

THE LEGAL TECHNOLOGIST

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FEATURES

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Ready for Launch

Richard Mabey, CEO of Juro, discusses his journey from lawyer to launching his own legal tech startup.

ARTICLE

Justice for All

Laura Aade discusses how chat bots and virtual legal research assistants can be used to improve access to justice.



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The Legal Technologist

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A note from the editor

Our seventh issue is out.

The magazine has certainly come a long way since the first issue (when nearly all the articles were written by me!). Nowadays, the content is so good I probably wouldn't be able to add my own articles to it!

We look to continue to provide good quality content, and over the coming months we look to partner with organisations to make sure that we are able to continue doing that. If this is of interest to you please do get in touch with me.

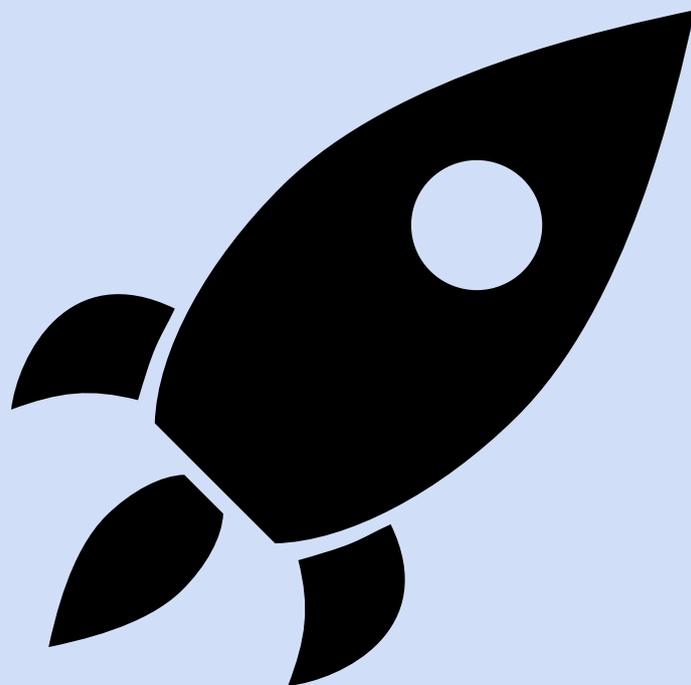
I just want to say a big thanks to all those that contributed to this issue and helped put it together.

Please do let us know what you think of the issue.

I hope you enjoy the read!

Marc May

Ready for Launch



Juro's Startup Story



Juro is an exciting LegalTech startup with an ambitious goal: to 'make legal more human'. This rapidly growing, innovative enterprise is transforming the way lawyers work and reaping the rewards of its impressive values and integrity. **Richard Mabey**, co-founder and CEO, discusses the secrets of Juro's success in a three-part series.

In Part 1, Richard offers some valuable advice about how to navigate a successful career. Careers can feel more like spaghetti junction than a fast-flowing motorway towards our goals. Richard explains how he sorted through the spaghetti, and the values that guided him in the process of launching Juro.

In Part 2, Richard will describe the challenges of scaling-up a business and the framework he uses to tackle them.

Finally, Part 3 will explore the culture of Juro and the values they live as a company.



If you read my LinkedIn it would seem there was a perfectly planned journey from being born to co-founding Juro. But when I graduated with my philosophy and languages degree, one thing I hadn't learned was what I wanted to do with my life. I was at square one and I needed to get a job. I'd done some work experience with criminal barristers and found it interesting, so I thought I'd pursue that path further.

My mini-pupillage that summer was actually in the building where Juro is now located, though at that time it was still Took's Chambers. I remember seeing some of the great advocates of the day – Helena Kennedy and Michael Mansfield, to name two – and I think I was excited by advocacy because it was basically arguing at people. Trials related to the 7/7 terror attack were going through the Old Bailey

at the time. It was my first real flavour of law.

I found myself applying for City training contracts, and I missed all the deadlines apart from Freshfields and somehow got a training contract with them. It was slightly accidental how it all came about, but it was at least decisive.

Freshfields offered me the option of six months off before my training contract, so I spent three months teaching the equivalent of the LPC for judges at the Institute of Legal Practice and Development in Rwanda. I was also interested in public policy and wrote a published paper on the Alternative Vote for the Bow Group.

When I got to Freshfields in August 2010 I was ready to get on and have a job. Freshfields gave me fantastic training. My supervisors had a big role to play in that. There was a period when there was a lot of heavy lifting on the transaction I was working on – a lot of proofreading in the middle of the night – and I didn't feel I was learning enough. My supervisor suggested that I come in at eight on a Wednesday morning and he'd spend an hour with me going through a legal topic. Even though he was already working eighty to ninety hours a week, he still took the time to train me one-on-one.

By the time I qualified I had quite a bit of corporate grounding. As a NQ I mostly worked on M&A and private equity deals. They were fast-paced, aggressive transactions. The deadlines were always impossible, and I spent a couple of nights sleeping under my desk on a stack of FT newspapers. It was quite fun at the time, in my early twenties. I think now it would be a bit more grating.

Taking ownership

The turning point came when I was seconded in-house. I was getting frustrated as a private practice lawyer. Although the work was challenging and interesting, I was never seeing the results of our labour; we were always moving on to the next thing. I felt a slight lack of ownership.

I worked on an IPO for the in-house client, where everything you did had a significant impact on people. I could get fully involved in the project and see its results. I realised I was getting jealous of the client's work, and I toyed with the idea of moving in-house. But I didn't make that particular move, and instead the idea for Juro was born.

I was increasingly frustrated with the tech stack we were using at the time: Microsoft Word, email and PDFs. I realised that most of the work we were doing was just process, not legal advice. I decided I wanted to solve that problem. I needed to know something about business, so I started an MBA at INSEAD in 2014. It was extraordinarily high-pressure, but it meant I could learn what I needed quickly and move on.

I worked on the concept for Juro in my classes at INSEAD, but the more I experimented, the more I found out I didn't know. I realised how blunt the concept was, how refined it needed to be, and how much more I needed to understand, like distribution and strategy.

Then the Juro concept won the INSEAD venture competition. My winnings were enough to build a minimum viable product, but I wasn't ready to launch Juro. I wanted to get some real-world experience first. I'd connected with the UK CEO

of LegalZoom, who invited me to join the team. I spent nine months away from my concept, learning the craft of how to build a product.

I needed to understand how to go from an idea to a finished product; how could I transform a concept into millions of lines of code that actually do something, that solve the problem? There were so many technical elements I had to learn: how to code, how to build a product, how to design a product that people actually want to use.

