic as too little, but what if that regulation is key to controlling a sea-change that could wipe away a profession as it has been known?

The obsolete lawyer

However futuristic artificial intelligence and automation by technology can seem, these issues have not sprung from nowhere. Since the turn of the millennium, **Chris Reed** from the School of Law at London's **Queen Mary University** has been writing about the impact of the internet on authentication processes and information ownership. His starting appraisal is that current regulatory and legal standards originate from a level of competence that is expected of humans. Technology raises two challenges: the first is that if human judgment and decision-making is replaced by technology decisions, is that adequate to meet regulatory and legal obligations about competence, care and skill? Perhaps of more serious implication for human lawyers, however, is Reed's second question of how the profession might expect regulation to respond to new forms of artificial intelligence.

'If technology is expected to perform better than humans—for example in due diligence or discovery searches—does this raise the required professional standard above that of a reasonably competent lawyer?'



Changing with the times

Law does not always adopt new technology enthusiastically though, nor necessarily should it seek to. Use of video evidence in criminal court, where it would often seem to simplify legal proceedings, is nonetheless subject to strict controls and is often inadmissible due to concerns of authenticity, origin or indeed where the data has been stored pre-trial. If we assume that cloud-based evidential data should be treated no differently to video data of unknown provenance, perhaps the proposition seems less alien.

Just as video footage might seem to offer incontrovertible evidence only to be judged below the evidentiary value required of a trial, so too is the technology used to store and sift data open to scrutiny. Where data is kept in cloud-based services, the decision of where and how it is stored might be driven by factors as varied as a country's online privacy laws, or even the positive environmental impact of storage in a cold climate where servers benefit from natural cooling.

'The major problem with using data as evidence is in producing an audit trail which demonstrates its integrity from the moment it was collected until the moment it is produced to the court,' explains Reed. 'This is particularly problematic with distributed processing storage, such as use of the cloud'.

'Data changes storage location regularly, under the control of various sub-processors, and none of these systems were designed with a view to producing reliable evidence. Failure to produce an audit trail does not render data inadmissible, but it does open its integrity up to challenge.'

Early arrivals

According to **Kristjana Çaka** of **King's College London**, it may not be long before we start to see how technology is already playing a more direct role in the delivery of law to society.

'There is evidence of courts around the world allowing an increasing reliance on technology,' says Çaka, 'Perhaps the best example is Canada where the Ministry of Justice developed the Civil Resolution Tribunal, which is the first online small claims court to be operational in the world. The Ministry of Justice in England & Wales is said to be doing the same and there are certainly lawyers and advocates, and judges, who are encouraging the use of technology and AI in the legal world.'

If the standard experience of technological adaptation is anything to go by, we can expect transitional periods in which technology presents efficiency savings but imperfect services. The problem, however, is that those imperfect services often externalise their costs onto humans, much as an overseas call centre with few telephone operators loads irritable but sustainable frustrations onto customers. The high stakes at play in law make it a dangerous testing ground—algorithmic sentencing in the US has already been found to compound racial biases when software is used to predict future criminality.

Human oversight

Given the borderless movement of data, it is unsurprising that supranational bodies such as the European Union will be the early candidates for oversight of technology in the legal industry, just as the EU has been ahead of national governments in responding to the dominance amassed by technology corporations like Google and Facebook. The General Data Protection Regulation, due to come into force in 2018, will certainly have ramifications for the handling of all data, for all purposes, across Europe.



While policy on the subject is far from advanced, there is talk that EU lawmakers will come to demand a standard of ‘explainability’ from AI platforms, so that decisions and methodology can be properly scrutinised, and so that technological errors—where they occur—can still be unpicked by human heads. This is in-keeping with existing software development theory, where programmers often define their work as a task of presenting both problems and proofs. It is often easier to address the problem, and even its solution, than the proof by which that solution was reached—correct outcomes can be found by fluke and even in error. AI and machine-learning, and the ‘convolutional neural networks’ from which they have built a field of so-called ‘deep learning’, will need to remain readable in human terms.

