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The Use and Regulation of Technology in the Legal Sector beyond England and Wales

Research Paper for the Legal Services Board

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Acknowlegements

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Contents

Executive Summary

Part 1: Introduction

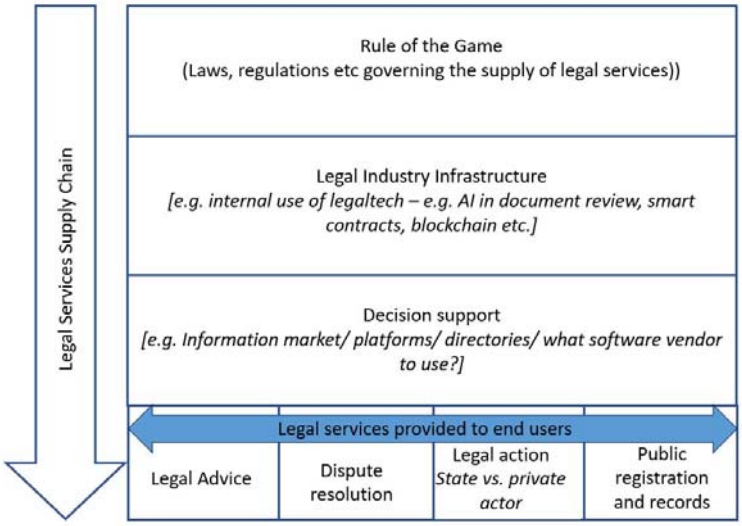
This report has been commissioned by the Legal Services Board (LSB) as part of a series of papers designed to address the impact of technology on the legal sector and to identify what this might mean for legal regulators.

The paper explores the adoption of legal technology in key jurisdictions and how legal regulators are responding, before looking for possible lessons from other sectors. The report concludes with some recommendations addressed both to the LSB and the frontline legal regulators in England and Wales.

The development and application of technology in the legal sector challenges existing regulatory models and raises questions about the scope, objectives and form that regulation in the sector should take.

The report sets out an analytical framework for thinking about the implications of legaltech and possible regulatory responses to it. It disaggregates the activity that goes into the delivery of legal services to end users into four layers: The legislative framework, the internal use of technology by law firms to produce services, the use of technology to assist in decisionmaking when selecting legal service providers or solutions, and the use of technology to meet the functional requirements of end users.

Figure 1: A Functional Framework for Understanding the Application of Legal Technology



This approach helps to provide a framework for thinking about technology that avoids an oversimplified distinction between B2B and B2C legaltech solutions (sometimes referred to in the legal press respectively as ‘legaltech’ and ‘lawtech’.

In order to illustrate the potential for technology to transform legal services, the paper also sets out a taxonomy of legaltech with examples of use cases and tools that are already available in the market.

Part 2: Legaltech Activity Around the World

The number of specific technology applications designed for the legal sector has grown significantly in recent years, to the extent that legaltech is now recognised as a strand of technology in its own right. It has also become a truly global phenomenon, with homegrown legal startups springing up in every corner of the world.

But whilst the sector is growing the legaltech economy is still relatively small in proportion to the overall size of the legal sector. And whilst investment in legaltech businesses is growing year on year, the value of this investment is dwarfed by investment in technology in other sectors, like financial services.

In order to understand where there may be obstacles in the way of the more rapid development of legaltech, it is helpful to understand the legaltech development cycle and how tech solutions emerge. This can help to point to where legal regulators might have a role to play in removing obstacles.

There is little evidence, however, that legal regulators have yet focused on legaltech in any depth. But various trends suggest that a tipping point may have been reached and regulators can no longer ignore technology developments.

These trends include:

- The fact that lawyer selection and legal advice marketplaces are being set up around the globe. In jurisdictions where lawyers and non-lawyers are not permitted to fee share, the business models used by many of these marketplaces could challenge existing codes of conduct.

- Although many consumer facing legaltech providers are not yet using complex and non-transparent forms of artificial intelligence, this will come. The use of deep learning AI in consumer facing legal advice may pose some ethical challenges.

- Legal tech is crossing borders, mainly through the activities of suppliers of technology to the legal sector, but the most successful consumer facing legal advice marketplaces

(e.g. LegalZoom and RocketLawyer) are also expanding into new jurisdictions. This potentially undermines the ability of regulators to regulate freely in future.

- Universities are increasingly offering courses to combine law and technology, suggesting that there is a growing demand for lawyers with awareness of technology. This reinforces the fact that legaltech is entering the mainstream.

- It is a difficult environment for legaltech startups since they must not only contend with the challenges that all startups face but also the regulatory challenges specific to the sector, which fragment and limit their scope of action. Regulators may find themselves under increasing scrutiny if they fail to respond effectively to the demands of legaltech and impede the ability of society to harness the potential benefits it could bring.

Part 3: The Impact of Legaltech on Consumer Markets

The impact of legal tech has been felt predominantly in B2B markets, in which an estimated 80-90% of legaltech businesses are operating. However, technology also has great potential to impact on consumer legal services. There is some evidence that this is beginning to happen.

Three trends appear to be common across different jurisdictions:

i) The rise of lawyer and legal advice platforms

These are now ubiquitous and seem to be a starting point for legaltech in many jurisdictions. Many startups in this area are small and short-lived but there is scope for such services to become significant players in the market and to attract considerable external investment once they have reached a critical mass. LegalZoom, for example, claims over 3 million users and has itself invested in a similar Australian service, LawPath, to the tune of $1.8 million.

The focus of these platforms varies. Some are marketplaces designed to give lawyers access to a wider source of work, and others are more obviously focused on the user's needs, offering consumers and small businesses DIY access to law with onward referral to a lawyer if desired.

ii) Reaching unmet 'legal' needs

There is evidence that legaltech startups are approaching legal services in a different way to traditional legal service providers. Many focus on simplifying consumer complaints procedures, for example by challenging parking tickets or facilitating airfare refunds, but others are addressing complex legal problems, such as divorce, immigration, wills and succession, from a consumer-centric perspective. This usually takes the form of an online service which is multi-disciplinary, and which integrates legal services, to the extent this is possible, alongside other services, rather than offering it on a standalone basis. The

advantage of this approach is that it enables legal services to reach individuals and SMEs who might not otherwise be explicitly looking for legal services.

iii) *Dispute resolution services*

Online private dispute resolution and small claims services are also increasing in number and sophistication, but with varying degrees of success in different jurisdictions. Experience to date suggests that, in order to create viable business models, ODR services need to have the support and recognition of the courts.

There is also evidence of a growing degree of engagement in technology by many court systems in a wide variety of jurisdictions. This is helping to increase access to justice, as well as improve court attendance and the efficiency of the court process, but it is still early days.

Lessons from the market

There are some observations that can be drawn from developments in the consumer focused legaltech market which are highly relevant to legal regulators:

- Consumers are more likely to be reached by multidisciplinary applications. Especially where they know they have a problem but don't necessarily think of it as a legal issue.
- Consumer-facing online legal services are more likely than traditional providers to offer pricing transparency and fixed fees for packages of services. This may increasingly influence the offline world.
- The most innovative consumer-facing legaltech services are not led by lawyers. This is in part because of the difficulty for lawyers of reengineering their thinking in a consumer-focused way. But ownership and fee sharing restrictions are also a limiting factor.
- The upfront investment needed to launch a consumer-facing legal tech service, given the scale needed to make it viable in the long term, makes it difficult for traditional legal partnerships to enter this sector.
- Investors, or entrepreneurs, who have choices about where to focus their efforts, may be deterred from investing in consumer legaltech by the existence of regulation around the provision of legal advice.
- Increasing digitisation of government services is likely to increase the demand for online consumer "legal" services to interface with them.
- Consumer legaltech sites are increasingly likely to integrate AI-powered diagnostic tools into their online offerings. Depending on the rules in any particular jurisdiction, this may begin to cross into the giving of legal advice, which poses new challenges for regulators about if, and if so how, to police such services.
- The experience of ODR in many jurisdictions illustrates how regulation may be needed to create a viable market for a technology that brings consumer benefits.

- Technology providers, such as Modria, illustrate how it is possible to engineer a shift of focus from large scale commercial markets towards the public sector or consumer/SME needs.
- Finally, leadership can play a very positive influence in determining the direction of travel that technology takes, as the example of the US Conference of Chief Justices, which has placed a big emphasis on access to justice, illustrates.

Part 4: Where Does Regulation Fit into This Picture?

So far, legal regulators around the world have tended to take one of four approaches in response to the rise of legaltech:

- For most of them, working with heavy workloads, limited resources and pressing immediate issues, the challenge of technology is not a priority. They have therefore tended to take a "wait and see" approach.

- There are, however, some regulators in the sector who have sought to resist the emergence and use of certain forms of technology in their jurisdictions: For example, by prohibiting lawyers from participating in online marketplaces for legal services, or by seeking regulatory means to prevent non-lawyer disruptors from entering the market.

- A third approach from regulators has been to seek ways of accommodating legaltech into existing rules by modifying the status quo. This has even extended in some jurisdictions to the organised Bar taking over legaltech providers or seeking to lead on the development of legaltech solutions, in order to ensure that they conform to prevailing requirements.

- Finally, there are few regulators who have sought to facilitate legaltech and who have enabled new entrants to challenge and change the regulatory landscape more profoundly.

Overall, most legal regulators are cautious, if not actively inclined to look negatively at legaltech developments. Although little has been said publicly, most of the purely regulatory bodies in the sector, if they have approached the topic at all, have seen it largely as a professional competence issue. In jurisdictions where there has been broader based thinking on the topic, this has tended to come from organisations with a mixed regulatory and representative competence. However, the driving motivation for action in these latter cases, has usually been representational.

Regulators risk being constrained by their own frame of reference, which is dictated by the prevailing model of legal regulation they are overseeing. This means that they may be missing the opportunity to help the sector take full advantage, or mitigate the risks, of

legaltech. Even in those jurisdictions most focused on legaltech, the approach is often fragmented and rarely involves all relevant stakeholders.

Part 5: Lessons from Other Sectors

There are other sectors where regulators have had a longer history of engaging with technology, and which have developed tools that might be useful for legal regulators to consider.

(a) Financial services

In the financial sector:

- Sandboxes have emerged in recent years as a way of testing new types of financial product, in a controlled environment. This helps to reduce development time and cost and ensures that consumer safeguards are adequate.
- Some financial services regulators have proactively encouraged new technology entrants to enter certain areas of the market which they regard as underserved.
- The preparation of an environment conducive to disruption has played its part in the financial sector. This has included harnessing the active support of government and pressing for legislative change where this is required.
- Many financial sector regulators have also created consultative panels to deepen their understanding of how tech is impacting on their sectors.
- They have also been willing to fill gaps in the regulatory framework to create certainty for new financial service offerings and to issue guidance on how digital advisory services should be framed.
- Lastly, they have exhibited a willingness to collaborate across borders in order to avoid inconsistent regulatory approaches.

The consulting firm EY has made several predictions for fintech, which may also apply to the legal sector. They foresee a growth in the use and sophistication of sandboxes, an increase in cross-border cooperation and a push for industry certification both within and across jurisdictions.

Whilst all the tools used by financial regulators may not directly translate across to the legal sector, there are certainly ideas from the fintech sector that can be adapted. Notably:

- The need for cross border cooperation.
- The potential for certification of new types of legal services powered by technology, to be used in some form.

- The need for regulators to look at regulating businesses, not just individuals and to be able to respond to the regulatory needs of new business models, whilst managing consumer risk.

(b) Healthcare and Medical Devices

In the health sector, the regulation of medical advices also offers an interesting case study for legal regulators. As in the legal sector, the health sector is experiencing the impact of AI, which can be used either to augment the decision-making capacity of professionals, or to empower the lay consumer to self-diagnose, and address their own problems.

The regulation of Software as a Medical Device (SaMD) offers some interesting insights into how AI could potentially be regulated in the legal sector.

- Health regulators have not attempted to treat all AI driven software and apps in the same way. An attempt has been made to classify them according to the risk that any individual software may pose, driven largely by its end user (professional or lay) and purpose (diagnosis, treatment, information etc).
- Health regulators have offered guidance to software developers about the requirements they need to fulfil and the standards of information and transparency about their software that they will need to provide to its users.
- Medical device regulators have developed close cooperation across countries to find common approaches, even where their regulatory regimes differ.
- Perhaps most importantly, medical device regulators have realised that it may be disproportionate to apply the same requirements to software that is in development as they do to services already in the market. Applying the same standards to AI driven software as to traditional medical devices may prevent a new, potentially useful developments from coming to market, given the data demands of AI. Determining how AI-driven SaMD can be developed in an appropriately managed risk environment is therefore key.

The analogies with the legal sector are interesting, since there are already siren calls from within the legal sector for the same rules to be applied to legaltech as to traditional legal services. The challenge is perhaps, in fact, a different one: How to meet the same ultimate objectives, using different rules.

(c) The Automotive Industry

Lastly, the automotive industry has shown how important it is for an investment heavy technology to have regulatory clarity. The regulation of driverless cars has developed much faster in those countries, like Germany, which have elaborated testing paradigms setting out clearly what is permitted, where responsibility lies etc, than in countries with no legislative framework.

Part 6: What Lessons Can Be Drawn for Legal Regulation in England and Wales?

There are various risks facing regulators in how they choose to approach legaltech:

- There are risks in doing nothing. Most jurisdictions do not have a regulatory framework that will encourage technology investment. But if they do not respond to the challenge of legal tech, investment capital will favour other areas of the economy.

- Legal regulators need to learn from other sectors that business models in the tech industry are very different from traditional sectoral business models.

- Legal regulators need to be aware of the extent to which current regulatory structures and constructs may be narrowing their field of vision. They should be willing to hold a much broader dialogue beyond traditional players in the sector and be prepared to rethink how they do things.

- Legal regulators should be wary of simply jumping on the sandbox bandwagon without considering the strategic objectives of such a move.

- The current, binary world of legal regulation, with its cliff edge between the regulated and unregulated will face a growing challenge from technology. This is where other sectors like the health sector in its approach to SaMD may offer pointers as to how a more flexible approach could be developed.

- The risk of a brake being placed on the take up of AI as a result of uncertainties about where liability lies when AI powered apps go wrong, or are misused, needs to be considered. Greater reflection about the possible, specific regulatory or ethical issues that might arise in the sector should be promoted by regulators.

- One of the most striking lessons from other jurisdictions and other sectors, is that the most interesting developments in technology are happening where a variety of different stakeholders with different backgrounds have come together. Regulators in the legal sector should reach out beyond their usual interlocutors wherever possible.

- Regulatory cooperation across jurisdictions is also made even more important as a result of technology. Moreover, since most legal regulators are short on resources, it makes sense for them to share insights and pool expertise.

- Whilst legaltech could simply be left to the market, doing so could further increase the gap in technology use between B2B and B2C markets. Ensuring that technology impacts all parts of the sector and not simply the B2B segment, could require regulatory action.

- Finally, legal regulators need to avoid the temptation to put their heads in the sand because this is too difficult. Taking action, however small, is an important start.

Part 7: Recommendations

The report concludes with 10 recommendations aimed at the Legal Services Board and 5 directed at the frontline regulators:

(a) The Legal Services Board should:

i). Seek better coordination with the courts and with other public sector initiatives directly or indirectly related to legaltech.
ii). Set up a standing Advisory Panel to advise on the development of a supportive regulatory environment for legaltech.
iii). Use the International Conference of Legal Regulators (ICLR) to promote a cross-border discussion on the regulatory consequences of technology in the legal sector.
iv). Set a strategic legaltech challenge to regulators, for example, encouraging them to seek ways of using tech more actively to improve the UK's unmet legal need problem.
v). Lead an investigation into where the data assets of the legal industry lie and promote greater access to them.
vi). Commission research into the specific regulatory ethical issues for the sector posed by different forms of AI.
vii). Ensure that frontline legal regulators develop a common language and conceptual understanding of technology in the sector.
viii). Work with the frontline regulators to produce a toolkit for entrepreneurs seeking to start a legaltech business.
ix). Address the question of how technology may impact on the current regulatory settlement in England and Wales.