Solving the problem

I'd met my co-founder, Pavel Kovalevich, at INSEAD, and we started working together after my time at LegalZoom to see if we could launch the Juro idea. We started doing some customer interviews, which helped us identify the exact problem we were solving with our product.

I think you can learn more from ten interviews with potential customers than you can from ten years of further education.



The interviews made us question whether Microsoft Word was the correct tool through which to agree legal contracts; did it make contracts easy to work with? The answer to the question was a resounding no.

We started by building a contract editor. It was important to us that it was machine-readable – with this whole world that’s now come into fruition around machine learning and data, it was important that the editor was able to facilitate that – and was integrated into the systems people use every day. Achieving both of those features required an awful lot of research, iteration and trial and error to get to the point where are today.

We got customers fairly early. In 2017 we started working with Deliveroo, starting with a pilot product and iterating regularly. It’s certainly a good sign that they’re still a customer nearly three years later.

Getting feedback early really helped us. All our assumptions about what was a good idea turned out not to be a good idea when the product actually got into the hands of users. It was essential in helping us realise our mission of making legal more human. It’s an unusual mission in the context of the unsexy world of LegalTech and contract management, but it’s actually pretty simple: either people use your product and go, ‘wow’, or they don’t.

Most of the time, when customers try new LegalTech products, they don’t go ‘wow’. Some products can feel clunky and hard to use. I think our obsession with user experience and design enabled us to differentiate ourselves in the market.



Trying to create the ‘Apple’ of contract management requires two things: it requires that you talk to customers – and you’d be surprised how many startups do not talk to their customers – and it requires a cross-functional team. We’re not a bunch of ex-lawyers – in fact, there’s only two lawyers in our team of twenty.

We’re also data scientists, developers, and designers who bring the best of their fields to bear on this legal problem.

Becky Baker was talking to Richard Mabey, CEO and co-founder of Juro. For more information or comments please tweet @LTechnologist, @GetJuro and @rebeccaJKBaker. Look out for Part 2 of our Juro series in December, where Richard will explain how he deals with the challenges of scaling-up a business.

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A different way to think about Legal Tech for Enterprises

By Stuart Loh



The Aerofiler team attended the annual CLOC conference in Sydney this year, along with more than 200 others. Interestingly, the majority of attendees came from larger Australian multinational enterprises (including at least half of the largest 10 companies listed on the ASX).

When you think about enterprises and enterprise software, the mind often turns to large budgets, complicated systems, lengthy implementation projects, project management teams, and hours of user training. This is true for legal technology as well, where systems that enterprises tend to use weigh in at six or seven figures and take many months to implement. But that doesn't always need to be the case, and looking for traditional enterprise software can sometimes be the sub-optimal solution - even for the largest of enterprises.

One well-received session at CLOC showed that sometimes there is a better, simpler tool for the job that doesn't require a lot of extra money, time, or effort.

Telstra is Australia's largest telecommunications company and has a legal team of over 100 lawyers. In 2018, the organisation underwent a large restructuring that saw a 25% reduction in the size of its legal team. As part of the restructuring, the legal team was asked to rethink its operating model, with the opportunity to rebuild certain processes from the ground up. Additionally, the legal team was asked to "do more with less" and explore "no cost solutions".

Legal process automation is a common initiative for improving operational efficiency and enabling teams to do more with less. How, then, did Telstra implement processes for automating matter management, contract generation, lawyer capacity tracking, and legal capabilities reporting with projects that took weeks rather than months and with minimal spend? You'd typically expect each of these process automations to be a large project in and of itself, using specialised software for each process.

Their answer was Office 365. Yes, Office 365. Every legal team uses software from the Office 365 suite, so for Telstra there wasn't the need to buy brand new software. It may also come as a surprise to some that the Office suite extends beyond the most well known apps, like Word, PowerPoint and Excel, and includes tools like Forms, Flow, SharePoint and Power BI.

Telstra used these tools in different combinations to automate each process, and they were unimposing enough that the legal team implemented them without needing to rely on the IT department.

For example, to automate matter management, Microsoft Forms was used to create a form where internal clients could request work from the legal team. The information was stored in a central database (SharePoint). Incoming tasks could then be triaged and assigned to individual lawyers. The tasks would then appear in Microsoft Planner, where each lawyer could manage all the tasks assigned to them. All these steps were chained together using Microsoft Flow.

To automate contract generation, Microsoft Forms was used again to collect inputs for variable items in contracts (like party details). These details were captured in SharePoint, then combined with a Word template, and then sent out by email to the intended recipient.

Telstra used to track the capacity of each of its lawyers by having each lawyer submit their capacity (eg, how busy they were on a scale of 1-3 or 1-5) each week to a team coordinator, who would then forward their team's report to a single person who would then manually update a master Excel spreadsheet containing 150 rows. To automate this process, they created a mobile app where each lawyer could press a button to indicate their capacity for a week. This information would automatically update a database without the need for any manual work in between. Having this information in a database also allowed the team to generate real-time reports very quickly and easily using Power BI, giving actionable insights into their raw data. By slicing and dicing data through a user friendly interface, managers could understand capacity trends of different teams over time and adjust resource planning to address spikes in activity and capacity shortages.

While a "simple" tool like Office 365 may not initially seem like an obvious solution for building an enterprise application, Telstra has shown that even the largest of enterprises can make use of low cost, relatively simple software and derive significant benefits from it. It doesn't always need to be complicated.

One of our takeaways from Telstra's presentation is that change sometimes helps to create innovation. Happily, each of us doesn't need to go through our own company restructuring to figure out what Telstra's legal team figured out. We can learn from their journey and implement their lessons learned into our own legal operations.

The other takeaway is that if you're part of a larger organisation and you're thinking about how to make legal operations more efficient, try to leave behind preconceptions about what's an appropriate tool for the job. Bigger doesn't mean better, and the more expensive and complicated the tool, the more risk it comes with. Think outside the box for non-traditional solutions; is there a more nimble, cost-effective way to solve the particular challenge you're confronting? Are there solutions you can implement without needing to spin up a large project implementation team and help from the IT department? Can you apply the 80/20 rule (solve 80% of your requirements for 20% of the effort)? After all, if improving legal operations is about improving efficiency, being able to implement a solution efficiently is just as important as implementing a solution that provides efficiency.