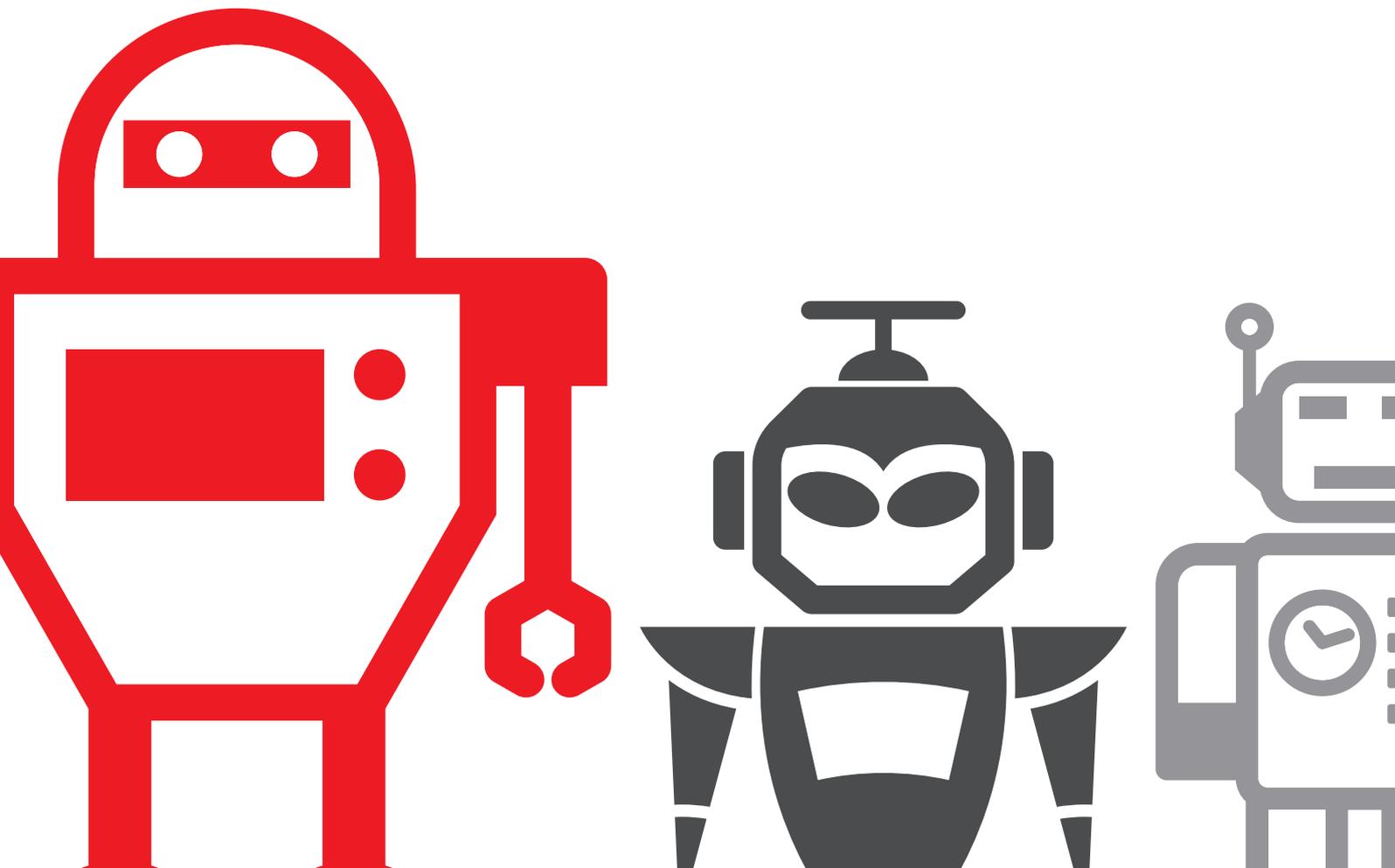
The concepts may seem daunting, but the principle for regulation is no more revelatory than the idea that a bookkeeper will show their workings out, not only the answers. Çaka notes that precedents are already being

set in other fields dealing with automation:

‘The notion of “explainability” is not surprising when you consider the existing use of AI in medicine. AI systems are already giving treatment suggestions and it seems obviously critical that they must provide evidence for the treatment.’