(b) The Frontline Regulators

As far as the frontline regulators are concerned, even though they may be at very different stages of engagement with technology, there are still some common needs and opportunities which they all face. In the light of these, they should:

i). Develop technology strategies.
ii). Build up their own internal knowledge and understanding of legaltech.
iii). Establish a dialogue with tech businesses active in their part of the sector.
iv). Harness RegTech to assist their regulated communities to adopt ethical and compliant behaviour.
v). Intervene more proactively in the sector by re-engineering the regulation of consumer legal services.

Conclusions

Regulation is not only about managing market failure and securing public policy goals. Industries will often autonomously seek to establish rules to help them. Such industry-driven rules can create clarity, interoperability between players, standards to guide choices by customers and a reduction of duplicated effort, conversely, they can be used to distort competition and create barriers to entry in markets which then require public policy intervention.

Legal regulators should therefore not assume that standing aside from legaltech is the right answer. Whilst they may believe that doing this will avoid coming up with the wrong answer that could slow down the take up of tech in the sector, they should also be aware that there is an equally strong chilling effect created by the current regulatory framework. Whilst our regulatory model may be relatively light touch, there are still points of friction and hard borders between the regulated and unregulated.

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Part 1: The Starting Point

Introduction

This report has been commissioned by the Legal Services Board (LSB) as part of a series of papers designed to address how technology will impact on the legal sector and to identify what this might mean for legal regulators.

In this paper we explore the extent to which legal technology is being adopted in major economies, what is driving its take-up, and how regulators in those jurisdictions are reacting. We then go on to look at whether there are lessons to be drawn from other sectors, based on how their regulators are engaging with the challenges of technology. And finally, we conclude with some conclusions and recommendations for future action.

This analysis is designed to widen the LSB's understanding of what is going on elsewhere in the world and so it deliberately excludes legaltech developments in England and Wales from detailed scrutiny. It does, however, conclude with some observations and recommendations that are addressed to legal regulators in England and Wales as well as to the LSB.

Why does technology matter to legal regulators?

The speed and power of computer processing, telecommunications liberalisation which has freed up the spectrum, and the accessibility and the functionality of smartphone technology, have collectively revolutionised the market for services. These innovations have created a market for new types of services; they have made existing services more accessible and more efficient to deliver; and they have begun to change the nature of the individual's relationship with government. But they have also raised new concerns about privacy and information security as well as questions about competition. The big five technology companies, Microsoft, Amazon, Facebook, Apple and Google increasingly dominate every aspect of people's digital lives in most parts of the world. Research by King's College London[1] found that Google had a 97% share of all internet search traffic in Brazil in 2016, and that Skype (owned by Microsoft) accounted for 40% of the international telecom market in 2014.

More recently, these tech giants have increasingly used artificial intelligence (AI) to drive search engines and to power "Internet of Things" (IOT) devices, such as voice-activated assistants (Alexa, Siri etc), often without consumers being aware of the underlying technologies deployed, or the potential consequences of their use.

At the same time, we are also seeing evidence of how technology can be proactively used as a tool to tackle seemingly intractable social and economic problems around the world.

[1] Moore, M. (2016). Tech Giants and Civic Power. CMCP, Policy Institute, King's College London

Delivering blood supplies to remote rural areas by drone in Rwanda, for example, or providing farmers in Kenya with automatic payouts to mobile wallets when their crops fail, thanks to smart insurance contracts executed on a blockchain.

This is the world that the legal sector and legal regulators must understand and to which they need to be prepared to respond.

The idea that technology might have a disruptive impact on the provision of legal services is not new. Concerns were raised about the impact on legal practice of fax machines in the 1980s, the internet in the 1990s and the Cloud in the 2000s. And although Professor Richard Susskind's seminal work *"The End of Lawyers: Rethinking the Nature of Legal Services"* published in 2008, began to focus minds in earnest; technology has so far impacted very unevenly on the legal sector. It is therefore easy to dismiss talk of major disruption of the sector as hype, but we should equally be mindful of Bill Gates' warning:

> *"We always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next ten. Don't let yourself be lulled into inaction".*[2]

Legal regulators should therefore be conscious that, even if the impact of technology on the legal sector is not highly visible to them yet, there is a fundamental shift taking place in the legal sector, of which they should be aware.

A recent discussion paper published by the University of Melbourne[3] suggests that a tipping point may have been reached in terms of the actual and potential use of technology in the legal sector, which legal regulators can no longer ignore. Not least because there are important regulatory questions raised by the deployment of new technologies in the legal sector:

i) Does disruptive technology alter the ultimate purpose of regulation in this sector in any way? Is the regulatory model still valid?
ii) As technology enables new ways of delivering services and new business models, is the scope of regulation right, in terms of what (and who) is being regulated? i.e. are the boundaries of regulation still appropriate? What might technology mean for the practitioner's duty to remain competent?
iii) Are the objectives of regulation still valid? Will the overall health of the market (facilitating new entrants, over concentration in certain areas) become more of a concern in future?
iv) Are the right rules in place, in the right form? i.e. Is there too much regulation of certain existing forms of legal service and under regulation of others? Can existing rules simply be stretched to fit new forms of delivery?
v) How will technology change the process of regulation itself? It presents new problems (e.g. cybersecurity, privacy challenges etc) but also offers interesting

[2] The Road Ahead,1995
[3] "The Current State of Automated Legal Advice Tools", Bennett et al, University of Melbourne (2018)

new solutions to these problems (e.g. use of Artificial Intelligence (AI) and Distributed Ledger Technology (DLT).

The discussion is further complicated by the fact that new forms of technology, currently at a very early stage of practical experimentation, might have an even more significant impact over the long term (e.g. quantum computing and deep learning AI systems). The pace at which such advanced technologies will become widely deployable however is not yet clear.

We therefore deliberately limit the scope of this paper to:

- The regulation of technology that is currently deployed or likely to be deployed within the next five years.

- What might, or should, influence legal regulators' strategic thinking over this sort of period.

An Analytical Framework for thinking about legal technology

All technology deployed in the legal sector is not equal. Its purpose and intended audience will vary, and this will influence the potential need for regulation around it. For example, the risks around an AI software which helps law firms draft contracts or undertake e-discovery for large corporate clients, is very different from the risks of a blockchain which stores criminal records, or an algorithm which helps consumers to draft their own wills.

Understanding what role any particular legal technology is intended to play, will therefore assist any understanding of the role of regulation.

Figure 1 attempts to do this, by setting out a "functional framework for legal technology", drawing on the Oxford Saïd Business School functional framework for fintech[4]. The advantage of such a framework as an analytical tool is that it allows us to make clear distinctions about the role that any particular technology may be playing in the creation of different types of legal service.

The framework suggests that there are four layers of building blocks that should inform our thinking about the application of technology in the legal sector. These are as follows:

(1) The "Rules of the game"
At the start of the supply chain for legal services is the legislation and regulations which determine the shape of the entire ecosystem.

(2) The Infrastructure underlying services delivery

[4] Introduction to Fintech, Oxford Fintech Programme, Said Business School (2017)

The “infrastructure” of the functional framework refers to the supply side of legal services’ delivery. This includes, for example, the use of AI by law firms in contract review or e-discovery, or the use of blockchain by court registries. In other words, it is mainly about how technology can help to improve the efficiency with which legal service providers assemble and deliver their services.

(3) Decision support tools and marketplaces

This element of the legal sector functional framework for technology covers the products and services which facilitate choices about how legal services are going to be produced, selected or delivered. They may include information tools, diagnostic programmes or lawyer choice marketplaces.

(4) End User functionality

At the end of the supply chain, the users of legal services will be seeking a service that meets one or four possible functional archetypes:

- ***Dispute resolution between private sector interests*** (which might include civil actions, arbitration or mediation). This area of legal activity employs technology in the form of smart contracts, Online Dispute Resolution (ODR) and e-filing. Judicial or case analytics could increasingly play a role, even if these are currently used mainly by legal service providers rather than end users.

- ***State/private sector legal action*** – (e.g. of criminal or administrative tribunals/ courts of protection, judicial review etc). Technologies which are, or could be, used in this area include advice bots, document automation, data analytics and virtual or augmented reality. Crowdfunding justice by issuing tokens on a blockchain (e.g. creating a tradeable interest in a legal case such as a judicial review) is also already under discussion in several jurisdictions[5].

- ***Public registration or records*** (e.g. property, succession, IP, insolvency, company registration etc). Blockchain applications, smart contracts, natural language processing and machine learning are already under examination or being experimented with in several jurisdictions for these purposes.

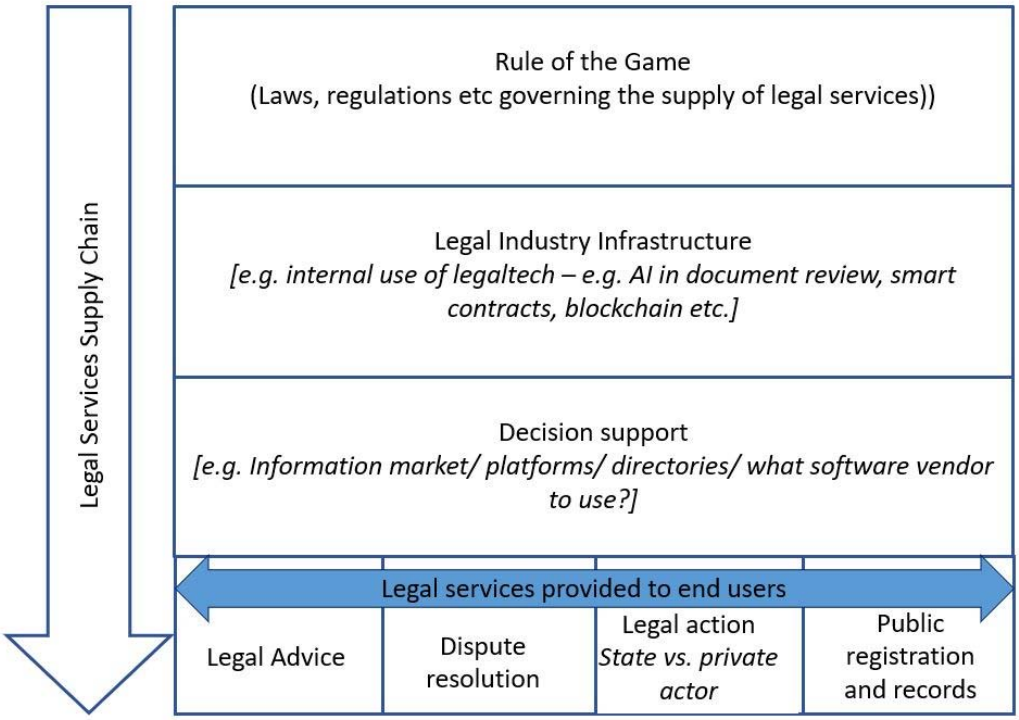
- ***Legal advice***. This is the broadest function that legal services provide and the sort of technologies that could support delivery to end users, include: Legal chatbots and virtual assistants using natural language processing, expert systems using diagnostics to recommend courses of action, as well as simpler forms of document automation and information provision.

Of course, any individual client-legal service provider matter could involve more than one of these types of functions, but this provides a simple schema for understanding the benefits that the ultimate users and consumers of legal services are seeking when they purchase

[5] https://www.legaltechnology.com/latest-news/big-funding-numbers-continue-as-legaler-raises-1-5-million-for-blockchain-platform/

them. This classification can also be related back, in broad terms, to the UN statistical classification of legal services which guides the collection of international data on legal services[6].

Figure 1: A Functional Framework for Legal Technology



This analytical framework provides a starting point with which to address the question of the role that legal sector regulation might have to play. It suggests that this role may need to be different, depending on the purpose, or function, of the activity utilising technology.

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Typology of Legal technology

Within the functional framework illustrated in figure 1, a host of different technologies may be deployed in different stages of the supply chain. These technologies have historically been lumped together under the heading 'legaltech' or, more recently, 'lawtech'. Some commentators[7] have begun to argue that the term 'legaltech' should be used only when talking about back-office, or supply side technologies, and the term 'lawtech' should be employed when talking about consumer facing technologies. This paper, however, only uses the term 'legaltech'. The reasons for this are:

[6] https://unstats.un.org/unsd/classifications/Family/Detail/1074
[7] https://www.legalgeek.co/learn/lawtech-legaltech-wtf/

- Firstly, the use of two separate terms sets up a false dichotomy. In reality, software solutions or business applications might move over time from B2B to B2C uses.

- Secondly, because the functional framework elaborated above, provides a more nuanced approach to understanding how to categorise technology used in the legal sector.

- And lastly, because the distinction between the two terms implicitly suggests that there might be a reason for them to be treated differently in regulatory terms and this may lead to an oversimplified approach to considering regulation of the activity around technology in the legal sector.

Figure 2, overleaf, illustrates the main types of technology that are currently being deployed or developed for use in the legal sector and gives examples of companies developing these technologies and how they work, along with a brief explanation of the benefit they offer.

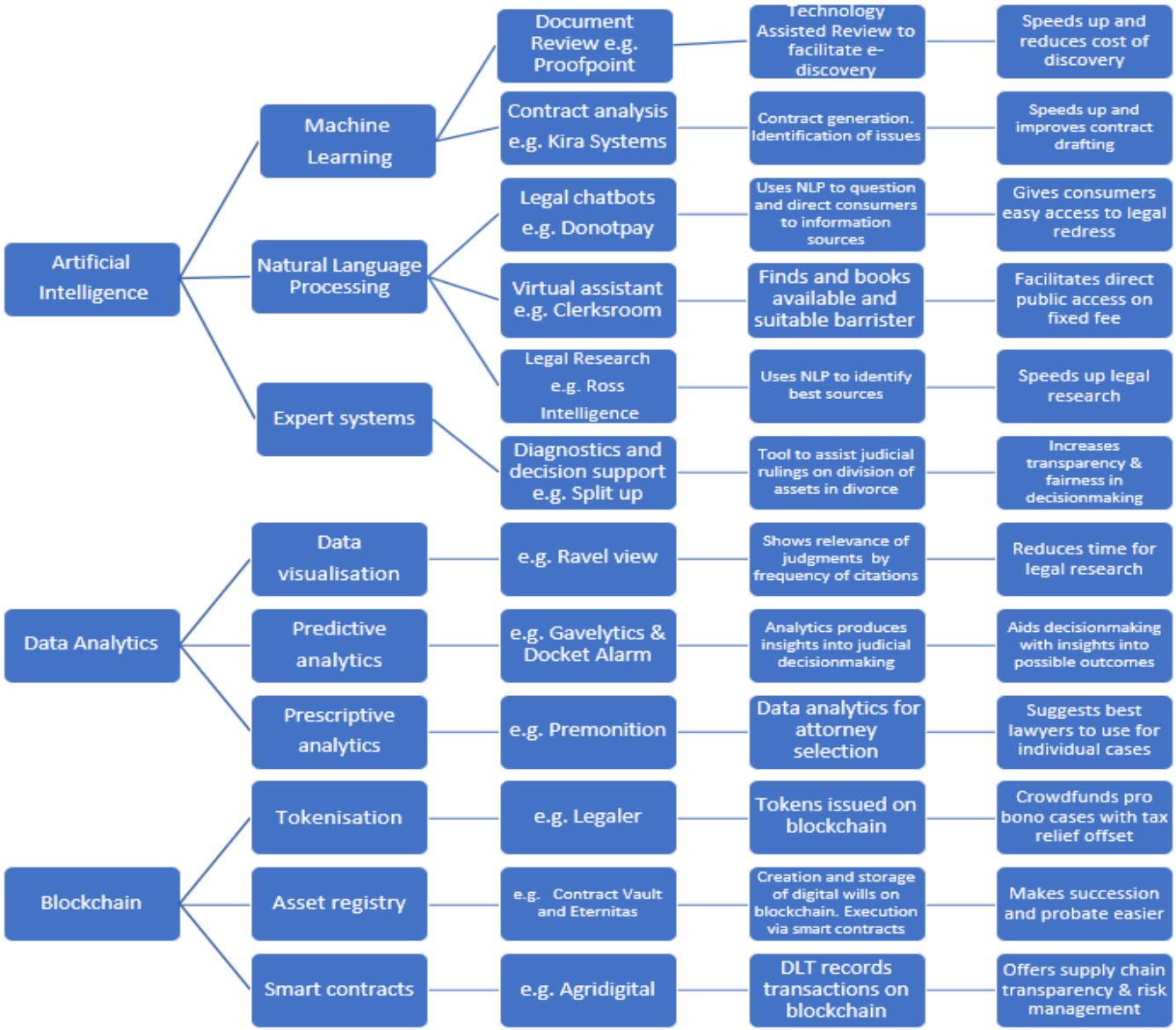
This forms the starting point for understanding how the legal market is being impacted by technology. The next part of this paper looks at the evidence of the actual take-up of these technologies around the world.