About the Author: *Stuart Loh is the co-founder of Aerofiler. Previously, he was Associate General Counsel at SurveyMonkey. Aerofiler allows in-house lawyers to drag and drop all their signed contracts into a web browser and transform this into searchable data so they never miss a key date or clause ever again.*

Data ethics is now a strategic business weapon

By Dan Wu

Five billion dollars. That's the apparent size of Facebook's latest fine for violating data privacy.

While many believe the sum is simply a slap on the wrist for a behemoth like Facebook, it's still the largest amount the Federal Trade Commission has ever levied on a technology company.

Facebook is clearly still reeling from Cambridge Analytica, after which trust in the company dropped 51%, searches for "delete Facebook" reached 5-year highs, and Facebook's stock dropped 20%.

While incumbents like Facebook are struggling with their data, startups in highly-regulated, "Third Wave" industries can take advantage by using a data strategy one would least expect: ethics. Beyond complying with regulations, startups that embrace ethics look out for their customers' best interests, cultivate long-term trust — and avoid billion dollar fines.

To weave ethics into the very fabric of their business strategies and tech systems, startups should adopt "agile" data governance systems. Often combining law and technology, these systems will become a key weapon of data-centric Third Wave startups to beat incumbents in their field.

Established, highly-regulated incumbents often use slow and unsystematic data compliance workflows, operated manually by armies of lawyers and technology personnel. Agile data governance systems, in contrast, simplify both these workflows and the use of cutting-edge privacy tools, allowing resource-poor startups both to protect their customers better and to improve their services.

In fact, 47% of customers are willing to switch to startups that protect their sensitive data better. Yet 80% of customers highly value more convenience and better service.

By using agile data governance, startups can balance protection and improvement. Ultimately, they gain a strategic advantage by obtaining more data, cultivating more loyalty, and being more resilient to inevitable data mishaps.

Agile data governance helps startups obtain more data — and create more value

With agile data governance, startups can address their critical weakness: data scarcity. Customers share more data with startups that make data collection a feature, not a burdensome part of the user experience. Agile data governance systems simplify compliance with this data practice.

Take Ally Bank, which the Ponemon Institute rated as one of the most privacy-protecting banks. In 2017, Ally's deposits base grew 16%, while those of incumbents declined 4%. One key principle to its ethical data strategy: minimizing data collection and use. Ally's customers obtain services through a personalized website, rarely filling out long surveys.

When data is requested, it's done in small doses on the site — and always results in immediate value, such as viewing transactions.

This is on purpose. Ally's Chief Marketing Officer publicly calls the industry-mantra of "more data" dangerous to brands and consumers alike.

A critical tool to minimize data use is to use advanced data privacy tools like differential privacy. A favorite of organizations like Apple, differential privacy limits your data analysts' access to summaries of data, such as averages. And by injecting noise into those summaries, differential privacy creates provable guarantees of privacy and prevents scenarios where malicious parties

can reverse-engineer sensitive data. But because differential privacy uses summaries, instead of completely masking the data, companies can still draw meaning from it and improve their services.

With tools like differential privacy, organizations move beyond governance patterns where data analysts either gain unrestricted access to sensitive data (think: Uber’s controversial “god view”) or face multiple barriers to data access. Instead, startups can use differential privacy to share and pool data safely, helping them overcome data scarcity. The most agile data governance systems allow startups to use differential privacy without code and the large engineering teams that only incumbents can afford.

Ultimately, better data means better predictions — and happier customers.

Agile data governance cultivates customer loyalty

According to Deloitte, 80% of consumers are more loyal to companies they believe protect their data. Yet far fewer leaders at established, incumbent companies — the respondents of the same survey — believed this to be true. Customers care more about their data than the leaders at incumbent companies think.

This knowledge gap is an opportunity for startups.

Furthermore, big enterprise companies — themselves customers of many startups — say data compliance risks prevent them from working with startups. And rightly so. Over 80% of data incidents are actually caused by errors from insiders, like third party vendors who mishandle sensitive data by sharing it with inappropriate parties. Yet over 68% of companies do not have good systems to

prevent these types of errors. In fact, Facebook’s Cambridge Analytica firestorm — and resulting \$5 billion fine — was sparked by third party inappropriately sharing personal data with a political consulting firm without user consent. As a result, many companies — both startups and incumbents — are holding a ticking time bomb of customer attrition.

Agile data governance defuses these risks by simplifying the ethical data practices of understanding, controlling, and monitoring data at all times. With such practices, startups can prevent and correct the mishandling of sensitive data quickly.

Cognoa is a good example of a Third Wave healthcare startup adopting these three practices at a rapid pace. First, it understands where all of its sensitive health data lies by connecting all of its databases. Second, Cognoa can control all connected data sources at once from one point by using a single access-and-control layer, as opposed to relying on data silos. When this happens, employees and third parties can only access and share the sensitive data sources they’re supposed to. Finally, data queries are always monitored, allowing Cognoa to produce audit reports frequently and catch problems before they escalate out of control.

With tools that simplify these three practices, even low-resourced startups can make sure sensitive data is tightly controlled at all times to prevent data incidents. Because key workflows are simplified, these same startups can maintain the speed of their data analytics by sharing data safely with the right parties. With better and safer data sharing across functions, startups can develop the insight necessary to cultivate a loyal fan base for the long-term.

Agile data governance can help startups survive inevitable data incidents

In 2018, Panera mistakenly shared 37 million customer records on its website and took 8 months to respond. Panera's data incident is a taste of what's to come: Gartner predicts that 50% of business ethics violations will stem from data incidents like these. In the era of "Big Data," billion dollar incumbents without agile data governance will likely continue to violate data ethics.

Given the inevitability of such incidents, startups that adopt agile data governance will likely be the most resilient companies of the future.

Case in point: Harvard Business Review reports that the stock prices of companies without strong data governance practices drop 150% more than companies that do adopt strong practices. Despite this difference, only 10% of Fortune 500 companies actually employ the data transparency principle identified in the report. Practices include clearly disclosing data practices and giving users control over their privacy settings.

Sure, data incidents are becoming more common. But that doesn't mean startups don't suffer from them. In fact, up to 60% of startups fold after a cyber attack.

Startups can learn from WebMD, which Deloitte named as one standout in applying data transparency. With a readable privacy policy, customers know how data will be used, helping customers feel comfortable about sharing their data. More informed about the company's practices, customers are surprised less by incidents. Surprises, BCG found, can reduce consumer spending by one-third. On a self-service platform on WebMD's site, customers can control their privacy settings and how to share their data, further cultivating trust. Self-service tools like WebMD's are part of agile data governance. These tools allow startups to simplify manual processes, like responding to customer requests to control their data. Instead, startups can focus on safely delivering value to their customers.