While it is important that these matters are considered, as with so many facets of AI and automation, the scope for questions is at present vastly greater than answers currently available. It is probably too early to make any definitive proclamations.

‘There has yet to be any major movement in government or amongst other bodies towards more regulation of AI,’ Çaka concludes. ‘The main reason for this is probably because we are yet to understand the real force and impact of AI nor the possibilities that might come with it.’





Developing technology In-house

The spread of technology into modern life and business has brought with it a vocabulary that can seem like it is used more frequently than it is understood. Each equipped with their own lustre, ideas such as 'disrupt' and 'innovate', or methods such as 'fail-fast', have become commonplace, now dropped with an eager noise for technological readiness that can easily outstrip the actual commitment.

In-house technology is just one concept that seems to hold such sway, and the notion of bespoke technology design, developed at close proximity to those who need it, has an obvious appeal. There are a range of logical answers for why technology development is brought in-house; solutions tailored to specific needs, hidden from the eyes of potential competitors, suited to the fine-tuning of a firm's systems so that it operates with utmost efficiency. There was something very complete-sounding about the statement from artificial intelligence due-diligence company, Luminance, when announcing that their software 'has been trained to think like a lawyer'.

With firms likely to remain guarded on the minutiae of their in-house development, there will be some guesswork in establishing the real ramifications of what that sort of 'training' actually consists of. From a purely technological perspective there's a surprisingly strong argument against in-house development altogether, and certainly against the idea of it as a panacea for the sometimes slow pace of development in LawTech.



Substance above style

Challenging this received wisdom of in-house as an unalloyed good, it is not hard to find a range of voices from the Tech world. **Jimmy Vestbirk** is the founder of LawTech community, **Legal Geek**, which has convened hackathons of coders and conferences of experts, brought together to shed light on how law and technology can best meld.

‘It is interesting to see law firms reacting to change by developing their own software,’ says Vestbirk. ‘From our perspective, it often seems like they might be better-placed to allow technologists to develop software rather than attempting to go it alone. If you look at large institutions, in-house efforts can often run over budget and be slow in delivery.’

None of this is to suggest that big organisations are incompatible with targeted, responsive interventions by the Tech community. Vestbirk points out Ernst and Young and PricewaterhouseCoopers are being perceived to offer better starting points on partnership, often working from a ‘blank sheet of paper’ with regard to developers. Big law firms, meanwhile, can come with a reputation for creating innovation boards consisting of senior partners who may not themselves be the right people to drive innovation.

‘A philosophical outlook on failure is a key ingredient in the process of innovation.’

‘The people who are best placed in innovation are often those able to work autonomous of the board,’ says Vestbirk of the organisational culture in law. ‘Firms are starting to get it right, with non-legal people on their boards and making decisions, but we still see few firms with—for example—teams of coders working within them.’

‘The financial sector, and FinTech, offers an example of an industry that has provided a safe environment for innovation and is now benefiting from that relationship. It is hard to attract good quality developers, and—relative to LawTech—FinTech is still seen as the newer and sexier destination for developers to choose to work in.’

However plain spoken the advice, the prognosis is obviously rooted in a concern for the legal industry and its ability to make good use of the technology now becoming available.

‘Lawyers have an affection for rank and status,’ adds Vestbirk. ‘This is sometimes helpful, but what it can leave the industry ill-suited to dealing with is a degree of failure. A philosophical outlook on failure is a key ingredient in the process of innovation.’

‘Tech often begins with a start-up lens, and where law firms are too heavily invested in the process they can restrict it in ways that are stifling. The biggest innovation required in LawTech is cultural, not technological, with a recognition that technology is to improve the lives of lawyers, not replace them.’

Opportunity aplenty

On the subject of how in-house relationships can be closely matched to a company’s specific needs, as is often the case in technology the weak links in the relationship are nothing to do with lines of code, but a product of human and business relations, and the design of the working process.