Methodology

The research which underpins the analysis in this paper is drawn from three types of sources:

- A literature review, which has drawn heavily on reports prepared by Bars and Law Societies in various jurisdictions and industry publications as well as articles in academic journals.
- A market review, which has looked at the level and type of legaltech activity around the world.
- And a series of interviews with regulators and legal technologists, designed to understand attitudes towards, and drivers for, adoption and regulation of legaltech.

Figure 2: Taxonomy of Legaltech



Part 2: Legaltech Activity Around the World

Over the past decade, legaltech has developed into a recognised strand of the technology market, with its own bespoke software applications and use cases. Although it remains concentrated in the US, and to a lesser extent in the UK, legaltech has developed a truly global reach, illustrated by the emergence of a Nigerian legal advicebot[8], or a Malaysian SME business legal document template provider[9].

Stanford University has complied an international catalogue of 1140 legaltech businesses[10], which captures the largest, best known players, but even this only catalogues a small proportion of the legaltech businesses which are being created daily, worldwide.

The overall size of the legaltech sector is unknown, but we do know that it has begun to experience significant growth in the last couple of years - over $1 billion was invested in legaltech businesses by venture capitalists in 2018[11]. Moreover, this figure does not cover those deals not made public, nor the internal spend on legaltech made by law firms, courts and public agencies. It has been noted by KPMG[12] that, on average, over 20% of investment in technology in recent years has come through corporate venture capital (i.e. company in house accelerators and tech partnerships) rather than through VC investment in startups. However, whilst the volume of investment in legal tech sounds impressive, this figure has to be set against the fact that the turnover of the world's largest 10 law firms in 2017 was reportedly $25 billion and the value of venture capital deals in tech overall in 2017 was estimated to be $120 billion[13].

The Legaltech Development Cycle

In order to get a better handle on the real significance of legaltech for the legal sector, we need to understand how it is being developed. This will help to explain how different stakeholders are engaging with technology and influencing how the market is evolving. From a regulator's point of view, this may also help to reveal where blockages to realising the potential gains of technology might lie. In other words, what is preventing the growth and development of legaltech solutions for the benefit of the users and consumers of legal services?

The legaltech development cycle is depicted below in figure 3. This is not intended to suggest that there is a single process that any individual technology application goes through in order to reach the market, but it does indicate the various players and stages that might be involved.

[8] https://lawpadi.com/
[9] www.burgielaw.com
[10] http://techindex.law.stanford.edu/
[11] Pivovarov and Dolm (2019), Forbes.com
[12] https://assets.kpmg/content/dam/kpmg/xx/pdf/2018/01/venture-pulse-report-q4-17.pdf
[13] Ibid.

Figure 3: The Legaltech Development Cycle

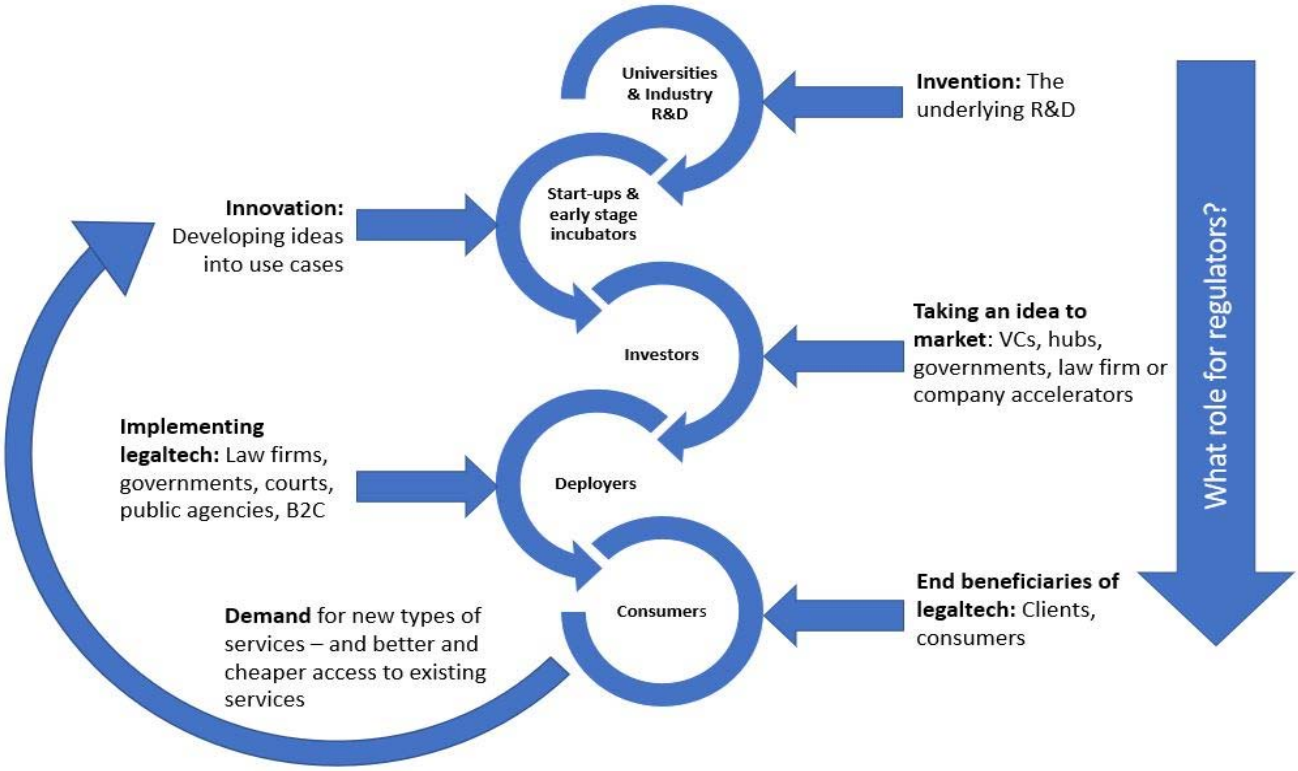


Figure 3 illustrates the following points:

- There are many stages involved in taking a raw technology from an R&D environment and bringing that to market. But an environment which can translate underlying science into applications is key. So, for example, although universities which encourage students and researchers to think about applying technology to legal problems will not alone deliver consumer benefits; without them it will be harder to kickstart the innovation process.

- The evolution of 'use cases' from the foundation technologies, such as AI or DLT, is a key stage. This is where legal design thinking, which deconstructs legal problems and invents technology solutions to address them, has a vital role to play and where legaltech incubators can help.

- Funding is a challenge for the development of legaltech. We must remember that legaltech is competing for funds against a myriad of other tech (and non-tech) investment opportunities. Until there is evidence, or the promise, of significant returns on investment, ideas for deploying technology in the legal sector will be chasing a relatively small pot of money. Regulated sectors are also a bigger challenge for investors than unregulated sectors, particularly where there is still considerable uncertainty about regulators' attitudes to different types of technology.

- The implementation stage is interesting, because most emphasis in the legal press is put on how large firms are adopting legaltech and on a few marquee consumer focused legaltech businesses (e.g. RocketLawyer[14] and LegalZoom[15]). However, there is work going on behind the scenes around the world in courts and government agencies, which could also shift the dial significantly in terms of consumer access to legal services.

- The question of where regulators fit into this picture is not set in stone. As we will see in part 4 of this report, different regulators in different markets around the world have engaged at different stages of the development cycle. This has often been dictated by their wider role in the legal sector (i.e. how narrow or broad their remit is defined).

Annex 1 provides more detail on this ecosystem and how it is evolving in different jurisdictions. It is not intended to present a fully comprehensive picture, but it does highlight some of the notable trends in legaltech activity as well as common and distinctive developments across the globe. From this is it worth noting:

- The most frequently cited technologies which law firms in different jurisdictions are claiming in public announcements to be adopting, are AI driven contract and document review. AI enabled compliance and litigation support are also not uncommon. These may be described as “infrastructure”, using the terminology of the functional framework. Large law firms are also incubating their own legaltech.

- Legaltech is crossing borders, either through the global networks of large law firms who are its main users, or through the market expansion activities of legaltech businesses like Kira Systems[16], Luminance[17] or Neota Logic[18], who supply legal technology software to law firms.

- Lawyer marketplaces or lawyer selection services are near universal. These may be described as “decision support” applications, using the terminology of the functional framework. However, they do vary in the extent to which they enable consumer “DIY” law, as opposed to simply making it easier to access existing legal professionals.

- A growing number of universities, particularly in North America, but increasingly elsewhere, are running courses which combine law and technology in some combination. This would appear to suggest an expectation of growing demand in the near term for lawyers with tech skills.

[14] https://www.rocketlawyer.com/
[15] https://www.legalzoom.com
[16] https://kirasystems.com/
[17] https://www.luminance.com/
[18] https://www.neotalogic.com/

- Whilst there are a few companies (especially in the area of AI) that have grown rapidly from startup status, and whilst there has been a proliferation of legaltech incubators around the world, the longevity prospects of many legaltech startups is unclear.

In the next part of this report, we examine in more depth the impact of this legaltech activity on various key segments of the market.

Part 3. Evidence of the Impact of Legal Tech on the Legal Market

Whilst there is clearly a lot of legaltech activity taking place around the world, the question remains, what difference is this making to the market for legal services in different jurisdictions?

Annex 1 supports the thesis that interest in legaltech is widespread and growing. At present, however, there is little hard quantitative evidence available on the actual size of the legaltech economy in most jurisdictions. There is, however, a general consensus view[19] amongst commentators, supported by anecdotal evidence from law firm press announcements and legaltech conferences and exhibitions, that much of the legaltech activity in most jurisdictions, is aimed at targeting efficiencies in law firms or large corporate legal departments, rather than at the delivery of legal services themselves.

The *Evolve the Law*[20] directory of US legaltech businesses, for example, includes 58 organisations targeting "BigLaw" or corporate legal departments and only 5 that are consumer facing. This is a ratio that is also evident in the membership of the Australian Legal Technology Association[21]. Anecdotal evidence therefore seems to point to the fact that less than 10% (by volume) of sustainable legaltech businesses are consumer facing.

The Impact on consumers and SMEs

This is not to say that there has been no impact on the demand side of the equation. For individual consumers and SMEs, technology is already showing glimpses of its future transformative potential.

The following trends are worth noting:

i) Lawyer and Legal Advice Marketplaces

The first is the explosion of lawyer and legal advice marketplaces. These 'marketplaces' vary in nature. Some are marketplaces set up to give lawyers access to a wider source of work, whilst others are more consumer focused, permitting lawyer ratings and reviews. There are still others, who offer consumers and small businesses DIY access to law, in the form of information and document templates, with onward referral to a lawyer if desired. There is an expectation that some of the latter type of marketplaces will in future add chatbots and more intelligent document templates powered by AI to their suite of services. The sheer number of such marketplaces is striking. In the US alone, they include: ArrestSOS, Attorneyfee, Avvo, Bluetree Legal Connect, Jammed up, Justiserv, LawDeeDa, Lawgives, Lawkick, Lawreview, Lawstud.io, LegalZoom and RocketLawyer, to name but a few.

[19] See for example, Lawsites blog predictions for 2018
[20] https://abovethelaw.com/legal-innovation-center/
[21] https://alta.law/

This kind of platform appears to be how legaltech begins in many jurisdictions, as the following few examples of legal advice marketplaces worldwide illustrates: Yuristiya (CIS), Shakeup Online (Malaysia), Burgie Law (Malaysia), Justika (Indonesia), Legalist Online on Hukuk Hizmetieri (Turkey), Advocatalog (Spain), Legalstart.fr (France), Rechtsanwalt.com (Germany). Some of these platforms provide access to DIY document templates, but many simply offer easy, and even fixed price, access to a lawyer.

Lawyer marketplaces are also attracting significant investment, since the business model in many jurisdictions is a proven one. In July 2018, the Australian legaltech business LawPath, received an investment of $1.8 million in an investment round led by US firm LegalZoom. LawPath's business was modelled on LegalZoom's and it has built up a user base of 60,000 users, since being founded in 2013.

The numbers of SMEs using sites that provide document templates and information tools, in addition to access to lawyers, is large and growing. LegalZoom alone reportedly had over 3 million users in October 2018, including 2 million small businesses.

ii) Consumer Issues or unmet 'legal' needs?

Secondly, there is a steady growth, most obviously in the US but to some extent also in Canada and Europe, of a startup legaltech community which is focusing on the sort of consumer who has problems to be resolved, rather than pure legal questions.

The sort of problems these businesses are dealing with, cover minor annoyances (e.g. flight ticket refunds and parking tickets), where an online service is merely simplifying a process that a consumer could have done themselves had they had the time and inclination to do the necessary research. But they also include a more interesting range of multidisciplinary services, which address problems from the consumer perspective, not purely from a legal perspective. The most notable examples of these are the family law and succession planning startups, which are almost exclusively of US origin.

Box 1: Consumer Legal Services Online

Immigration: *Visaease* (Green card applications); *Roadtostatus* (Green card support from $99 – lawyer review optional),

Family law: *Wevorce* (US – self guided divorce from $949), *Supportpay* – which helps parent manage child support documentation and finances and prevents disputes ($10-15 per month), *Tioex* (Mexico – chatbot assisted divorce online)

Consumer rights: *Refund my ticket* (France – flight compensation - no win no fee), *Flightright* (Germany – flight delay compensation); *Ticketwarrior* (Canada); Fixed (US - parking tickets), Airhelp (US – flight compensation)

Succession: AfterIgo (US); Aftersteps (US), Everplans (US), Tomorrow (US)

Property: LeBonBail (Belgium – digital property leases for landlords); shortsalesopedia (US – help for individuals facing foreclosure; wenigermiete.de (Germany – the enforcement of rent control rights)

Employment: Rightmart (Germany)

Two of the examples mentioned in Box 1 which are worth highlighting are:

- ***SupportPay***: A California based legal tech business which helps separated and divorced couples amicably work out and monitor the finances of supporting their children or ex-partners. The service provides an "agreement generator", a transparent system for tracking payments that can be used by both parties and the option of integration with employer payroll. The site also provides access to legal professionals. It costs $120 a year or $15 a month and in 2017 had over 42,000 couples on its books. Whilst on the face of it, this service is not providing a legal service as such, it is removing the source of tension and dispute between many divorcing and separated couples. One of the testimonies for the service given on the site is from an attorney, who is quoted as saying:

  > *"This is very valuable to my clients. All of their expense and payment history in a transparent system. There is no longer a dispute of who owes what to whom and significantly reduces the ongoing conflict associated with child support."*[22]

- ***Tomorrow***[23]: A Seattle based company which offers comprehensive succession planning including: A free legal will created by a team of 52 attorneys from across US, setting up of Trusts to spread inheritance over a time and reduce tax, a platform to purchase a tailored life insurance policy, tools for managing information and documentation for heirs and keeping track of assets and belongings. The basic will writing service (based on intelligent choices not a document template) is free but premium services start at $39.99 a year.