Get ahead of the curve

For so long, the public seemed to care less about their data. That's changing. Senior executives at major companies have been publicly interrogated for not taking data governance seriously. Some, like Facebook and Apple, are even claiming to lead with privacy. Ultimately, data privacy risks significantly rise in Third Wave industries where errors can alter access to key basic needs, such as healthcare, housing, and transportation.

While many incumbents have well-resourced legal and compliance departments, agile data governance goes beyond the "risk mitigation" missions of those functions. Agile governance means that time-consuming and error-prone workflows are streamlined so that companies serve their customers more quickly and safely.

Case in point: even after being advised by an army of lawyers, Zuckerberg's 30,000-word Senate testimony about Cambridge Analytica included "ethics" only once, and it excluded "data governance" completely.

And even if companies do have legal departments, most don't make their commitment to governance clear. Less than 15% of consumers say they know which companies protect their data the best. Startups can take advantage of this knowledge gap by adopting agile data governance and educate their customers about how to protect themselves in the risky world of the Third Wave.

Some incumbents may always be safe. But those in highly-regulated Third Wave industries, such as automotive, healthcare, and telecom should be worried; customers trust these incumbents the least. Startups that adopt agile data governance, however, will be trusted the most, and the time to act is now.

Dan Wu is a privacy counsel and legal engineer at Immuta. He holds a JD from Harvard University, and is a PhD candidate for Social Policy and Sociology at The Harvard Kennedy School. This article previously appeared on TechCrunch.



Applying AI in the field of medicine: a legal and ethical perspective

By Slavina Petrova

AI: the two magical letters of our century. A couple of years ago, artificial intelligence was just in our GPS in our cars and the google translate service. Today, algorithms based on machine learning are disrupting various sectors, from personalised education to medicine.

Using AI to revolutionise the efficiency of the healthcare system sounds tempting. Currently, AI-enabled software systems are largely applied in medical diagnosis. Pattern recognition programmes in fields like radiology and pathology can interpret radiography images and analyse patient data faster and with greater accuracy than a human clinician.

However, questions of liability arise, particularly in relation to negligence. To be held liable for negligence a number of elements need to be satisfied. There must be a breach of the clinician's duty of care which must have caused harm, and the harm must not be too remote from the breach. These requirements are well established in common law.

While clinicians can justify their diagnoses, the autonomous basis of the AI solutions makes it nearly impossible to trace the steps it took to conclude a particular decision. So who is liable? The software vendor? The healthcare professional? Can a patient sue an algorithm or a robot for malpractice? The law is currently silent and the topic is terra incognita. Therefore policy makers have to find a balance between protecting the public and not stifling innovation.

Because the future is already here. AI is already being used to predict various medical conditions from the strangest sources, like Facebook. The social media giant is employing an algorithm which makes suicide predictions based on posts including phrases like "Are you okay?" and "Please don't do this." The significant ethical concerns raised by this process are numerous, and the consequences could be unpleasant. Selling medical predictions to third parties like employers, life insurers or any other interested parties could lead to bias and discrimination.

Data privacy and security

This brings us to the further challenge raised by AI in medicine: data privacy and security.

Article 22 of the EU General Data Protection Regulation (GDPR) states that a data subject

“shall have the right not to be subject to a decision based solely on automated processing, including profiling, which produces legal effects concerning him or her similarly significantly alerts him or her.”

The imprecise language of the regulation creates more questions than answers. What is the actual protection afforded to data subjects? Terms like “profiling”, “solely” and “legal effect” are not self-explanatory and the absence of clarification leaves too much room for judicial interpretation.

Intellectual property

Another set of challenges in the sector is created by IP.

IP relates to intangible assets like inventions and new technologies. The most relevant forms of intellectual property for medical AI are patents and trade secrets. A key issue when considering patent protection is the “abstract idea” exception. Patent claims that are based on abstract ideas are ineligible under patent law. Currently there is little case law on the topic. However, it is notable that one district court in the USA has recently ruled that “to the extent artificial intelligence inventions...involve an inventive concept, they could be patentable even if they have, at their core, an abstract concept.” (Blue Spike, LLC v. Google Inc., Case No. 14-cv-01650-YGR, 2015 WL 5260506, *6 (N.D. Cal. Sep. 8, 2015).

There are further issues around trade secrets. A trade secret constitutes “information that provides a competitive advantage because it is not known to others, and for which reasonable safeguards are maintained to protect its secrecy”. While keeping their data and methods secret might be an effective tool for medical AI companies to stay competitive, problems might arise from these practices. Clinicians, physicians and patients may not be keen to be part of a project they know nothing about, especially if they don't know how it was developed and what the side effects are, for example.

As with any emerging technology, AI can be protected in various ways. However, the legal framework around AI is currently not capable of addressing all the issues arising from it and this calculus should change in the near future.

Conclusion

The healthcare artificial intelligence market is expected to grow by 41.8% from 2019 to 2025, hitting the revenue mark of 13 billion dollars by 2025. Having legal clarity and certainty will be essential if the industry wants to use the full potential of the emerging technology. AI as a stethoscope will be a fundamental part of our lives, but only a multi-disciplinary approach can address all the issues it raises.

By Slavina Petrova

JUSTICE FOR ALL

the transformation of legal services through technology

By Laura Aade

Four billion people are robbed of the chance to build a better life for themselves because they are excluded from the rule of law. It means that the majority of people living on our planet do not have access to legal services when they encounter a legal issue in their everyday life. Wouldn't it be great if we can actually change that? We might have a chance with the latest innovations in the field of legal technology.

Contrary to common belief, solving legal problems does not always require the assistance of a lawyer. There is a wide range of options, and technology is one of them. Developments in machine learning, artificial intelligence and predictive algorithms have the potential to be the game-changers in the fight for access to justice. This will not only have consequences for each of you reading this article, but for billions of people all around the world.

I would like to share two exciting examples on how technology is used to improve and revolutionise access to justice.

Chatbots increasing access to justice - is that a thing?

Using artificial intelligence software, chatbots can stimulate conversations with users and ask relevant questions in natural language – just as a human lawyer would. While the most complex matters will and should remain in the hands of human lawyers, the reality is that basic legal answers can be programmed into decision trees and delivered to the public at large thanks to chatbots. As a result, individuals can gain a better understanding of the law and receive legal help anytime, anywhere, via tools that they use every day. Chatbots become even more powerful when they enable us to help those who need it the most.