‘The greatest challenge we see in this area for law firms is not developing the technology but getting all the other “Product Management” aspects in place,’ suggests **Richard Seabrook**, European managing director of **Neota Logic**. ‘This includes tasks such as identifying the right use case and target user group, pricing, user experience design, marketing, customer support and so on. Getting the technology to do its part is relatively easy—there are enough organisations and tools available on the market to do that aspect.’

‘The biggest innovation required in LawTech is cultural, not technological, with a recognition that technology is to improve the lives of lawyers, not replace them.’

What is clearly important is law firms themselves being invested—as organisations—in developing technology.



'The biggest challenge law firms still have is in prioritising lawyers' time towards internal systems/programs. This issue has to be addressed head-on for the project to be successful. We have found the most effective partnering arrangements are where both parties have some significant "skin in the game". This incentivises the organisations to prioritise their time towards the partnership yet at the same time partly or fully reimburses the professionals (technologists and lawyers) for their time spent on the project.'

The assessment mirrors that of Vestbirk's, when asked what the ideal conditions for the meeting of technology and law might look like.

'I would like to see more firms engaging with the legal Tech community. It is currently very hard to sell-in to firms and this in turn prolongs the sale cycle, thus inflating costs unnecessarily. If we had access to siloed databases, to play with and test technology offline... ideas like this would be a very interesting prospect.'

'What we currently see are situations where an agency might prototype software and law firms don't know how to react. There are certainly big difficulties, especially when engaging large firms with legacy systems and complex M&A to deal with, but you have to start somewhere, and you have to start with an open mind.'

Mind over matter

If designing systems to the specific requirements of each firm is crucial, then what effect does that have on the ensuing creation of intellectual property—do the ideas behind unique solutions become more or less

valuable as a result of their very specificity?

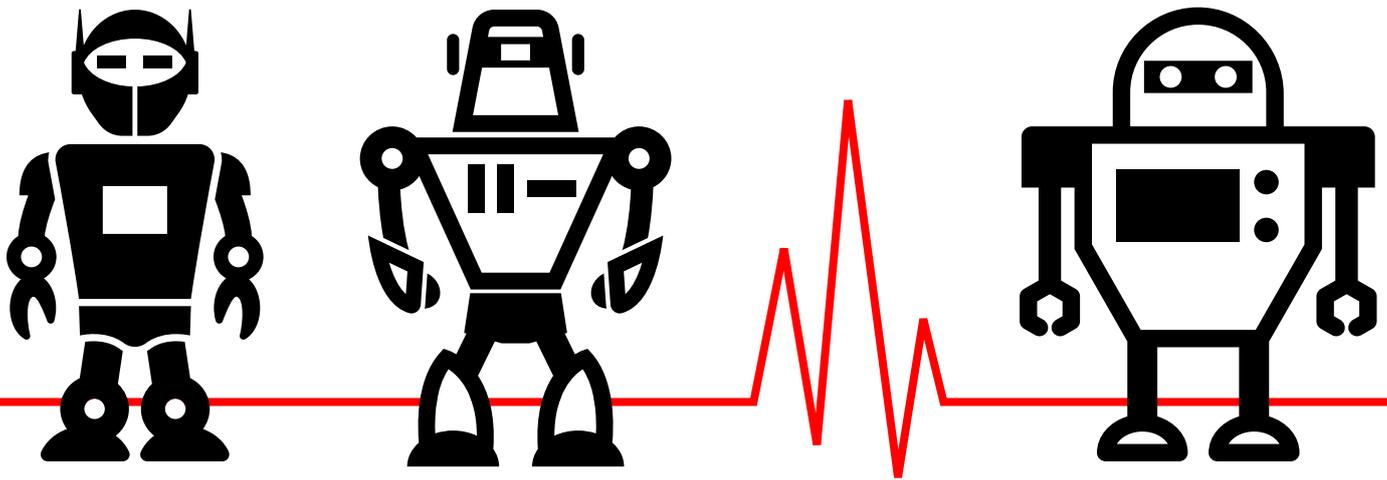
Vestbirk offers an important external perspective on the prominent role that, as a default, lawyers often afford to Intellectual Property.