Neither of the examples highlighted above were created by lawyers. Supportpay was created by the former executive of a technology company who had gone through a divorce, and Tomorrow was created by a digital entrepreneur who experienced the US system of inheritance following the death of his parents. These examples illustrate that the "unlawyered" may be more effectively reached by services which do not present themselves as 'legal services' but rather as affordable, multifaceted solutions to problems approached from the client's point of view. They perhaps also illustrate that individuals who are not legally trained may be better placed to re-engineer legal problems.

Not all the creators of solutions to unmet legal need are startups. Singapore based OCBC Bank has created a free online will writing service for Singapore citizens, to enable them to prepare their own wills. This was designed as part of a package of new services aimed at the Bank's older customers and will save on estimated lawyers' fees for similar services of between Sin$99 and Sin$500.

The overall size and impact of this segment of the consumer market is difficult to quantify at present. We can however conclude that the key characteristics for any new online legal business would appear to be an easily automated process and access to a potentially large market.

[22] https://supportpay.com/about/references/
[23] https://tomorrow.me/

It is worth noting that the technology that is used in many start-up consumer applications is often not particularly cutting edge. Many startups are based more on good process and document automation, than fancy forms of AI. This is often necessary given the absence of the data that would be needed to power AI applications and this situation will change over time as online legaltech providers are able to build up their own datasets.

There would therefore appear to be a marked difference in the sophistication of the technology employed in B2B legaltech and consumer legaltech. This reflects the commercial realities of this market – the services offered are very cheap, or free. Longer term viability for the businesses behind these online services may only be possible if additional paid-for services can be added to their initial offering (e.g. in the form of onsite legal services rather than referral to a third-party lawyer which may need to be unpaid); or if they can achieve massive scale, like LegalZoom or RocketLawyer.

Where online consumer law platforms can achieve scale, they can make a significant difference. In Germany, for example, the flight compensation site Flightright has won five judgements before the German Federal Court of Justice and before the European Court of Justice, all in favour of airline passengers[24]. This example illustrates the importance of the aggregation power of online consumer law platforms, even where the underlying technology is not particularly sophisticated. It also illustrates that technology can help to fulfil needs that the law in its current form does not meet – in this case Flightright becomes a vehicle through which a quasi-class action can be brought.

How to deal with online consumer platforms is becoming a real challenge for many regulators:

- Jurisdictions which do not permit lawyer/non-lawyer fee sharing will, wittingly or unwittingly, place obstacles in the way of the development of viable consumer facing online legal services. They will do so by making it difficult for lawyers to work with others to set up new forms of legal services as owners or entrepreneurs. They will also make it impossible for lawyers to offer add-on services to broader consumer facing platforms.

- The emergence of online legal platforms could also lead to the growth of a large unregulated market for certain types of legal services which fall outside the traditional monopoly of lawyers, potentially confusing the consumer and leading to the loss of transparency over whether or not they are using a regulated service, and what protections they have. However, these platforms may well, based on current evidence, develop only in certain areas which can be made commercially viable through aggregation and commercial viability. This viability is likely to be heavily influenced by the extent to which legal and non-legal services can be provided alongside each other.

- Online legal platforms also pose a challenge to regulators in terms of cross-border services. The most successful platforms are already demonstrating that they will

[24] https://www.lto.de/recht/zukunft-digitales/l/fdp-gesetzentwurf-legal-tech-rechtsdienstleistungsrecht-modernisierung-kommentar/

increasingly seek to move across borders to achieve scale and viability. This will further highlight the myriad of differences across jurisdictions to the definition of "the practice of law" or the "lawyer's monopoly"'.

- The challenge will increase as online platforms deploy more advanced forms of AI, raising questions about the standards applied in this segment of the legal market in relation to confidentiality, independence etc as well as in terms of the scope of potential liability and consumer redress.

iii) Dispute Resolution Services

In addition to the transactional legaltech services that are increasingly provided to consumers, online private dispute resolution and small claims services are also increasing in number and sophistication:

- **Fairclaims.com**, for example, is a US site which deals with arbitration for small claims under $25,000 (for flat fee between $79 and $159).

- **DemanderJustice.com** is a French consumer redress service for claims under €10,000 which don't require the use of a lawyer. The site claims to have processed 570,000 since 2011 at a cost of between €39.90 and €89 per claim.

- **Litige.fr** helps landlords expel tenants and deal with the recovery of unpaid rents. It has dealt with over 300,000 procedures and uses court enforcement officers (huissiers) to serve process and enforce claims.

- **Swiftcourt** is a Swedish online provider of digital contracts for consumers and online dispute resolution.

- **Pactanda** is a Chilean tech company which helps companies manage customer claims and complaints.

An honourable mention must also go to the Netherlands Rechtwijzer which was a pioneer in this area. It was set up as early as 2007 by the Dutch Legal Aid Board (LAB) and the Hague Institute for the Internationalisation of Law (HiiL) to offer self-help and mediated settlement for certain types of previously legal aid funded disputes. This project was discontinued in 2014 on the grounds that it was financially unsustainable, but it has since inspired a number of public initiatives in other countries (see below) and a leaner, purely divorce focused, spin-off in the Dutch market, www.uitelkaar.nl which has been able to raise private sector investment.

A helpful survey of online dispute resolution initiatives published by the US National Centre for State Courts in 2017[25] concluded that many private sector ODR initiatives, in the US at least, had struggled to find sustainable business models. However, the paper also concluded:

[25] Case Studies in ODR for Courts, NCSC (2017)

"What is clear from both public and private sector implementations of ODR is that the use of information and communications technology (ICT) to resolve disputes provides notable benefits to parties with disputes and the organizations (public and private) chartered with resolving those disputes. It is an encouraging trend.".[26]

The Impact on Courts and Public Registries

The experimentation with ODR initiatives in the private sector has encouraged courts and public registries to adopt technologies directly.

One of the best-known examples of court mandated ODR has been operating in British Columbia since 2013 (mandatory since 2015). This initiative was designed to help individuals and small businesses settle disputes without recourse to the courts. The service was initially trialled on condominium disputes but has since been broadened out to cover most small claims valued at up to Can$35,000 (and since April 2019, personal injury claims up to Can$50,000). The success of the British Columbia experiment has encouraged courts elsewhere in Canada and the US to explore and promote online mediation. Lessons learned from these initiatives have been helpfully summarised in the case studies on ODR published by the US National Centre for State Courts[27] but perhaps foremost amongst these is the importance of mandatory procedures. If ODR is not mandatory, its use can be undermined by one party who refuses to co-operate. This is a good example of how regulatory interventions can be vital to the take-up of technology.

The growing interest in the US courts in court promoted ODR, has no doubt encouraged the technology provider Modria[28] to announce in 2017 that it was exiting the e-commerce market to focus on court and ADR organisations[29]. Modria is the technology company which developed the online dispute system that underpinned several large e-commerce platforms like Ebay. This illustrates how technology developed for one purpose and a particular set of users, can evolve to find a use elsewhere in the functional framework for legal technology.

The use of technology in the courts more generally can also bring enormous benefits to ordinary court users. The technology provider, Matterhorn[30], is implementing online systems in courts across the US. It claims that 39% of people who used its system said they would not have been able to come to court in person; and that it has reduced case duration in the courts which are using it, to an average of 14 days, compared with an average of 50 days previously. It has also helped to improve the collection of court-imposed fines, claiming to collect 92% of fines within 30 days, compared with only 51% before the system was introduced.

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[26] Ibid.
[27] Ibid.
[28] https://www.tylertech.com/products/modria
[29] https://www.lawsitesblog.com/2017/06/modria-innovator-online-dispute-resolution-acquired-tyler-technologies.html
[30] https://getmatterhorn.com/

The approach of the US Courts to technology is worth highlighting, because this is one example of where there has been a purposeful intervention in a justice system in order to produce a specific positive outcome – namely, improved access to justice.

The Conference of Chief Justices[31], which is the national level body bringing together the Chief Justices of all US States has set out a strategic approach to technology (see box 2) and challenged each US state to adopt technology to improve access to justice.

It has encouraged states to adopt their own projects, such as the Portal Initiative, which is a joint project of the Alaskan Courts and the Hawaiian Legal Services Commission. This project, which is supported by Microsoft, the Pew Foundation and Pro Bono Net, is designed to ensure that all people with civil legal needs can more easily navigate through the system and find appropriate solutions available to them from legal aid providers, the courts, the private bar, and other community organisations[32].

Box 2: Conference of Chief Justices: Resolution 13 - The Emergence of E-Everything

"NOW…BE IT RESOLVED that the Conference of Chief Justices hereby agrees to establish the following national action plan:

- The Conference of Chief Justices encourages the development of national functional and data standards for automated state court systems and encourages each state to comply with the standards as they develop and to enhance their own automated systems;
- Each state should establish a process and a governing body to create and modify policy on electronic access issues;
- Each state should establish a strategic plan to guide implementation of electronic access initiatives;
- The National Center for State Courts should periodically conduct a national survey of existing state court policies and strategies on implementing electronic access to state court systems; and
- The National Center for State Courts should convene a summit to discuss the results of the national survey and to explore methods of fostering implementation of state court electronic access initiatives.

The navigator element of the project incorporates an Artificial Intelligence module which allows people to describe their problems in their own words, helps them decide if it is a legal problem and, if so, gives them guidance on how to solve it, including appropriate signposting or access to self-help resources. The system has been developed as an open source system on GitHub at relatively low cost. It is an illustration of how an ambitious public interest goal in combination with strong leadership can mobilise diverse interests to effect significant change through technology.

Lessons from the Market

From a legal regulator's perspective, the lessons that might be drawn from this picture are:

i). People don't think about legal problems but about problems: A multidisciplinary approach (i.e. not marketing the service as 'a legal service' is more likely to produce

[31] https://ccj.ncsc.org/Policy-Resolutions.aspx
[32] See materials on this project and other A2J technology projects at https://lscitc2019.sched.com/info

an attractive consumer facing online experience and therefore more likely to meet unmet legal need.

ii). Impact on price: Most of the consumer facing online legal services offer greater clarity around pricing, with some fixed fee options, compared to traditional law firms.

iii). Lawyers have not so far led on consumer facing tech services – and if they are involved will tend to be acting as arms-length service suppliers rather than partners in an online tech business. Ownership and fee sharing restrictions will take lawyers out of the running as entrepreneurs in many jurisdictions.

iv). The upfront investment needed to launch a consumer facing legal tech service before it can attract a premium customer base, does not sit easily with the traditional legal partnership model.

v). To be viable, consumer facing legal services sites either need large scale (e.g. like RocketLawyer or LegalZoom) or need to be embedded in a range of other value-added services that might not be law related.

vi). From the entrepreneur or investor point of view, the existence of regulation around the provision of legal advice may act as a brake on the inclusion of legal services into broader purpose online "life stage" portals (e.g. for divorcees or new immigrants). If value added services are legal but must be completed off-site by an attorney to avoid breaching unauthorised practice of law rules and (at least in some jurisdictions) without a referral fee, then there is going to be less enthusiasm to develop such services.

vii). As government services become more digital, the demand for online consumer "legal" services to interface with them, will also be likely to grow.

viii). As off-the-shelf AI capability becomes more widely available, consumer sites will increasingly be able to integrate diagnostic legal elements. At this stage the line may be crossed into legal advice, which may need to be regulated, depending on the jurisdiction, and this is where challenges for regulators arise.

ix). The experience of ODR in many jurisdictions illustrates how regulation may be needed to create a viable market for a technology that brings consumer benefits.

x). The experience of Modria illustrates how the experience gleaned from applying technology in large scale commercial environments in the private sector can subsequently inform the development of public sector or individual consumer facing services.

xi). Finally, the positive impact of the initiative of the Conference of Chief Justices, in challenging states to embrace technology to promote access to justice, illustrates the importance of leadership. Without this sort of leadership, extracting benefits for consumers from technology will be harder.

Part 4. The Regulation of Legaltech – The Story So Far

Where does regulation fit into this picture?

How technology should be regulated is an issue which polarises opinion, whether in genetic science, financial services or law. In the initial stages, two camps tend to emerge - the pro-innovation lobby, which favours an approach of zero or minimum control by regulation – arguing that regulation may unwittingly kill off potentially beneficial technologies before we have had a chance to see what they could do. This thinking, generally supported by new entrants to the industry, tends to prioritise the potentially transformative effect of technology above all other considerations. Some regulators also feel they must take a hands-off approach because they do not have the vires or technical competence to get involved.

In the opposite corner, there is the "manage or minimise risk" camp which, not surprisingly, is where many regulators are often found. This school-of-thought prioritises the regulator's duty to protect public health, safety, security, the environment and human rights. This does not always imply a desire to stop technological innovation in regulated markets but does imply a strong desire to control the pace, scope and extent of innovation.

Legal regulators are often in an interesting position, since in many jurisdictions, unlike England and Wales, there is no clean separation of the regulator from the practising profession. The extent to which the sector is governed by a self-regulation or 'profession led' regulation as opposed to independent regulation, can have an impact on how regulatory authorities treat technology-enabled new entrants (e.g. as competition or a potentially positive contribution to diversity in the sector). But is can also have a more profound effect than this, since the regulatory model will also determine the extent to which technology poses challenges to the regulatory status quo and the ability of the legal regulator to respond to these.

So far, legal regulators around the world have tended to take one of four approaches:

(i) Hands-Off

For most legal regulators, working with heavy workloads, limited resources and pressing immediate issues, how to respond to the challenge of technology is not a priority. Unless specific disciplinary issues arise, or pressure is exerted externally for some kind of response, this topic will remain on the backburner.

Passivity can, however, have a detrimental effect. In 2015, the Bulgarian Commission on Protection of Competition published an opinion which drew attention to the chilling effect the Attorneys Act was having on the take up of technology in the legal sector in Bulgaria. The ban on advertising in the Attorneys Code of Conduct meant that the information that could be provided by lawyers on online legal marketplaces was extremely limited and also that any services a lawyer wished to provide by an online site, had to comply with the Bar rules on minimum pricing for services.

There is also evidence that, if regulators stand back, new tech providers may seek to create their own standards. The Accord Project[33], for example, is a consortium of industry players including law firms, technology companies and other stakeholders, who have come together to create a common framework for the implementation of smart legal contracts. Whilst this is an initiative that need not necessarily concern regulators directly, it is illustrative of the fact that rules in a new and growing industry do not necessarily play a negative role.

(ii) Resistance

There are some legal regulators who have sought to resist the emergence and use of certain forms of technology in their jurisdictions. For example:

- In 2010, the Taiwanese Bar Association[34] prohibited its members from participating in online marketplaces for lawyers' services, on the grounds that referral fees were involved, which was a violation of the Attorney Code of Ethics.

- Between 2016-18, the Bar Associations of eight US states[35] issued ethics opinions which determined[36] that participation by lawyers in the online legal services provider Avvo's services represented an ethics violation. These opinions were founded on a number of arguments: Firstly that they represented an improper fee sharing or referral fee arrangement with a non-lawyer; secondly that the arrangements violated the lawyer's duty to safeguard client's funds because Avvo retained the fee until the end of the representation; thirdly that Avvo set the price for services, which interfered with the lawyer's independent professional judgment; and finally that the "satisfaction guarantee" offered by the site, prevented a lawyer from being professionally independent. Following these criticisms and the potential implications for lawyers wishing to get involved in its service, Avvo ceased providing legal services in July 2018 and relaunched as a lawyer search and ranking service, supplemented by additional information and FAQs[37].