Think about an asylum seeker who cannot find the information they urgently need to progress their case. A chatbot enables them to access free legal advice, determine their legal rights and potentially file a claim. And with the progress of voice-recognition technology and voice as a user interface, these services are finally available to the 750 million people around the world who are illiterate.

Artificial intelligence as your virtual legal research assistant

Let's now look beyond the most vulnerable. The reality is that legal services are still not fully accessible even to the middle classes. One of the reasons for this is that lawyers have to go through hundreds of past cases to find the specific one that would help their client's case. Although research has always played an important role in the practice of law, it can be like trying to find a needle in a haystack. According to some studies, lawyers spend nearly a third of their working hours conducting legal research or about 15 hours per week on average. Not only such practice is very costly for those who can afford it, but it constitutes another barrier to access to legal services for those who can't.

The good news is that start-ups and companies are building legal technology solutions, powered by artificial intelligence, that can sift through all the available case law to flag what's most relevant. For example, Deloitte created TAX-I, a virtual legal research assistant, which has been exclusively designed to support lawyers in the field of tax law. Such tools can show connections between cases, generate cases summaries and conduct statistical analysis to power predictive modelling for case outcomes. It allows lawyers to reduce their workload from hours to minutes, significantly reducing the costs of legal services and, therefore, making them more accessible.

To be continued...

These examples are perfect proof that the field of legal technology is transforming access to justice. The legal tech community is working hard to ensure that we have the right ecosystems in place to allow these technologies to flourish. However, the legal industry as well as legal professionals themselves must also be willing to change and accept this technological wave. This is why we must train the next generation of legal talent to be ready for this new reality.

While writing this article, this famous joke came to my mind: how many lawyers does it take to change a light bulb? The answer: as many as you can afford. With current technological advances, I am hoping that the punchline will change to only one lawyer – the one who builds the chatbot and interacts with the virtual legal research assistant. That way we will certainly increase access to justice.

Laura Aade

Legal Tech: The India Perspective

By Suchorita Mookerjee

Though India is in the forefront of technology and the outsourcing space, its name fails to figure prominently in the legal tech arena. The legal industry in India is tight-knit and small in comparison to other countries. The USA, UK, Australia, Europe and now even Singapore are hotbeds for innovation in legal tech. This is despite the fact that some of the prominent legal tech vendors have at least one centre in India, where, by contrast, legal innovation is currently being treated as a singular phenomenon. Here, law firms and legal departments are still debating whether their brand gets diluted by managing voluminous work in a process style rather than whether one should or should not engage in it.

The Indian legal education system does not have legal tech in its curriculum, while working lawyers pick up the idea that legal technology is all about replacing them. Sadly, they fail to realise that the real boon with adopting tech is that it eliminates monotony by concentrating on core functions rather than voluminous process work. It would allow them a work-life balance which currently so eludes lawyers.

The problems within the Indian legal industry are not unique. Like its counterparts in other countries, they too are grappling with the challenges of dealing with managing costs, price pressure, managing knowledge, managing talent, managing the paper work that the India legal scenario demands, and managing a culture which is averse to any change.

This industry is not completely alienated from technology though. The current government is pushing for automation in compliance, tax and real estate registrations. There is talk of using block chain, machine learning and artificial intelligence to increase efficiency.

Indian legal tech vendors are still in their nascent stage. Most are struggling for adequate funding and quite a few are unable to ride out the initial two to three years of gestation period. Having reviewed quite a few range of products created in India, I feel there is a disconnect in understanding the requirements of the client. Product designers fail to understand the wants of the client. This has led to most law firms in India and the top one hundred companies sourcing their legal tech from international vendors who are more client centric. This is despite the fact that the cost of a basic Indian law firm management software is lower than similar software developed internationally. Most of the software products implemented in India are mainly within areas of document management, CRM, HRM, contract management and time recording systems. Currently there seems to be no inclination for using legal tech for process transformation, change management, legal process efficiency management and legal analytics.

Legal technology and innovation are not magic wands that make problems go away. They are enablers that help iron out issues one faces in the work arena. However, before you take that path, it is better to do a detailed diligence of the tech players in the space, understand what your needs really are and what your expectations are from the technology. Sometimes the answer may be just a tweak in the process or utilising existing technology to its full capacity. For me, my biggest lesson as a legal technology consultant in India has been that technology is not the only answer. To quote Colin S. Levy, "The real innovation comes from changing people".

About the Author

Suchorita Mookerjee is an attorney and a legal technologist expert. She has almost two decades of experience helping legal process outsourcing units, legal departments and law firms address challenges with e-discovery, compliance, legal process transformation, contracts management implementation, due diligence management and information governance.



Are UK Law Students Future-Proof?

By Rianna Grewal



University opportunities on offer

Law students are highly regarded for studying an intellectually challenging and stimulating degree. Currently students are taught hard law with some soft law elements such as research, essay and dissertation writing. It is undeniable that mooting, court visits, pro bono and negotiation are wonderful opportunities which universities currently offer. Professional guest speakers and networking events enable students to connect with legal professionals they want to emulate in the future. However, I believe law students do not have access to information about what the future of the legal profession will be like.

The dilemma

We are given conflicting evidence about the threat of technology to our future jobs. There are a number of scare-mongering individuals who say that technologies such as AI and machine learning will replace a range of legal jobs for future lawyers. They claim that technology will take over simpler tasks usually carried out by the junior end of the profession, leaving the remaining complex and higher-level work to experienced lawyers. They predict that the legal industry could potentially be hit by technology in the way it has hit the food and retail industries - online shopping and self-service at checkout in supermarkets have severely reduced the need for individuals working in stores. This camp of individuals also suggest that computing skills are essential for future lawyers (such as programming). In fact, some universities do offer the opportunity to complete a small qualification in Computer Science, which would undoubtedly bolster anyone's credentials.

On the contrary, there are other individuals who argue that lawyers have no reason to panic and that they will have job security in the future. I have attended panels where professionals have stressed the importance of lawyers' people skills. This is because they help build and maintain client relationships,

alongside exhibiting reliability and trustworthiness. The ability to strike up a conversation about current affairs, sport or even television would undoubtedly help to build a friendly relationship between lawyers and their clients. It is extremely unlikely that in the near future technology will be advanced enough to replace these skills, especially since more traditional clients might dread communicating with legal chatbots and would prefer to meet in person.

What can law students do?