'Lawyers will naturally have the IP implications of a deal well sewn-up in advance,' says Vestbirk. 'From the technologists point of view, however, when the development of tech is focused towards IP from the get-go it can strangle progress. The principle of open-source software, which is very mainstream in tech, is something that many lawyers don't yet fully grasp.'

'The drawback is that this reticence about working in an open way, with a focus on IP, can restrict development and also the speed of development. Agile developments and iterative work processes necessitate an open approach or they can find themselves stuttering and going over-budget.'

Whether collaborations take place in-house or on a more traditional customer basis, law firms seeking to realise gains through technology are now looking to a LawTech market that offers far more than it did even a year ago. As with any successful partnership, to make the most of the technological opportunities that developers can offer, firms will need to be honest in their appraisal of what they want from a relationship, as well as being self-reflective and open to compromise in how they work towards those goals.





What impact could technology have on the law firm-client relationship?

Andy Morris, global head of IT solutions, **Stephen Allen**, head of legal service delivery, and **Clare Dundon**, innovation and new ventures manager at **Hogan Lovells** share their thoughts on how technology impacts the relationship between lawyers and clients.

Is technology important in your law firm?

Stephen Allen is of the opinion that technology is not just important but vital. He says:

‘Our clients’ world is changing. Car companies are now building “connected devices”, banks are creating technology applications and so on. At the same time there is an ever burgeoning level of regulatory burden and operating costs under continued scrutiny. To be able to help our clients meet all these challenges, we need to embrace technology—as a core tenet of a rethought people, process and technology solution.’

Andy Morris agrees with Stephen and says:

‘In order to continue to grow as a business, a firm must offer a clearly differentiated value proposition. Technology is fundamental to that—it’s often an enabler to increased effectiveness and efficiency—a core component of most value propositions clients are interested in today.’

Clare Dundon added:

‘I’m with Andy and Stephen on this one. Technology is a great enabler—especially when it comes to

collaboration. We have over 6,000 people in our firm across more than 45 offices globally. We use technology in multiple ways to help us work and deliver as a team. Bringing the best team together for our clients is of the utmost importance.’

How does the use of technology in your law firm affect your relationships with your clients?

Dundon claims that for junior lawyers, technology has unlocked the door to more client interaction and says:

‘The horror stories of being left alone in dark and dusty disclosure rooms are becoming a thing of the past. Sophisticated document databases and collaborative platforms have allowed junior team members to reinvent their role—they now have the tools to manage the review process remotely and spread the tasks across a wider team. Managing the platform and the review process means much more regular and valuable contact with our clients. Not only that but technology is helping them find the needle in the haystack quicker, freeing up more time to engage in other areas of the matter.’



Allen believes clients need law firms to be efficient, available, connected and transparent:

‘As Clare says, relationships will become more collaborative and imbedded. It will be impossible to achieve this without technology.’

Morris went on to add that:

‘It also changes expectations and the sense of urgency clients have for access to people and the information needed to make decisions and get the job done. Just as it has been said how did we do business before the fax machine followed by how did we do business before email—down the road the ‘nostalgia’ will be around doing business before algorithms and “smart assistants”.’

Technology will not replace the human, says Morris, but instead add to their ability to apply judgment and make sound decisions on a scale and at a pace that is difficult today.

How do clients want to see you using technology?

For Dundon, the sheer ubiquity of technology in our lives is staggering. She says:

‘The flow of real-time data we digest from social media, wearable tech and other devices informs the decisions we make daily. That appetite naturally flows into our expectations of the working world. Our clients are no different. Technology can create a level of transparency over pricing and matter management which was previously not possible.’

Allen says:

‘Some really want to understand what technology can deliver and we have relationships with particular clients comparing notes on the 1,600 legal tech companies currently in the market and what benefits they may hold

for the future. Many clients, however, are still in the “here and now”. As Clare highlights, technology that simply enables us to be more transparent around pricing and matter management ticks many boxes.’