- In April 2016, the French Conseil National des Barreaux and the Montpellier bar association obtained a judgement from the Court of Appeal in Aix-en-Provence against the online legal service provider, www.divorce-discount.com[38] for having provided unauthorized legal advice. The site offered a fixed price for an uncontested divorce of €300, compared to €2000 on average charged by licensed lawyers.

These examples are sometimes depicted in the legal tech press as pure protectionism (which is certainly a possibility) but, in many cases, regulators would argue that they are simply applying their existing code of conduct and rules of professional practice to lawyers participating in online businesses in the same way that they would in the analogue world. This further illustrates how attempts simply to treat tech businesses in the same way as

[33] https://www.accordproject.org/
[34] Disruptive Innovations in Legal Services - Chinese Taipei, 19 May 2016 DAF/COMP/WP2/WD (2016)
[35] New York, Ohio, Pennsylvania, South Carolina, New Jersey, Utah, Virginia, and Indiana.
[36] Either directly or by implication
[37] Could Consumer-Side Legal Tech Funding be on the Rise? – Legal Tech news, By Victoria Hudgins | October 24, 2018 at 01:34 PM
[38] http://sosconso.blog.lemonde.fr/2015/04/29/divorce-discount-condamne-a-cesser-son-activite/

incumbents may have the unintended effect of preventing tech businesses from developing in the legal sector. Since most (if not all) codes of conduct were drafted in an analogue age, even those that were drafted as principles based, rather than prescriptive codes, will not necessarily meet the specific needs of regulation for technology powered legal services.

(iii) Control

The third approach adopted by legal regulators towards technology businesses in the legal sector can broadly be categorised as "if you can't beat them, join them". The regulators adopting this approach have variously attempted to find ways to adapt new technology to fit existing rules, rather than the other way around.

Some have done this by the absorption or appropriation of tech initiatives:

- A classic example of this is the partnership between several US State Bar Associations, the American Bar Association and the tech company Cloudlawyers[39], to provide lawyer search engines that regulators are satisfied meet their ethical rules.

- But the French National Bar Council (CNB) went one step further in 2015 and bought the market leading lawyer consultation platform from the company Jurihub. It did so in order to ensure that any lawyer selection platform would be compliant with the CNB's ethical rules and to be able to guarantee that the person who was selected to deal with a client's problems through the platform was actually a lawyer properly registered with a bar. This platform, which acts as an online tendering mechanism for different types of consumer law, was relaunched by the CNB under its control in 2016 (consultation.avocat.fr). It offers clients the opportunity to obtain a few quotes from different lawyers and assists with pricing transparency.

In other cases, control has been exerted by defining the circumstances in which regulated individuals can engage with new technologies.

- For example, in the Netherlands, the College van Toezicht Advocatuur, the supervisory authority for lawyers, issued a notice in 2016, informing lawyers of their intention to act on breaches of the referral fees provision in the lawyers' code of conduct. Their focus of attention was on the involvement of lawyers with online lawyer marketplaces. However, the College also indicated that it would not act against lawyers involved with such platforms, if they provided certain information before a given date and ceased to breach any referral fee provision. As a result of this, online platforms have been categorized for the purposes of Dutch lawyers, into seven different categories:

  - No fee paid by the lawyer
  - A reasonable fixed fee paid by the lawyer
  - Payment per click
  - Payment per referral (non-exclusive)

[39] https://www.zeekbeek.com/

- Payment per referral (exclusive)
- Payment per accepted case
- Payment is a percentage of fee

The College of Supervisors permits lawyers to be involved in online platforms which have fee arrangements that fall in the first three categories but regards the other categories as a breach of the prohibition on referral fees.

(iv) Enabling

The last category covers those regulators who have taken a more enabling approach. In these cases, efforts have been made to facilitate the adoption of technology in the legal sector.

These responses have ranged from the limited to the more systemic:

a) Changes to Codes of Conduct

At one end of the spectrum, some regulators have begun to look at the implications of their own rules on the development of legaltech solutions. But despite the existence of various common types of rules that can act as a deterrent for lawyers to engage in legaltech, most of the tech driven changes adopted in codes of conduct to date appear to have been linked purely to competence requirements.

For example, in 2016, the American Bar Association changed the guidance to its model rule 1.1. on competence, to require a lawyer "to k*eep abreast of changes in the law and its practice, including the benefits and risks associated with relevant technology.".*

In 2017, the Federation of Law Societies of Canada also proposed additional commentary to its model rule on competence, referencing the need for members of the legal profession to seek to achieve the competence "appropriate for their own practice area and circumstances". Whilst this avoids the trap of over-prescription, it does not particularly incentivise individual practitioners to embrace technology.

More recently, and more boldly, in January 2019, the newly configured State Bar of California set up a "Task Force on Access Through Innovation of Legal Services". This task force has been charged with identifying possible regulatory changes to enhance the delivery of, and access to, legal services. It has been asked to look at: The definition of unauthorized practice of law in California; rules around marketing, advertising, partnerships, and fee-splitting; and rules around non-lawyer ownership or investment. The task force is required to report back by December 31, 2019.

Whilst this Californian review is a more definitive move than has been seen in any other US state, it is still based on the premise of amending the existing rulebook, possibly to make it more "principles based".

b) Provision of support and guidance

Many legal regulators and professional bodies who wish to enable technology, have identified the need for greater guidance to be given to the legal profession on technology. To date this guidance has tended to focus on current areas of regulatory concern, such as cybersecurity.

The Estonian bar has, for example, produced guidance for its lawyers on cloud computing and using cloud services. The emphasis of these guidelines is how to marry up the use of modern, digital, online tools with the need to manage risks around cyber security and the protection of client confidentiality. This reflects the wider Estonian government strategy for a digital society, which has included the creation of a centrally managed government information system for justice called e-file. This provides for an integrated exchange of information between the police, prosecution services, courts, prisons, probation services, bailiffs, legal aid system, tax and customs board, lawyers and citizens.

Others have curated larger collections of useful material. The Florida Bar has created a website called LegalFuel[40], which offers law practice management and technology information to Florida lawyers.

c) Dialogue around rules for businesses in the sector

A few legal regulators have committed to a willingness to explore how new business models permitting lawyers to share fees with non-lawyers, might be accommodated into the regulatory sphere (notably the State Bar of California (see above) and the Law Society of Singapore in the context of the Future Law Innovation Programme[41] (see below).

Others are still exploring what this might mean. In 2012 the Canadian Bar Association (the national representative body for the Canadian legal profession) established the Legal Futures Initiative which produced a "Futures" report[42], suggested that the provincial regulatory bodies should embrace the idea of outside ownership of law firms, as this would facilitate the take up of technology in legal practice. Some of Canada's regulatory bodies, including in Nova Scotia and the Prairies (Alberta, Manitoba and Saskatchewan) are reportedly exploring parts of the CBA's Futures report recommendations.

Overall, given that most legal regulators in most jurisdictions do not have specific rules for law firms or legal businesses, as opposed to individual lawyers, there is a limited frame of reference for engaging with those who are trying to innovate. It is perhaps worth noting therefore, that the jurisdictions outside the US in which there is most legaltech activity (England and Wales and the Uniform jurisdiction of New South Wales and Victoria in Australia) are also those in which there is the greatest flexibility on lawyer fee sharing with non-lawyers and in permitted forms of business structure.

[40] https://www.legalfuel.com/
[41] https://www.flip.org.sg/
[42] http://www.cba.org/cbamedialibrary/cba_na/pdfs/cba%20legal%20futures%20pdfs/futures-final-eng.pdf

e) Legaltech Strategy

Several legal regulators have either launched or are in the process of launching strategic reflections on technology and the legal profession, including the Federation of Law Societies of Canada and the Legal Services Board and Commissioner of Victoria. In some cases, professional body regulators such as the Law Society of Scotland through its LawScotTech initiative, or the Law Society of New South Wales, through its The Future of Law and Innovation in the Profession (FLIP) commission, have aimed to create focal points within their jurisdictions in order to facilitate dialogue about technology between different stakeholders.

This has led, in some cases, to closer ties across the legaltech ecosystem. In late 2017, for example, the Law Society of New South Wales entered into a strategic alliance with University of New South Wales[43] to produce research on a series of issues, including: clients' needs and expectations, new ways of working, community needs and legal education, artificial intelligence and the practice of law and technological solutions to facilitate improved access to justice.

Singapore has however, gone beyond strategic reflection and has developed and launched a strategy – the Future Law Innovation Programme (FLIP) which is now managed by the Singapore Academy of Law. This programme emerged from a combined industry/government and regulatory reflection which also produced Singapore's Legal Technology Vision in 2017. FLIP has a range of different strands which all complement each other. These strands include education of lawyers who are at an early stage of using technology, the acceleration of ideas to improve legal services (See for example FLIP's 101 problem statements) and the exploration of innovative ideas and business models by lawyers and law firms in a 'safe environment' (i.e. not actually a sandbox but rather an opportunity to enter into dialogue about what might be need to be done by a new business to conform to existing rules).

There is a strand in this overall strategy which relates to regulation and which is owned by the Law Society of Singapore, which is charged with reviewing regulation and identifying improvements that can be made to encourage technology.

f) Building Internal Capacity

In a few cases, legal regulators have recognised that they will need to build their own internal capacity in order to serve their regulated communities more effectively. The lead in this area, however, is coming from representational bars. The San Diego County Bar Association for example, has hired a dedicated technology officer, who has significantly increased the education and training opportunities for the SDCBA's members and provided helpful tailored information for practising lawyers around the use of tech.

[43] https://www.lawsociety.com.au/advocacy-and-resources/news-and-media/new-innovation-and-technology-hub

g) Developing data standards
A few legal regulators have identified the importance of data standards, as part of the enabling infrastructure for technology in the legal sector. In Scotland, for example, LawScotTech is embarking on a project to look at how data could be made available via an API, and which will attempt to learn from positive lessons from the oil and gas sector. In Singapore, the Legal Technology Vision of 2017 identified data portability and data standards as a priority.

h) Developed technology platforms for lawyers
Some regulators, particularly those which have a mixed regulatory/representative role, have developed their own technology platforms which offer services to lawyers and enable them to become more efficient and technologically enabled. The Paris Bar for example, offers its members a suite of online services that include access to the CARPA (for holding client money), professional indemnity insurance renewals, and continuous professional development, as well as online practising certificate renewal.

The Spanish Bar (Consejo General de la Abogacia Espanol) has perhaps the most sophisticated of such platforms, having been developing it continuously since the mid-2000s[44]. This platform not only enables a lawyer to perform all their required interactions with the bars which regulate them, but also provides secure and authenticated access for lawyers to government registries, funding agencies (e.g. for legal aid) and other bodies (e.g. courts, prisons etc).

The Belgian Bars, in an initiative led by the Flemish Bar, are developing a platform for secure cloud storage, communications and transactions by Belgian lawyers. They are also actively investing in tech which could be deployed to support Belgian lawyers.

Overall, the regulatory response from the legal sector to technology would appear to be still at a very early stage and focused largely through the prism of the incumbents.

What is determining the approach of legal regulators?

Several factors appear to determine which approach legal regulators take. These include:

- **Whether there is a positive driver to get involved**
  Most legal regulators are limited by statute or bylaws as to what they are permitted to do. This in part seems to have acted as a brake on legal regulatory engagement with technology. Most progress has therefore tended to be made in jurisdictions in which some overarching strategic push from government or the courts, has been given to regulators to get involved in regulating technology.

[44] https://www.abogacia.es/servicios-abogacia

- **Whether technology developments are taking place in areas that attract the attention of regulators**

  Regulators have tended only to become interested where technology developments have cut across codes of conduct. This belies the extent of legaltech activity, which is significant and growing. Technology developments are therefore happening outside of regulatory engagement.

  Whilst it might suit those who are currently engaged in some areas of legaltech to attract limited regulatory attention, this runs the risk of skewing the benefits of technology. Most of the developments that can comfortably take place without regulatory involvement will be designed to create greater efficiencies for incumbent law firms at the corporate end of the spectrum.

- **The shape of lawyer regulation**

  The determinants of any regulatory response will also be influenced by deeper, structural factors, which affect how the legal regulator in any jurisdiction will, or can, respond to technological developments.

  Those regulators who are responsible for jurisdictions in which there is a blanket prohibition on unqualified individuals providing legal advice have a harder time accommodating legal technology into their thinking than those whose focus is purely on title or certain regulated activities.

  However, those regulators whose scope of regulation is limited to specific activities (rather than 'legal advice' in general), or to those holding particular titles, can only control the involvement of those whom they regulate. In the Netherlands, for example, the College of Supervisors can only exert any control over those online platforms which involve lawyers and not the ones that don't. The risk of this approach – and hence the driver towards some accommodation with online legal services platforms in the Netherlands, is that lawyers are marginalized from the benefit of technological developments and consumers are potentially exposed to less good.

  Engagement in technology issues is also more evident in those regulators with a wider remit. Organisations which have purely regulatory responsibilities have tended to be slower to respond to technology than those that have mixed functions. However, the response of those with mixed functions is not always entirely selfless.

  > *"We have to come together, and we have to take control over this process. Otherwise, we are ceding the battlefield to for-profit lawyer finders."* [45] Illinois State Bar Association, Assistant Executive Director for Communications.

The evidence so far suggests that most legal regulators are cautious, if not actively inclined to look negatively at legaltech. Most have said very little except where they have enforced

[45] https://www.americanbar.org/groups/bar_services/publications/bar_leader/2017-18/july-august/the-lawyer-search-tool-that-never-sleeps-bar-associations-use-technology-to-meet-consumer-needs/

existing rules. Those pure legal regulators who are thinking about this at all, have often approached it as a professional competence issue. Whilst those organisations which have a mixed regulatory/representative role are often approaching this as an issue of maintaining incumbent competitiveness against new entrants.

What conclusions can we draw from this?

Regulators risk being constrained by their own frame of reference, dictated often by the prevailing model of legal regulation. This means that they may be missing the opportunity to help the legal sector take full advantage of the possibilities offered by legal tech or missing the need to mitigate potential risks to consumers presented by online legal services.

Even in those jurisdictions most focused on legal tech, with few exceptions, such as Singapore, there is rarely a holistic approach being taken, which includes all relevant stakeholders (including the judiciary, the organised profession/Bar, incumbent legal service providers, tech powered providers seeking to enter the legal sector to compete/supplement existing services, legaltech developers and vendors, universities, government and the regulator). This is often due to the fragmented structure of regulation and the absence of leadership from an entity which can rise above the vested interests of both incumbents and new entrants, and instead take a user/justice perspective.

Part 5. Lessons in Regulating Tech from other Sectors

There is no doubt that the regulation of technology is a challenge across the board in every sector. A recently published OECD paper summarises the challenges that the digital revolution poses for policymakers, as shown in table 2 below.