Regardless of what legal professionals may claim, technology will affect young, budding lawyers in some way or another. Therefore, it is imperative to prepare as much as possible, rather than shelter ourselves from the inevitable reality. In particular, research into the different types of technology law firms use is particularly impressive in interviews for training contracts. Moreover, showing a greater understanding of how this increases the efficiency with which lawyers work is extremely important. For instance, some UK law firms pride themselves in offering cloud-based technology to their clients. This is because they can access documents at any time of the day. They might also use programmes they have developed themselves or those they have paid legal start-ups to create. These technological programmes increase efficiency immensely, which is extremely important because in law firms 'time is money'.

What can universities do?

Since soft skills such as networking and client care will always be in demand, universities should offer students opportunities to develop them. During a recent conversation with a solicitor from a regional firm, I was told that a lot of law students who applied to their firm were solely focused on achieving high academic grades and participating in strictly legal extra-curricular activities. She reported that some trainee solicitors at her firm did not possess simple skills such as telephone etiquette or the ability to deal with difficult clients. She reported that the root cause of their ineptitude was that they had not diversified their work experience. This suggests that giving students these practical experiences would help their employability immensely. It may also benefit the reputation and prestige of law schools offering such opportunities as accredited extra-curricular activities, which would, in turn, boost their employment statistics.

They should also consider contacting lawyers and tech start-ups who know the ins and outs of legal tech, since they are equipped with the greatest insight into the future of this area, so that students can anticipate their future work lives.

What can law firms and external organisations do?

Firms should offer law students insight days centred around the different ways in which lawyers currently use technology on a daily basis, such as recording billable hours or using cloud-based technology.

There is an incentive for law firms to implement such programmes, especially considering that the Wolters Kluwer Future Ready Lawyer Survey Report has predicted that by 2022 possibly two-thirds of organisations will be using more technology such as artificial intelligence and machine learning. It is arguable that the current generation are far more tech-savvy than their predecessors, but this does not account for the fact that practical, day-to-day insights into legal technology are unavailable and they are made to learn 'on the job'. In some cases, firms are willing to provide extra training. But the question is, why wait till these individuals are employed?

Legal tech start-ups should give law students the opportunity to visit their offices and view the technological solutions they are currently developing. For instance, Luminance have contracts with some of the largest law firms on the planet. They have created solutions which use algorithms and statistics so that lawyers can work with contracts more efficiently, to either examine them or search for them easily. Ravel Law are also another startup to keep an eye on. Aside from providing standard research facilities, they have also created a product which analyses the firm and their opponents' experience, through having access to information such as topics they have worked on, in which court, and which judges were involved.

Conclusion

Legal technology is an area which is certainly being explored and trialled to increase the efficiency with which law firms work. Needless to say, the future is uncertain for young lawyers. In order to be 'future proof' we must keep up to date with legal technology news and remain open to opportunities on offer, but also hone our interpersonal skills.. Whether it be through work experience at law firms or other organisations, the 'human touch' will always be a key selling point of a successful lawyer.

By Rianna Grewal
Student at University of Birmingham

Contributors Required

Here at the Legal Technologist we are always looking for good content so if you're interested in writing an article about how law and technology are converging then please do get in touch. This could be a practical article on legal tech, a use case of legal tech with clients, how new technology will change legislation or what the future lawyer looks like. This isn't an exhaustive list though so please don't think you are limited to just those topics. If you are keen to contribute then all you need to do is get in touch with our editor at marc@legaltechnologist.co.uk.

We look forward to hearing from you!

A - Z of Tech Basics

By Stephenie Ong

Artificial Intelligence

TL;DR – AI allows computers to perform tasks that are normally performed by humans. Use cases are vast ranging from spelling and grammar checks to teaching a stickman to walk.

What – AI is an umbrella term for computer-generated tasks that mimic those typically performed by humans. Subsets of AI include machine learning, natural language processing and robotics. Regardless of type, AI aims to produce a more accurate outcome in a shorter timeframe with larger amounts of data.

How – AI employs the use of algorithms. Algorithms are a set of instructions to the computer that may be entered via a programming language the computer understands e.g. Javascript or Python. Algorithms instruct the computer on what to do. Traditionally, algorithms are specific and limited; they could tell a computer to recognise a sheep every time it saw a picture of a sheep for example. However, to teach a computer to be artificially intelligent would mean inputting code to allow it to recognise any type of drawing of a sheep regardless of how closely it resembles one. In other words, inputting a code to allow a computer to repeat the learning process until it recognises the shapes that resemble sheep.

Why does this matter – AI has many applied and potential further applications in many industries. In the legal industry, one such example is automated contracts. Here, pattern recognition would allow the AI model – as they are called – to recognise specific templates and words used in contracts for a specific use such as tenancy agreements. This reduces the time a solicitor might spend drafting similar contracts, instead allowing him/her time to analyse the client's issue more thoroughly.

I know all this; tell me more – There is more than one school of thought as to how machine learning algorithms are categorised. One popular classification divides them into 3 types: supervised, unsupervised and reinforcement. Supervised learning means the AI model learns based on a set of data provided along with a result. Returning to our sheep example, this means providing 100 pictures and telling the computer whether the picture shown is that of a sheep or not. The computer then identifies patterns shared by the pictures of sheep and those that aren't. Once enough data is provided, if the computer is then shown a random picture (without being told whether it is of a sheep or not), it should reliably and accurately recognise if the picture is that of a sheep or not. With unsupervised learning, the computer goes in blind. This means we first show the computer 100 pictures comprising a

mixture of sheep and non-sheep pictures, except we don't provide the computer any further information. The computer then identifies any commonality between the two groups and makes its own classification. This is more often used for complex patterns that we cannot identify without the help of a computer. Reinforcement learning is more complicated. Reinforcement learning is a combination of both supervised and unsupervised learning together with other factors that the computer must be instructed to consider such as time. The result is a model that teaches itself to produce its own outcome the same way a child learns good from bad. A good example of reinforcement learning in action is how Google's DeepMind taught its own humanoid to walk. This can be seen here: https://www.youtube.com/watch?v=hx_bgoTF7bs&feature=youtu.be

Augmented Reality

TL;DR – AR converges reality as viewed through the lens of a device such as a mobile phone with interactive computer-generated visual elements. One example is attempting to catch a Pokémon in Pokémon Go.

What – AR combines what is seen in the real world with visual elements generated by a technological device, usually in 3D form. It then takes these generated visual elements and maps it onto what we see in real life on the screen of our technological devices. AR is not virtual reality ('VR'); it is different from VR in one main aspect i.e. AR is about the integration of the real environment with the virtual environment. VR replaces the real environment and immerses the viewer in a virtual (or simulated) environment.