In concert with this Morris believes clients really want lawyers to be pragmatic visionaries. He says:

‘They want to know that we are considering advancements, not standing still, while at the same time delivering tangible results that benefit them and their business. In the end, it is about business after all and what they ultimately want to see are outcomes that positively impact their bottom line and position in their markets.’

Is it important to your clients to see that you’re up-to-date with technology?

‘This is a tough one. In some respect, I don’t think it is, says Morris. He posits that:

‘What clients are most interested in are the outcomes of the legal advice and services the firm provides, and how it impacts their business. If a firm is not delivering success at a price that seems fair, then perhaps they may want to ‘see’ what technology is involved. As a means of differentiating us from other firms, then demonstrating we are up-to-date can be a factor. I don’t believe any client is going to select a firm (or change firms) solely on how up-to-date the technology is—they are choosing the best lawyer. In those cases where they believe the lawyers are “equal”, then perhaps technology can be one of the tie breakers. In the hyper-competitive market today, this should not be taken for granted.’

‘Technology will not replace the human, says Morris, but instead add to their ability to apply judgment and make sound decisions on a scale and at a pace that is difficult today.’



Allen observes that:

‘Traditionally, the legal services market has been good at following leaders in innovation rather than leading it. However, today just being great lawyers is not enough. Clients want to partner with “trusted advisors” who see the bigger picture, are able to draw inferences from vast amounts of data or look at challenges in a new way. It is just expected that we understand what technology is doing to our clients businesses and what technology can do to help them succeed. This isn’t just about legal technology, it’s about keeping abreast of all advancements relevant to them and their businesses.’

Dundon adds:

‘As Stephen says, clients want “trusted advisors”—fulfilling that role means being out there exploring and understanding the impact technology is having on their market, their business and their future.’

How do you see the development of technology in the future affecting your work and your client relationships?

Tomorrow, Allen says, he will be doing things with people that we can’t even comprehend today. He says:

‘The world is becoming more complex at an ever increasing pace. I will need to work with people that are

neither clients or colleagues, as I know them today, in ways that are not even possible to deliver outcomes that are beyond our imagination. To do this, I need a better tool box.’

As technology continues to facilitate new ways of working, the importance of building relationships in person will continue, says Dundon, who believes:

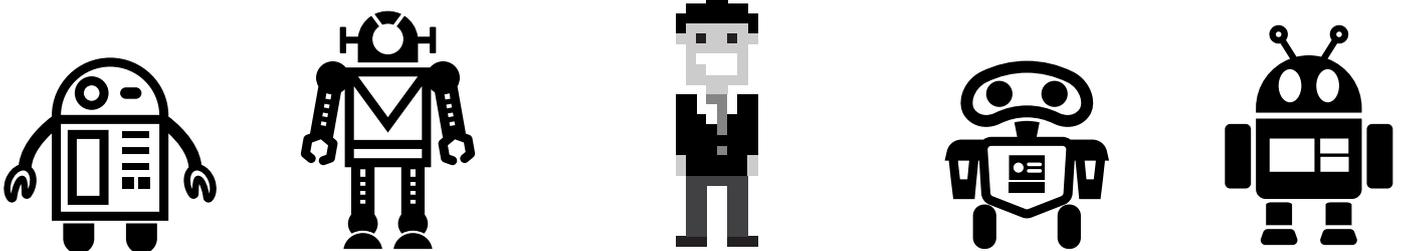
‘Something special happens when you bring a team of people around one table to really bottom out an issue. That is true for both clients and colleagues. Desktop video conferencing has helped to bridge the gap—or the Atlantic when I think about how Andy, Stephen and I work together—but for truly strategic discussions, the time we have spent in person gives us a better understanding of each other’s fields and a stronger base to collaborate.’

Morris adds:

‘Ditto on what Clare and Stephen have to say on this and a revisit to the point made earlier—the pace of business will never slow down—it will just continue to increase.

Technology in the future is both a driver of this as well as the only hope to stay on top of it.’

‘Today just being great lawyers is not enough. Clients want to partner with “trusted advisors” who see the bigger picture.’





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