Table 2: The Policy Challenges of Digital Transformation

Vectors of Digital Transformation	Policy Challenges
Scale without Mass	*As digital businesses can be physically small but have massive reach - are size-based policies (or policies based around regulating individuals rather than businesses) still appropriate?*
Panoramic Scope	*Do you have competition policies in place to take account of the ability of digital businesses to scale quickly due to low transaction costs and potentially create network effects that may create barriers to entry? Are your policies neutral between traditional firms and digitally enabled firms who may have new business models?*
Speed: dynamics of time	*Have you considered creating spaces for policy experimentation (e.g. sand boxes, policy labs)? Is there scope for replacing overly specific regulations with more general principles that allow greater flexibility? How might data analytics improve the design, implementation and evaluation of policies?*
Intangible assets	*Do policies "follow the data" and make provisions for who owns the data, has control over it and is accountable for its stewardship?*
Transformation of Space	*Do policies that are based on geographic concepts take into account the ability of digitally enabled firms to provide products and services with little or no physical presence?*
Empowerment of the Edges	*Have you developed policies that exploit the ability that digitisation brings to more accurately target policies to individuals or specific businesses? Have you considered the use of block chain technologies as a means of authentication and verification services?*
The Rise of Platforms and Ecosystems	*Have you considered developing public platforms or partnering with commercial platforms to deliver government services and execute public policies? Have you sought to develop a cadre of civil servants with technical expertise that can help inform policy making and its implementation?*

Source: Adapted from Vectors of Digital Transformation, OECD Digital Economy Papers January 2019 No. 273

These policy challenges are faced in various forms by sectoral regulators as well as governments. There are some useful lessons for the legal sector from the way in which regulators in other sectors have addressed these challenges.

Lessons from Fintech

One sector which is often a point of reference for legal sector regulators is the financial services sector. The fintech revolution has taken off since the 2007-8 financial crisis which shook public trust in so many financial institutions. Levels of investment in fintech have risen from less than $3 billion in 2011[46] to over $100 billion in 2018[47]. Not surprisingly, financial regulators have been required to respond. These responses have broadly fallen into the following categories:

- **Sandboxes: A response to the demand for speed and flexibility in regulatory decisionmaking**

The sandbox concept was first launched by the UK Financial Conduct Authority in 2015. It emerged from a suggestion by the UK's Chief Scientific Officer that the financial services industry needed to be able to conduct its own equivalent of drugs trials. The objectives of the sandbox are:

- To enable firms to test products and services in a controlled environment
- To reduce the time it takes to develop new services and at potentially lower cost
- To ensure that appropriate consumer protection safeguards are built into new products and services
- To provide better access to finance for innovative types of service.

The sort of financial businesses that have entered the FCA's sandbox have covered the spectrum of the financial sector, from pensions and insurance through to wholesale and retail banking. The majority of those involved have been in the retail banking sector with a focus on improving customer experience, such as better payment systems, improved tracking of assets, or enhanced identity verification procedures[48].

There have also been some interesting and innovative consumer facing trials taking place in the sandbox. One service tested was designed to help consumers on benefits feel more financially empowered. It enabled them to receive payments from government, manage their budgets through a mobile app and make faster payments for key services such as rent, council tax, gas, and electricity.

[46] https://www.economist.com/leaders/2015/05/09/the-fintech-revolution
[47] https://thefinanser.com/2018/08/100-billion-invested-fintech-2018.html/
[48] www.fca.org.uk/publication/research-and-data/regulatory-sandbox-lessons-learned-report.pdf

Another sandbox firm tested a mobile application which used behavioural techniques to encourage consumers to set aside small amounts of money in a savings account. These savings were then offset against high cost credit obligations and helped to reduce the number of customers going into arrears on outstanding debt.

A further test looked at how AI could be used to obtain more consistent advice for consumers receiving face-to-face debt advice, thus augmenting the expertise and judgment of financial advisers.

Since 2015, the principal financial regulators in Australia, Hong Kong, Indonesia, Malaysia, Thailand, Singapore, Korea, Beijing (Fangshan district), the Netherlands, Denmark, Arizona, to name a few, have launched their own variants of the sandbox concept.

The key features of a sandbox are set out in figure 4, below.

Figure 4: How sandboxes work

Type		Common "customer safeguards"
1	Boundary of sandbox environment	• Fixed time period of the sandbox (e.g. usually half a year to a full year) • Number of customers • Type of customers (e.g. retail/professional, age, income level) • Exit strategy for test failure and discontinuation • Transition plan for full deployment
2	Customer protection measures	• Client onboarding requirements • Disclosure requirements (about the test and available compensation) • Dispute resolution process (e.g. PII)
3	Risk management measures	• System stability, cybersecurity and data privacy • Organizational competence

Source: EY Analysis

- **Regulator non-neutrality: A response to the need to drive change**

A particularly thorny area for regulators arises because virtually any decision that they make in relation to new technology represents a non-neutral position, which may either be perceived as favouring incumbents or disruptors. In the financial services industry, regulators have cast aside neutrality and taken positive steps to encourage disruptors through the creation of fintech accelerator programmes (e.g. the Bank of England's FinTech Accelerator; the Monetary Authority of Singapore's Financial Sector Technology and Innovation (FSTI) scheme). Accelerators are more proactive than sandboxes as they aim to seek out and assist new entrants to produce "proof-of-concepts" for new services.

- **Industry Environment: A response to the need for good infrastructure**

As the functional framework shown in figure 1 of this report illustrates, the legislative framework and industry infrastructure in a sector is crucial to the creation of a tech friendly environment. The broad industry environment will include factors such as the existence of a national digital identity (e.g. as in Norway or Estonia), or the development of specific APIs or other measures to enable open data (e.g. the UK's Open Banking initiative). It can also include corporate law, such as the new law introduced in 2018 by Vermont, enabling companies to incorporate as blockchain-based LLCs, and ensuring that this is supported by a generally positive policy environment.

- **Dialogue: A response to the need to grow regulator expertise**

Many financial regulators recognise that they lack the internal expertise to respond to technology driven innovations. The creation of the advisory panel is therefore an increasingly common tool in the financial regulator's armoury. The US Conference of State Bank Supervisors (CSBS) has, for example, set up a Fintech Industry Advisory Panel which has been commissioned to engage with state regulators *"to identify actionable steps for improving state licensing, regulation, and non-depository supervision and for supporting innovation in financial services".*[49] Such panels usually aim to provide a direct dialogue with a broad cross-section of businesses operating in the fintech sector. The CSBS panel, for example, is comprised of 33 fintech businesses operating across the spectrum of retail financial services. Some of these are well-established financial sector players, such as Western Union and Paypal, some are start-ups and some are digital businesses moving into the retail finance sector, such as Amazon Payments and Microsoft Payments. This sort of panel is intended to be practical and business focused, rather than one that engages a wide range of academic and regulatory input, as in the case of the Board of the UK's Office for Artificial Intelligence.

- **New Regulations: A response to the need to fill gaps**

Many fintech regulators have aimed to fill obvious gaps in their rules e.g. in relation to equity crowdfunding and Peer to Peer (P2P) lending (Korea, Thailand, Malaysia and Singapore). Others, like the Gibraltar Financial Services Commission (GFSC) are creating new types of authorisation to cover types of businesses that don't fit under existing frameworks. In Gibraltar's case, it has chosen to create a regulatory framework for financial sector businesses based on distributed ledger technology (DLT). This framework applies to any business that is not subject to regulation under any other regulatory framework, and which uses DLT for the transmission or storage of value belonging to others. The new framework has been in place since January 2018 and there are now 7 DLT firms registered in Gibraltar, representing around 1.5% of all the Gibraltar Financial Services Commission's licensees.

[49] CSBS Vision 2020

- **Guidance/standards: A response to the need for greater clarity in grey areas**

The increasing use, and potential future uses, of forms of AI in financial advisory services, has led several financial regulators to issue industry guidance on the use of AI. The Australian Securities and Investments Commission (ASIC) has issued guidance on digital financial advice that includes robo-advice[50] and the Monetary Authority of Singapore (MAS) has elaborated a set of principles for the use of AI and data analytics in financial advice[51]. The principles adopted by MAS are shown in Box 3 below.

Box 3: Fairness, Ethics, Accountability and Transparency (FEAT) in the Use of Artificial Intelligence and Data Analytics (AIDA) in Singapore's Financial Sector

Fairness Justifiability

1. Individuals or groups of individuals are not systematically disadvantaged through AIDA-driven decisions unless these decisions can be justified.
2. Use of personal attributes as input factors for AIDA-driven decisions is justified.

Accuracy and Bias

3. Data and models used for AIDA-driven decisions are regularly reviewed and validated for accuracy and relevance, and to minimize unintentional bias.
4. AIDA-driven decisions are regularly reviewed so that models behave as designed and intended.

Ethics

5. Use of AIDA is aligned with the firm's ethical standards, values and codes of conduct.
6. AIDA-driven decisions are held to at least the same ethical standards as human-driven decisions.

Internal Accountability

7. Use of AIDA in AIDA-driven decision-making is approved by an appropriate internal authority.
8. Firms using AIDA are accountable for both internally developed and externally sourced AIDA models.
9. Firms using AIDA proactively raise management and Board awareness of their use of AIDA.

External Accountability

10. Data subjects are provided with channels to enquire about, submit appeals for and request reviews of AIDA-driven decisions that affect them.
11. Verified and relevant supplementary data provided by data subjects are taken into account when performing a review of AIDA-driven decisions.

Transparency

12. To increase public confidence, use of AIDA is proactively disclosed to data subjects as part of general communication.
13. Data subjects are provided, upon request, clear explanations on what data is used to make AIDA-driven decisions about the data subject and how the data affects the decision.
14. Data subjects are provided, upon request, clear explanations on the consequences that AIDA-driven decisions may have on them

[50] https://asic.gov.au/for-business/your-business/innovation-hub/licensing-and-regulation/digital-advice/

[51] http://www.mas.gov.sg/News-and-Publications/Media-Releases/2018/MAS-introduces-new-FEAT-Principles-to-promote-responsible-use-of-AI-and-data-analytics.aspx

- **Collaboration: The need to avoid inconsistent regulatory approaches**

Whilst financial services regulators have increasingly been active in engaging with fintech companies, they have not always done so in a way that is helpful or consistent. In the crypto currency sector, for example, those launching a business in the US find themselves defined and regulated as: "Property" by the IRS, "Money" by the Treasury Department, "Commodities" by the CFTC[52] and "Securities" by the SEC. There are also different, often inconsistent, rules in place across many States[53].

Where next for fintech regulation?

Active regulation of fintech has now been in place in some jurisdictions for 4-5 years, whilst in others, it is just beginning. Wherever they are on their trajectory, financial services regulators are increasingly finding that they do not have a choice about whether to react to the digital revolution. The US Competitive Enterprise Institute has argued[54], for example, that the Consumer Financial Protection Bureau's *"failure to promote innovation and competition as part of a consumer protection framework is an explicit violation of the Bureau's objectives".*

In terms of what might be the next stage of developments for fintech regulation, the advisory firm EY has made several predictions, which may have some resonance in the legal sector. They foresee:

- A growth in sophistication in the use of sandboxes. EY expect that emerging technologies with higher maturity and better-defined scope such as biometrics, user comparison sites and P2P lending will have shorter approval processes and defined criteria for graduation. Less mature technologies with a more uncertain balance of consumer risks and benefits, might follow a different path.

- Cross border cooperation is projected to increase with the prospect of multilateral "FinTech bridges". A few financial authorities have signed FinTech cooperation agreements in recent years which go beyond simple information sharing and pave the way for regional or multilateral experimentation with regulation.

- There will be a push for industry certification both within and across jurisdictions. These will be particularly in demand for areas which require specialized knowledge, such as robo-advice for investment, cryptography in blockchain applications and credit scoring models in alternative lending.

[52] Commodities Future Trading Commission
[53] https://www.carltonfields.com/insights/publications/2018/state-regulations-on-virtual-currency-and-blockchain-technologies
[54] https://cei.org/blog/financial-services-regulatory-sandbox-win-consumers%C2%A0%C2%A0

Whilst all the tools used by financial regulators may not directly translate across to the legal sector, there are certainly ideas from the fintech sector that can be adapted. Notably:

- The need for cross border cooperation on this issue.
- The potential for certification of individuals or of services to be used in some form.
- The need to look at regulating businesses, not just individuals and be able to respond to the regulatory needs of new business models, whilst managing consumer risk.

Medical Device Regulation

Fintech is not the only sector which might hold lessons for the regulation of legal tech. The use of technology in the health sector is also interesting for legal regulators to explore, since both sectors are experiencing the dual phenomenon of new technologies that can augment the decisionmaking capacity of expert professionals, and empower the lay consumer to self-diagnose, and perhaps even resolve or cure their problems.

Whilst the legal services sector remains hung up in most jurisdictions on the dichotomy of 'lawyers' versus 'non-lawyers', the medical world has been able to develop a different approach. This is largely thanks to the long-standing existence of national regimes for the regulation of medical devices, which may or may not be used by expert clinicians. This regime has been able to expand to cover software in medical devices and health apps which embody artificial intelligence.

Medical device regulation is longstanding and although it varies from jurisdiction or economic area, there are commonalities across countries. As early as 2013, the International Medical Device Regulators Forum (IMDRF) began to establish a common framework for regulators in relation to technology. This was designed to assist regulators everywhere to take a convergent approach to the regulation of Software as a Medical Device (SaMD). This sort of cooperative effort has produced guidance[55] which states that software which is intended to "treat or diagnose" is considered to represent a higher risk (and consequently should be subject to more stringent regulatory oversight) than those that "drive" or "inform" clinical management.

The UK's Medicines and Healthcare Products Regulatory Agency (MHRA) has slightly expanded this classification into: Apps and software that are intended to diagnose, apps and software that are intended to calculate clinical risk; and apps and software that are intended to provide clinical decisions. It has also produced very useful guidance for developers to assist them in understanding whether software or apps that they have developed should be regulated and what standards and other requirements they will need to meet[56].

[55] www.fda.gov/downloads/MedicalDevices/DeviceRegulationandGuidance/GuidanceDocuments/UCM524904.pdf
[56] MHRA Guidance: Medical device stand-alone software including apps (including IVDMDs) v1.05

Besides this, in the UK and throughout Europe, standalone software and apps that meet the definition of a medical device must be CE marked in line with the EU medical device directives, in order to ensure they are regulated and acceptably safe to use and perform in the way the manufacturer/ developer intends them to.

However, in order to encourage the safe development of new applications, some medical device regulators have taken an approach not dissimilar to the sandbox approach. For example, the US Food and Drug Administration (FDA), which historically required new medical devices with no legally marketed equivalents to be given the highest regulatory classification, has recognised that this could potentially undermine the development of new technologies. It has therefore published a Software Precertification Test Plan. This aims to explain how the FDA would satisfy itself that AI driven software devices are sufficiently safe and effective to be given limited market clearance to enable them to be tested and to collect the data they need to be developed, even where they cannot meet the same standard required of traditional medical devices.

There are some areas of potential interest to legal regulators in the approach taken by regulators of medical devices:

- Firstly, regulators have not attempted to treat all AI driven software and apps in the same way. An attempt has been made to classify risks according to its end user or purpose;
- Secondly, regulators have offered guidance to developers about the requirements they will need to fulfil and the standards of information transparency about their software that they should provide to users.
- Thirdly, regulators have cooperated across countries, to find common approaches, even if their regulatory regimes are different.
- Lastly, regulators have realised that it may be disproportionate to apply the same rules to apps under development and some kind of sandbox or precertification approach may be needed.

AI driven medical software has not been without its problems and there continue to be a raft of unresolved problems, inter alia, around liability issues[57]. But this area is nonetheless one which might merit further close examination by legal regulators for ideas and inspiration on how to address the problems of expert and diagnostic systems.

In addition to these industries which have analogies to the legal sector, there is experience worth regulators being aware of in less obvious comparative circumstances.

The Automotive Industry

The automotive industry illustrates how the existence of appropriate rules can promote the development of a new industry.

[57] http://blog.petrieflom.law.harvard.edu/2017/02/10/artificial-intelligence-and-medical-liability-part-ii/

Countries which have adopted legislation around the regulation of driverless cars[58] (the UK, Germany, South Korea and Singapore) have, not surprisingly, developed the technology faster than others. Germany, for example, has developed a testing paradigm which sets out clearly what is permitted (e.g. a driver's hands off the wheel), where responsibility lies (the carmaker is responsible for accidents if these are due to system failure) and the ethics of decisionmaking in these circumstances (to be compliant in Germany, autonomous vehicle software must prioritize human lives over animals and property).