How – AR employs the use of camera and GPS technology. The camera frame is first used as an initial map, showing us what we see in real life. Computer vision then works to understand what the camera is showing the user. More importantly it works together with GPS to create a map of the 3D position of relevant objects. These objects are the ones which will interact with the computer-generated visuals. Then the computer "renders" this initial. This means that the computer-generated visual elements are mapped onto the real environment and displayed in a realistic way such that the 2 environments appear integrated. This process happens every time the camera frame shifts, even if slight.

Why does this matter – AR has been shown to have largely beneficial uses in areas such as education, gaming and online shopping. Accuvein improves accuracy for medical professionals in visualising blood vessels. IKEA gives you an idea of how a new piece of furniture would look in your room before even stepping foot in the store. However, in so doing, issues such as product liability arise. For instance, Pokémon Go raised controversy over use when road safety was compromised from unaware pedestrians. The use of GPS technology also means AR apps create a log of the exact location of the user, generating data privacy issues.

I know all this; tell me more – There are three types of AR experiences: marker AR, markerless AR and location-based AR. Marker AR requires a trigger object to be identified by the computer before the visual element is generated and appears. For instance, AR apps that allow you to learn more about a museum artefact by pointing your mobile phone at it. Markerless AR, as the name suggests, IKEA or Houzz is a good example of markerless AR in action. The AR technology is launched upon



opening the app and requires no trigger object. It uses your camera to generate a virtual 3D map to place the virtual object which you can realistically move around within the app. Location-based AR is most clearly seen in apps such as Pokémon Go; your physical presence at a particular location is the trigger for the AR technology to be launched, thus producing a screen with a Pokémon overlaid onto the real world through our mobile phone screens.

What pieces of technology would you like to see in our upcoming issues? Feel free to send your thoughts to us here.



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*Digital lawyering and the
growing importance of the
human touch: Implications
for wellbeing*

By Dr Emma Jones

Any web search about the future of the legal profession will undoubtedly bring up reams of links around the increasing role of digital technology. These range from praise for the increased productivity and efficiency such technological developments can bring, to concerns around the impacts it may have on recruitment and retention for those whose roles could be at risk of automation. At the same time, there is a growing tendency for such web searches to bring up a variety of links about the importance of what is often termed “soft skills”. In other words, those skills relating to social and emotional competencies, often focused on communication, working with others and client care. Although, at first glance, this may appear to represent two separate trends for the future of the profession, in fact, the two are intimately linked in a number of ways. These are links which may have significant implications for the wellbeing of legal professionals.

The first of these links relates to the need for (what could be termed) “traditional” legal professionals to retain their relevance and standing in the face of rapid technological development. As digital technology improves the accessibility of legal resources and develops the capacity to automate and streamline routine tasks, such as document disclosure, for legal professionals to remain in demand they must increasingly emphasise the client care which they can offer. To market their offering to new clients, and enhance their retention of existing clients, they must demonstrate that they can provide forms of personalised and responsive service which set them apart from digital offerings and emphasise a human touch to their client care. To do this demands a delicate blend of empathy and detachment, approachability and boundary-setting, which demands a high level of soft skills.

The second of these links relates to the diversification of the legal profession. As digital technologies have grown, so have the different roles required within legal firms and businesses. Legal project and risk managers, legal knowledge engineers, legal data scientists and many other technology-driven roles are all becoming an established part of the legal landscape. Twenty, thirty or forty years ago, a legal professional may well have been working largely with colleagues from similar backgrounds with shared assumptions and common understandings in relation to

how law should be practiced, what clients require and how their business should develop. Today, the diverse range of roles involved bring huge opportunities for innovation and expansion. However, they also require individuals to display a range of social and emotional competencies to communicate effectively with colleagues and ensure that teams can integrate the legal and technological aspects of legal practice as seamlessly as possible. Often, legal professionals have been trained as lawyers, rather than managers, meaning that the need to work within, and lead, such multi-disciplinary teams may demand new and unfamiliar soft skills.

The third of the links between technology and soft skills relates once again to the need for effective communication, as legal professionals must ensure clients clearly understand the role and purpose of any technology being utilised in relation to their legal matters. This may originally have seemed more relevant to the large firms who have been investing heavily in digital technology. However, such technologies are increasingly becoming pervasive throughout the justice system, for example, the moves towards online court proceedings by HM Courts & Tribunals Service in England and Wales. Therefore, legal professions in all sectors must increasingly provide appropriate advice and guidance to clients to help them understand and navigate these systems effectively. Once again, this demands strong client care skills drawing on a range of social and emotional competencies.

This increasing emphasis on skills demanding social and emotional competencies demonstrates that there is a misnomer in the term “soft skills”. In fact, these skills are essential to professional practice (something that was recognised by the Legal Education and Training Review in England and Wales in 2013). Given this interplay between digital technologies and these vital skills, it is important to consider to what extent legal professionals are equipped to meet the challenges involved. Of course, this will vary between individuals but, at present, much legal education and training is focused on the technical legal knowledge and skills required and there is a lack of emphasis on the need to develop appropriate social and emotional competencies to tackle the changing demands of legal practice. This means

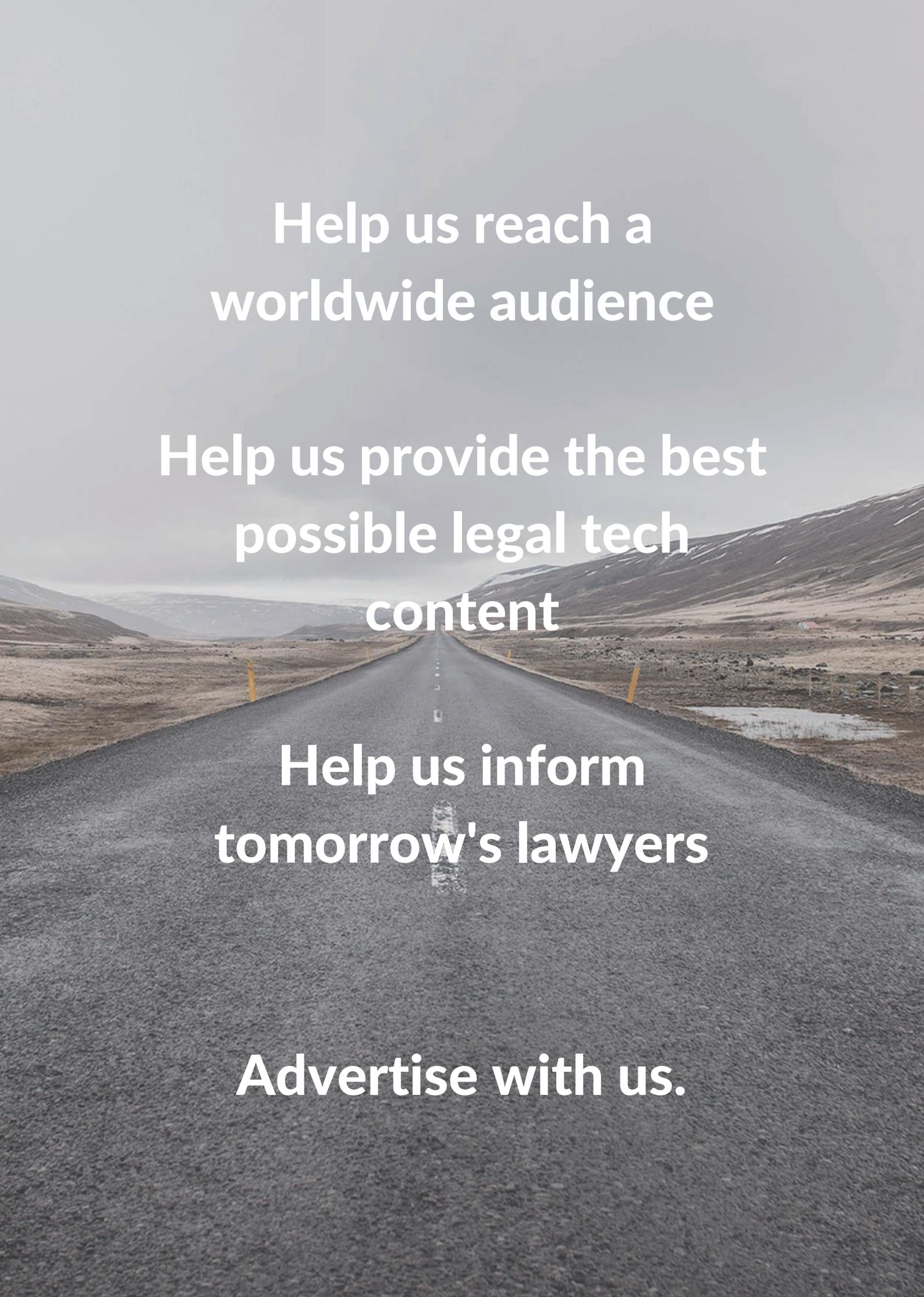
many legal professionals are facing increasing demands to display such skills without being taught how to do so.

In terms of wellbeing, the current position is extremely problematic. The type of skills being required may demand significant amounts of emotional labour (a concept developed by Arlie Hochschild to recognise the emotional investment required to perform certain working roles). Tackling new situations and applying new skills can be extremely stressful and damaging to wellbeing if individuals are not given the appropriate support and training to equip them. Even going through the type of self-development necessary to obtain these can itself be an added stressor in a fast-paced, pressurised environment.

To ensure legal professionals are equipped for the practice of the future, it is important that debates about wellbeing do not just focus on how digital

technologies themselves impact on wellbeing. Instead, the wider ways in which they are shaping the future direction of the profession must be acknowledged. As law schools begin to include digital lawyering and law and technology courses in their undergraduate degree, it is important that their curricula emphasises to students the very human skills required, as well as the technological ones. As the professions' regulators consider what competencies will be required from legal practitioners in the future, it is vital that they recognise the growing emphasis on (what were once termed) soft skills. Individual employers must also consider the training and support they are providing to equip their employees appropriately. Understanding such broad human implications are vital for a healthy legal profession.

Dr Emma Jones
Open University



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Bristol Legal Hackers: A New Chapter

By Sarah Oosthuizen



Legal Hackers is a global movement inspired by the ethos of the original MIT 'hackers' in the 1950s and 60s, and was launched in 2012. Since then the movement has grown exponentially, expanding to over 150 chapters worldwide. On 24th September 2019 Bristol joined the movement as one of its newest chapters and this is a review of the launch event.

One of the key aims of Legal Hackers is to bring together policymakers, technologists, students, academics and lawyers to explore and develop solutions to some of the legal sector's most pressing issues. At the launch we saw an eclectic mix of people from the world of law and technology. A diverse mix of people came together to see what Bristol Legal Hackers (BLH) was all about and how they could get involved.

The launch event was held at the offices of TLT LLP in Bristol. The room where the presentations were held had an amazing views of the city, which had a great vantage point over the scurrying commuters and activity below. As the sun made its final descent and the room filled out the event was ready to kick off.

The event involved a series of presentations from those involved with Bristol Legal Hackers, as well as those who had volunteered to speak for their organisations. It kicked off with an introduction of the BLH the team and discussed what Legal Hackers is and how BLH will make a difference. Ed LeGassick and Marc May discussed what BLH stood for and what they hoped to achieve, as well as describing which events would be upcoming. This, they hoped, would allow those working in the legal and tech sectors to converge to learn from each other, discuss issues and develop solutions.

Lilly Manzoni, of Bristol Legal Hackers, discussed the need to make sure diversity and inclusion were at the forefront of decision-making when creating events to make them as inclusive as possible. We want to create an environment which is innovative, creative, passionate, fun and inclusive. Adam Waterman, Technical Lead for BLH, also discussed his plan to create free monthly coding workshops for those in the legal sector to provide them with the knowledge to develop apps in Python.

There were also two talks from Marius Jennings, who manages the Bristol Open Data Project at Bristol City Council, and Nathan FitzPatrick, from Bristol Law Centre. Both were great presentations which offered some insight into what data is available locally what challenges there were for access to justice charities like the Law Centre. Once the talks were over we all enjoyed the craft beer and pizza on offer (kindly provided by the Legal Technologist).

Bristol Legal Hackers would love to achieve something tangible which can help people and increase access to justice. To do that they hope to put on events which aims to educate those in Bristol on the latest developments related to law and technology, or provide a forum in which those from the legal and tech worlds can integrate. It was clear from conversations I had that tech people don't fully understand what lawyers do and vice versa, so that is a gap that BLH hopes to bridge.

As well as the coding workshops, there will also be a panel events to discuss the latest issues, and a huge hackathon at the beginning of next year.

Sarah Oosthuizen



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If you want to get involved, would like to sponsor BLH or would just like to know more, get in touch with us at bristollegalhackers@outlook.com or follow our LinkedIn page.

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Next edition



Next edition will be out in December 2019.