The autonomous vehicle industry has also had to meet requirements for the documentation of failures[59], leading to exploration of how the notorious black box problem in deep learning might be dealt with. This has led to the importation of ideas from the Air Accident and Safety Industry and investigation of how flight data recorders might be adapted to autonomous vehicles in order to assist with an ex-post understanding of where liability might lie for any accidents[60].

The black box problem in AI is often raised as a potential issue for legal AI, so it is instructive to see that other industries have found potential solutions to this problem.

Interesting lessons from this for legal regulators are that the automotive industry's experience demonstrates that:

- Appropriate regulation can enable the development of technology solutions
- Ethical requirements and liability considerations can be built into technology.

Conclusions

The legal sector is not alone in adjusting to the world of technology. There are therefore many opportunities for legal regulators to learn from other sectors. This may, however, require regulators to take a much wider view of the market for policy ideas than they traditionally might have done.

[58] https://www.insurancejournal.com/news/national/2018/05/15/489307.htm
[59] Bryson, CoE conference, Helsinki (2019)
[60] Washington University Law Review Volume 92 | Issue 5 2015 The Black Box Solution to Autonomous Liability Ujjayini Bose

Part 6: What lessons can be drawn from this for Legal Regulation in England and Wales?

There are many lessons that regulators in England and Wales can draw from the rest of the world and from other sectors. These lessons can be translated into risks that regulators should factor into their policymaking in relation to technology.

- **Risks of doing nothing**

Firstly, whilst there are plenty of tech entrepreneurs who would argue that regulation acts as a deterrent to investment by venture capital, and who might be fearful of regulatory involvement in legal tech, there are risks in doing nothing. The current state of regulation in the legal market in many jurisdictions is not necessarily conducive to investment. If regulators do not respond to the challenge of legal tech, investment capital will favour other areas in preference to the legal market. The opportunities that technology presents, to improve the functioning of the sector, will then be lost.

- **Risks of being too slow**

Although regulators ought not to take the easy option of standing aside and letting legal technology develop independently of regulation, this does not mean 'business as usual'. Regulators need to learn from other sectors that business models in the tech industry are very different from traditional sectoral models. If regulators want the positive benefits that technology can bring to longstanding problems of e.g. access in the sector, they will need to be prepared to move more quickly than in the past. This may mean being prepared to encounter a greater risk of challenge in decisionmaking.

- **Risks of being constrained by the current regulatory model**

Evidence from around the world illustrates how important the regulatory model is in determining how regulators engage with legal tech. It is important for regulators to be aware of this and to be prepared to think about how current regulatory structures and constructs may be narrowing their field of vision. It is also a particular risk of regulation by title[61].

- **Risks of settling for sandboxes rather than building castles in the sky**

The sandbox approach has been widely embraced in the financial sector and is seen as a positive way for regulators to be flexible when faced with new technological solutions, whilst minimising public policy risks. Sandboxes certainly have their place in the regulator's toolbox but should not be the whole story. The sandbox approach only deals with circumstances in which innovators have a business proposition which needs to be tested

[61] University of Melbourne NSI Discussion Paper 1, 2018

against the existing rulebook. They promote an incremental approach, in which individual rules may be waived or modified. What they do not do, is proactively harness technology to deal with systemic problems, such as access to credit for the poor in the financial sector, or access to justice in the legal sector. These kinds of issues require a deliberate policy decision to use technology to help solve them and to provide incentives to entrepreneurs to focus in this direction.

- **Risks of the binary regulated/unregulated model**

Different jurisdictions may have different boundaries between what is and is not regulated in the legal sector, but these boundaries are all problematic when considering new technology. For example, in England and Wales, legal advice apps which incorporate advice outside of the reserved activities would, as in the case of similar advice provided by a human being, be unregulated. Although they would be covered by the basic protections offered by the Consumer Rights Act 2015 and the Electronic Commerce (EC Directive) Regulations 2002, these protections would only apply where a contract had been concluded[62]. There might, however, be greater risks involved in an unregulated online automated advice service compared to the same unregulated advice being provided by a human being. A consumer accessing an app which gives legal advice may, for example, not know if the app is designed for their jurisdiction. Equally, the app designer may never have intended it to be put to the use that an unwitting online user chooses for it. And lastly, a highly misleading app which was of great significance to the choices made by individual consumers, could potentially cause more damage more quickly than a rogue human.

It has sometimes been suggested that this might justify a redrawing of the boundaries of regulation for the entire sector (see for example, NSI University of Melbourne 2018). However, this doesn't have to be the case, as other sectors, like the health sector illustrate. The example of the regulatory debate around health apps is very instructive for the legal sector and might point to an intermediate type of kitemark based regulation to deal with new types of risk. The medical profession continues to be divided on the appropriateness of kitemarks[63], but the European Union has been establishing a new CE mark regime to govern medical devices, which covers Software as a Medical Device (SaMD). This regime subjects SaMD to regulation where such software is classified as a medical device, with a different regime applying to devices that are classified as "accessory" devices[64]. The classification is dependent on the level of risk involved to patients or users. Regulators in this area have been at pains to stress that the delivery of medical device type activity through software or an app will be subject to full regulation. The clinical director of devices at the Medicines and Healthcare Products Regulatory Agency (MHRA) said to a conference in 2015, "Be under no illusion—if you have a medical device and it's software or an app and patients come to grief, we're coming looking".[65]

[62] Electronic Commerce (EC Directive) Regulations 2002 SI n° 2013 of 21/08/2002
[63] Van Velthoven, M., & Powell, J. (2017). Do health apps need endorsement? Challenges for giving advice about which health apps are safe and effective to use. Digital Health
[64] https://www.bsigroup.com/en-US/medical-devices/Technologies/Software-as-a-Medical-Device/
[65] https://ec.europa.eu/digital-single-market/news/call-expression-interest-establishing-working-group-mhealth-assessment-guidelines

- **Risks of uncertainty about liability/responsibility issues**

There has been a great deal of focus on AI and ethics in the last couple of years and there are many others engaging with this question. However, “ethics” is a narrow regulatory concept as well as a broad societal issue. Although it has not yet become a major drag on the development and deployment of AI in the legal sector, it may well do so in future if the medical sector precedent is anything to go by.

It would help to promote the take-up of AI if there was a sector-wide reflection on the specific ethical issues for the sector posed by different forms of AI, how they are used and what this might mean for the authorised individual or entity who acts as “the moral agent”[66]. In other words, helping to unpick some of the responsibility and liability issues around the use of AI in the legal sector. In certain circumstances, this could mean, for example, that a responsible legal service provider should only use AI when they have an appropriate understanding of the data on which the software application has been trained, an appropriate knowledge of how the underlying algorithm or deep learning works (or the ability to obtain an ex-post explanation), and are deploying the software in an appropriate environment. However, the extent to which such a detailed understanding might be required should depend on the use to which the software is being put. In other words, an ethical AI legal regulatory framework might need to exert greater control and scrutiny in circumstances where AI is applied to consumer legal needs.

Given that individual legal service providers are realistically, not going to be in a position to have all of that knowledge about the software and how it was developed, there is an argument for some standards to be developed for legal services applications using AI in the provision of legal services to end users. This is where the concept of the functional framework for legaltech becomes a useful tool.

- **Risks of siloed thinking**

One of the most striking lessons from other jurisdictions and other sectors, is that the most interesting developments in technology are happening where a variety of different stakeholders with different backgrounds have come together. The ‘big tent’ legal sector conversation about technology has now become commonplace.

Whilst this is a good starting point, there are many other interesting technology regulation lessons to be learned from sectors which the legal sector would never previously have thought of looking at, ranging from medical devices to the automotive industry.

- **Risks of being overwhelmed by the challenge**

Most regulators don’t have the data, skills or internal cultures to enable them to deal easily or comfortably with technology. The evidence from other sectors and jurisdictions is that most regulators are just at the beginning of the journey and the key is not to get frightened. Doing something, however small, is a start.

[66] Bryson, J. (2018) “How do we hold AI itself accountable? We can’t”.

- **Risks of competition not cooperation**

Technology, and AI in particular, has become a competitive battleground for governments and regulation is often seen as part of the global competitiveness equation. Nonetheless, as the financial sector has increasingly discovered, there are also strong incentives for regulators to cooperate. Entrepreneurs often seek a bigger playing field than one jurisdiction in order to make their investments in technology work, and this leads to the need for interoperability between jurisdictions. Beyond this, regulators everywhere are short on resources and it therefore makes sense for them to share insights and pool expertise, even if their domestic models are slightly different.

- **Risks of lack of leadership**

Large corporate law firms, not surprisingly, lead on the adoption of the more advanced technologies in most jurisdictions. The drivers for large law firms to adopt AI solutions, for example, tend to be either client pressure, or greater internal efficiencies. The scope for technology to make a difference, however, is greatest at the consumer and unmet legal end of the demand curve. Ensuring that technology impacts all parts of the sector is something that may require regulatory action. The courts in the US, for example, are playing an important leadership role in trying to apply technology to access to justice problems and this is Illustrative of what leadership from the top can look like.

Part 7: Recommendations

This discussion leads to a range of recommendations.

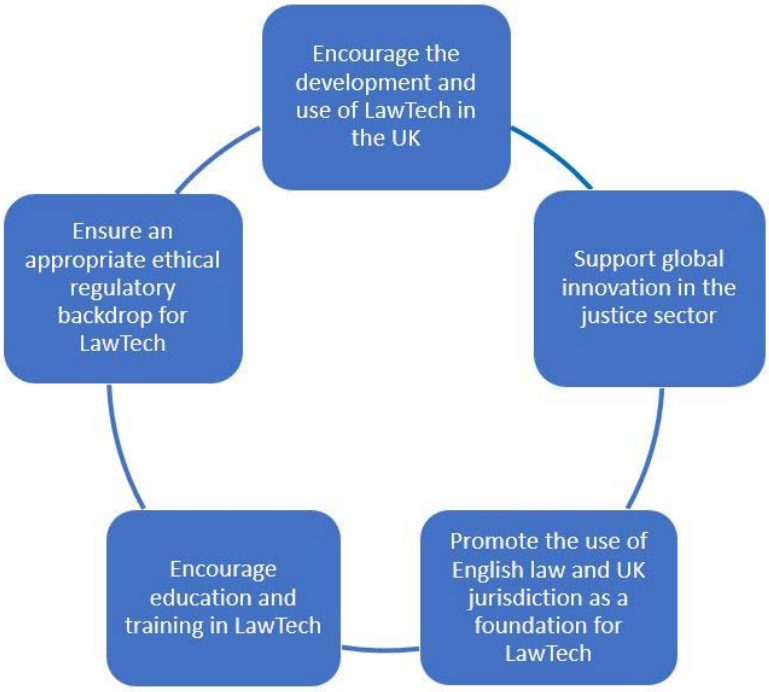
(a) For the Legal Services Board

The LSB is well positioned at the centre of regulatory framework in England and Wales and should therefore be well positioned to take a broad and longer-term view of the market. The specific suggestions for further action for the LSB to take are:

i) Better joined up with the courts and other public sector initiatives

The UK government has made technology a priority for UK PLC. *The AI Sector Deal* [67] published in March 2018, sets out an industrial strategy for AI. In response, in summer 2018, the Lord Chancellor set up a LawTech Delivery Panel which has the following objectives, illustrated in figure 5.

Figure 5: The Objectives of the LawTech Delivery Panel



In March 2019, the Lord Chief Justice also set up an AI Advisory Group, to offer guidance on the likely impact of developments in AI on the Judiciary. The remit for this group also included: Ensuring that judges are sufficiently trained on AI and its impact; and considering the most pressing legal, ethical, policy, cultural and economic effects of AI.

[67] https://www.gov.uk/government/publications/artificial-intelligence-sector-deal/ai-sector-deal

The LSB and frontline legal regulators should be part of these wider sector conversations, or at the very least, there should be a regular opportunity to bring regulators together with those working on the same problem but from a slightly different angle. The LSB could also liaise with regulators in other sectors and monitor the wider "UK PLC" regulatory initiatives that might impact on legal sector regulation (e.g. the recommendation from the House of Lords[68] that a group of bodies including, inter alia, the Centre for Data Ethics and Innovation, the Alan Turing Institute, the Institute of Electrical and Electronics Engineers and the British Standards Institute should produce guidance on the requirement for AI systems to be intelligible).

ii) A Standing Advisory Panel

Currently there are plenty of opportunities for legaltech start-ups and investors, vendors and clients to get together at industry specific gatherings, but little direct dialogue with regulators on the industry-wide or systemic challenges posed by technology. The LSB could help to fill this gap by setting up an advisory panel on legal technology, along the lines of the approach taken by the US Conference of State Bank Supervisors (CSBS). The objective of such a panel would be to ensure that the legal regulatory environment was as supportive of the development and adoption of technology as required to meet both regulatory and wider UK PLC objectives. The panel could be charged with addressing some specific questions, along the lines of those outlined below in 'specific projects' and coming up with recommendations for the legal sector as the CSBS advisory panel did. In order to be most effective, the panel would need to include a range of industry players, representatives of consumer interests, data scientists and academics, as well as regulators. Care would, however, need to be taken that this did not duplicate the efforts of the LawTech Panel.

iii) Cross-border dialogue

The challenges of technology in the legal sector are by no means unique to the UK. As this report has illustrated, many other legal regulators are grappling with the same issue and are at the same early stage of consideration. Although technology development, and AI in particular, is often seen through the prism of geopolitical and economic competition, there is also a recognition in many sectors that this is also a matter in which countries need to cooperate.

The LSB could play a useful role in this, for example, by building on the existing International Conference of Legal Regulators[69] network. It could bring together a group of regulators from different jurisdictions who were most interested in the regulatory consequences of technology in the legal sector. Such a group could usefully also comprise academics with expertise in legal regulation and applied computer science, as well as practitioners and players from the legal tech sub-sector. This could take inspiration from the Global Financial

[68] House of Lords Select Committee on Artificial Intelligence, Report of Session 2017–19 HL Paper 100, AI in the UK: ready, willing and able?
[69] https://iclr.net

Innovation Network[70] and could, for example, start by aiming to establish common understanding about key definitions and terms, in order to begin building a legal regulator's playbook for technology.

There are also several specific projects in which the LSB could engage for the benefit of the legal sector:

iv) Setting a Legaltech strategic challenge to regulators

The LSB could follow the lead taken by the US Conference of Chief Justices and set out an ambitious goal for the deployment of technology in the legal sector. In the case of the US, the focus is access to justice, with an emphasis on the courts and dispute resolution. A UK version of this could focus more explicitly on how regulators can use technology to solve the unmet legal need problem. This would allow the conversation around the regulation of technology in the legal sector to be drawn more widely than simply around the question of whether regulation is or isn't a barrier to innovation. This could be designed to build on and broaden-out existing initiatives in order to take a more holistic view of how technology can be harnessed to solve access to legal services and access to justice.

vi) Data standards

The LSB has already done important work on open data. But there is much more that could be done. The LSB should consider leading an investigation into where the data assets of the legal industry lie and with whom. This may be a critical building block for future developments, since there is possibly a greater risk of overconcentration in the information assets of the sector than in any other area (given the dominance of companies like Thomson Reuters and Lexis Nexis). The importance of this is underlined by comments that were made by Mike Lynch to the House of Lords Select Committee on Artificial Intelligence and quoted in its April 2018 report[71]

> *"Data is everything in machine learning, which means whoever gets access to data can have a big advantage. As they gain a more consolidated position in the market, in turn they get access to more data, and so they can easily create an advanced competitively defensive position".*

The data gathered and made available by front line regulators through the open data initiative, is a good start but it must be recognised that what this includes is inevitably limited by the current regulatory model. The legal services market will only work effectively when there is enough data available about the problems that the LSB is keen to resolve. There is therefore scope for a project on data in the legal sector – its existence, availability, usability and what could be done to improve this situation.

[70] www.fca.org.uk/firms/global-financial-innovation-network
[71] Ibid.

vii) Ethics and AI

There has been a great deal of focus on AI and ethics in the last couple of years and there are many others engaging with this question, not least the Law Tech Panel, which has looked at ethics in the justice system. However, "ethics" is a narrow regulatory concept as well as a broad societal issue. The LSB could usefully lead a project reflecting on the specific regulatory ethical issues for the practising profession posed by different forms of AI, how they are used and what this might mean for the authorised individual or entity which acts as "the moral agent"[72] in legal advice scenarios. In other words, helping to unpick some of the responsibility and liability issues around the use of AI in the legal sector.

viii) Ensure consistency of approach

The experience of other sectors explored in section 5 illustrates the risk of inconsistency in regulatory treatment (e.g. of blockchain by various US financial services regulators). The LSB could help to ensure that regulators develop a common language and conceptual understanding. This might be done, for example, through training organised by the LSB and made available to relevant staff at the front-line regulators.

ix) Creating a Toolkit for Legal Tech Start-ups

There is a regulatory product that the LSB could either produce itself or do so in collaboration with the frontline regulators and others. This would be a toolkit for entrepreneurs seeking to start a legaltech business on the issues they should be aware of. This is the kind of exercise which could underpin the development of a future BSI standard for certain types of legal technology that might warrant 'soft regulation'.

x) Reflecting on the regulatory model

As explored in the previous part of this report, there may be new questions to be asked about the current regulatory settlement in England and Wales, prompted by the increased use of technology in the sector. As technology changes the balance of risk in the sector, the Legal Services Board should not be afraid to reflect on what this means for the England and Wales regulatory model at a fundamental level.

(b) For Frontline Regulators

The frontline legal sector regulators are all at very different stages of engagement with technology and have very different levels of resource capability. However, even where a sophisticated approach has been taken (e.g. by SRA), this has been focused largely on

[72] See "How do we hold AI itself accountable? We can't" Joanna Bryson University of Bath

engagement with individual legal sector businesses and not at a systemic level. The frontline regulators might therefore all be encouraged to:

i) Develop technology strategies

These will inevitably vary in detail and sophistication and will depend on which part of the sector they are in, and the nature of the authorised persons or entities for whom they are responsible. However, whilst this would be a challenge for smaller regulators, it would be worthwhile encouraging each of them to develop a view on the big technology questions facing the sector and to begin to think through their own approaches to these questions. For the very smallest regulators, the LSB might assist in facilitating these reflections.

ii) Build up internal knowledge and understanding of legaltech

Inevitably, an exercise like that suggested above, would help to develop more understanding within each frontline regulator. It would help to embed greater understanding of technology into the regulatory organisations if the larger regulators were encouraged to set up their own internal staff working groups, cutting across the different functions of the organisation in order to promote an overall growth of understanding about how technology is changing the market and will change regulatory functions over time. Regulators could also be encouraged to look at where they themselves can deploy technology to improve their own performance.

iii) Dialogue with tech businesses active in their areas

Given the different areas of the legal sector for which the frontline regulators are responsible, there will most likely be some differences in the type of legaltech with which their authorised individuals and entities engage. Each frontline regulator should therefore be encouraged to create their own dialogue with relevant businesses, once they are more familiar with how technology will impact their area of the legal sector. This might include existing authorised entities who are using or incubating tech solutions, potential new entrants, those who are deliberating positioning themselves as unregulated and tech entrepreneurs with products relevant to the sector.

v) Encouraging RegTech

Although the incentive for entrepreneurs to enter the legal regtech industry is nowhere near that of the financial sector, there are still ways in which technology could be harnessed to assist with compliance and the LSB, together with frontline regulators, could assist in this regard. Firstly, they could do so by increasing dialogue with startup regtech businesses to help them understand where there might be legal sector specific issues e.g. around legal professional privilege. Secondly, they could facilitate a dialogue across the sector on how regtech might help to build underlying legal regulatory principles (rather than explicit requirements) into their technology. Ultimately, what legal service providers want, is not to have to think about whether the software they are using is appropriate for their legal sector needs in terms of cybersecurity, data protection, AML etc. This is not to say that the LSB or

the frontline legal regulators should necessarily get into the business of kitemarking software for the legal sector, rather that it could issue continually updated guidance on the issues that software for internal use by the legal sector might deal with.

iv) Reengineer problems

Further down the road, the frontline regulators may want to expand on the overarching legal tech regulation challenge, which was suggested earlier and develop their own design thinking. In practice, this would mean, taking certain consumer related legal issues and working with others in the sector to reengineer them from the consumer perspective. This design thinking approach is evident in the US consumer legal tech applications looked at in part 3 of this report, like Supportpay or Tomorrow.me and in the various small claims apps which exist in different jurisdictions. However, there is an opportunity for the market in England and Wales to take solutions like these to the next level of functionality, by integrating regulated legal services in a way that is not possible in many other jurisdictions. Thinking through how regulated legal services could work alongside consumer-focused apps which bundle various services together to deal with specific problems, may help to unlock some of the elusive hidden legal need in society.

Conclusions

Regulation is not only about managing market failure and securing the public interest and other public policy goals. Industries will often autonomously seek to establish rules to help them function and develop their markets. Indeed, this is how much of the regulation in the legal sector outside the courts in England and Wales, and elsewhere, has emerged. At their best, such industry-driven rules create clarity, interoperability between players, standards to guide choices by customers and a reduction of duplicated effort. On the negative side, they can be used to distort competition and create barriers to entry which then requires public policy intervention.

Legal regulators should therefore not assume that standing aside from legaltech to avoid interfering unhelpfully in a world of which they are uncertain, is necessarily the right answer.

Alison Hook
June 2019

Annex 1: A Mapping of Legal Technology around the World

ANNEX 1: A MAPPING OF LEGAL TECHNOLOGY AROUND THE WORLD

North America

	Universities with Legaltech Courses or Legal Technology Centres	Incubators or innovation hubs supporting Legaltech or A2J startups	Legal Tech Business	Deployment activity
Canada	Legal tech centres hosted in the following: University of Waterloo and Osgoode Hall Law School; Dalhousie University – Law and Technology Institute; University of Ottawa – Center for Law, Technology and Society; University of Toronto – The Center for Innovation Law and Policy (CILP); Ryerson University – Legal Innovation Zone	Canadian Incubators supporting legaltech: OSMO Foundation (Montreal) -has planned emphasis on startups geared towards disrupting traditional professional services. The Legal Innovation Zone (LIZ) (Toronto) spun out of Ryerson University. Creative Destruction Lab (Toronto) The Vector Institute (Toronto) Centre4Growth (Vancouver) - not explicitly legal tech but has hosted many access-to-justice startups. Spring Activator (Vancouver) - supports access to justice tech.	Major Canadian legaltech businesses include Kira Systems - contract review and analysis; Diligen - AI document review; Loom Analytics - application that helps law firms and companies to analyse settled matters that did not leave behind a public court record. Clio – practice management software now with AI integration; Blue J Legal – predictive analytics software; OpenText™ Magellan– AI platform; Attorned (Toronto) - online legal procurement and flexible resourcing; Clausehound (Toronto) – tool for entrepreneurs, early-stage businesses and small businesses; Rangefindr.ca - helps lawyers and judges find criminal sentencing ranges in seconds instead of hours.	Large Canadian law firms have all embraced technology: Osler Hoskin & Harcourt LLP, Fasken, Gowling WLG and Miller Thomson LLP all use Blue J Legal. Gowling WLG and Bennett Jones have adopted Loom Analytics. McCarthy Tétrault LLP and Cassels Brock & Blackwell are using KIRA Systems. Aird & Berlis has seconded one of its corporate associates to Toronto-based legal AI company, Diligen, to enable the firm to make use of the company's technology for due diligence and real estate matters. The Quebec Bar, Quebec notaries and accountants have teamed together to invest in developing a secure communication tool to be offered to their members.

	Universities with Legaltech Courses or Legal Technology Centres	Incubators or innovation hubs supporting Legaltech or A2J startups	Legal Tech Business	Deployment activity
United States	Over 21 US Universities across the country have dedicated Centres for Legal Innovation, research labs or innovation facilities.	The ABA Legal Incubator Directory lists 60 incubators of legal tech startups nationwide. The vast majority of these are either based in universities or in legal non-for-profits and law centres.	Major Legal technology players (based on size, capitalisation or fundraising) include Bloomberg Law, Everlaw, Prospero, Relativity, Legalzoom, LexisNexis, Recommind, Thomson Reuters Westlaw, Lex Machina, Ravel Law, Rocket Lawyer, ROSS Intelligence, LegalEase, Luminance, Neota Logic, UpCounsel, Wevorce. The vast majority of the 1140 tech businesses listed in Stanford X's Techindex are US based.	The following large US law firms have developed in-house technology development capability or partnerships with legal tech businesses: Crowell & Moring (Digital Transformation Group); Dentons (Nextlaw Labs); Drinker Biddle & Reath (Tritura Information Governance (eDiscovery)); Jackson Lewis (Workthruit (workplace laws tech software)); Littler Mendelsohn (CaseSmart (employment)); Perkins Coie (patent prosecution management); Reed Smith (GravityStack);Winston & Strawn (full service ediscovery vendor); Akerman; (Akerman Data Law Center); Atrium LLP (Atrium LTS); BakerHostetler (Accord Project); Cravath, Swaine & Moore (Luminance (partnership)..

Europe

	Universities with Legaltech Courses or Legal Technology Centres	Incubators or innovation hubs supporting Legaltech or A2J startups	Legal Tech Business	Deployment activity
Germany	The following universities in Germany run law and technology courses: European University Viadrina, Bucerius (Berlin), Saarbrucken University (Institute of Legal Informatics), University of Applied Sciences Bielefeld, Dusseldorf University. Goethe University (Frankfurt) hosts a Legal Tech Lab.	The following universities are members of the European Union funded ICT Law Incubators Network: The Alexander von Humboldt Institute for Internet and Society (HIIG), Leibniz Universität Hannover and the University of Passau. ReInvent Law (Frankfurt) is a standalone legal innovation hub whilst other German incubators e.g. FactoryBerlin host startups with applications for the legal sector.	A German blog[1] identified 120 German legal tech businesses in 2017. These were categorised into the following areas: Technology-based consumer legal advice products; legal process outsourcing/lawyers on demand; AI and eDiscovery tools for law firms; legal practice management; legal databases; open data; smart contracts technology-based and standardized legal advice products; legal process outsourcing; lawyer finder and rating portals In January 2019, legal tech startup Helpcheck raised €11 million to defend consumer rights against big corporations.	Beiten Burkhardt has been active in the legal tech space, sponsoring and hosting various events SKW Schwarz is active in the German legaltech space, investing in many emerging technologies.

[1] https://tobschall.de/2016/06/25/german-legaltech-overview/

	Universities with Legaltech Courses or Legal Technology Centres	Incubators or innovation hubs supporting Legaltech or A2J startups	Legal Tech Business	Deployment activity
France	None found.	L'Incubateur du Barreau de Paris (IBP) hosts startups which are designed to assist lawyers in the practice of law. Several regional bars in France have now launched similar legaltech incubators and there is a network of 12 across France.	In 2017, 85 French legaltech companies were identified by Wolters Kluwer US tech database TechCruch highlights several French legaltech/regtech firms: Guacamol which provides incorporation and all legal formalities for startups. Captain Contrat - an online content and legal services platform for entrepreneurs, start-ups and small businesses. Lawgarithm which uses artificial intelligence and collaborative features to allow companies to better prepare, review, negotiate, execute and manage their contracts. Payfit which manages HR and payroll compliance. The Paris Bar Incubator lists 20 startups nominated for its 2018 prize – most either are designed to offer services to law firms (e.g. contract drafting software) or to facilitate access to lawyers.	There are 26 law firm members of the Paris Bar Incubator.

	Universities with Legaltech Courses or Legal Technology Centres	Incubators or innovation hubs supporting Legaltech or A2J startups	Legal Tech Business	Deployment activity
Netherlands	Law and technology courses are offered at: Leiden University, Hogeschool van Amsterdam, University of Amsterdam and the University of Tilburg.	Institute for Information Law (IvIR), Faculty of Law, University of Amsterdam is a member of the EU funded ICT Law Incubators Network Dutch Legal Tech is a platform for Legal Tech and Legal Innovation which has over 1000 members.	Dutch Legal Tech and Wolters Kluwer have identified 70 Dutch legaltech startups which have received a total investment of € 6.36m. Amsterdam is the main hub for this activity, hosting 33 Legal Tech startups, followed by Utrecht with 11 and the Hague with 6. Most Dutch startups are active in the areas of Online Legal Services and Document Assembly.	Dutch law firm Van Doorne has worked with the Nalytics search and discovery platform to jointly develop a Bulk Document Compare solution Houthoff Buruma is deploying Luminance's contract analytics technology. Loyens & Loeff launched its own Tech Academy in 2018.
Belgium	KU Leuven (Katholieke Universiteit Leuven) and Vrije Universiteit Brussels, VUB) offer law and technology courses.	The University of Namur – Research Centre on Information, Law and Society (CRIDS), ICRI – Katholieke Universiteit Leuven (KU Leuven) are members of the EU funded ICT Law Incubators Network. The Flemish Bar Association and the French Speaking Lawyers Bar Association have both set up their own funds to invest in IT projects which can be used by all their members. Legaltech Belgium is a network and meetup group which has over 200 members	Legaltech Belgium has identified 33 businesses operating in the legal tech ecosystem in Belgium. Of these 7 are consumer facing services, mostly offering easier access to lawyers or document automation to assist with online claims.	Law firm tech adoption activity has been driven by the Flemish and French speaking Bar Associations who collaborate on a Digital Platform for the Lawyer (DPA).

	Universities with Legaltech Courses or Legal Technology Centres	Incubators or innovation hubs supporting Legaltech or A2J startups	Legal Tech Business	Deployment activity
Spain	IE Law School offers a masters' programme in Law and Technology; UAB Barcelona offers modules in law and technology and postgraduate study options. UAM in Madrid offers an LLM in technology and IP law.	IE lawschool launched a startup competition in 2019. Madrid based Instituto de Innovacion Legal hosts a hackathon and connects law firms to technology.	In October 2018, tech consultancy Legaltechies.es identified 127 legal tech businesses in Spain (29.4% in Barcelona, 25.2% in Madrid and 5.9% in Valencia). These fall into 5 major categories: Management software for law firms and lawyers, platforms to acquire and/or generate online contracts, legal marketplaces, ODR, services to collect and securely generate digital evidence.	Major Spanish law firms Garrigues, Cuatrecasas and Legalitas host startups.
Scotland	University of Edinburgh offers an LLM in Innovation, Technology and the Law	Fintech Scotand is a member of LawScotTech and hosts several startups whose services might crossover into the legal sector for backoffice and compliance.	The LawScotTech community currently includes 10 law tech businesses all focused on law firm or corporate users.	Law Society of Scotland has launched LawScotTech to promote the conversation around legaltech in Scotland.
Northern Ireland	University of Ulster hosts the Centre for Legal Innovation	The Ignite NI accelerator has hosted tech startups with legal applications.	Belfast's legal tech is focused primarily on law firm and corporate users. Local startups include: Repstor, SALT DNA and Briefed. Belfast also hosts European offices of Olenick, iManage and others.	Belfast is used as a global hub for technology development by Allen & Overy, Axiom, Baker & McKenzie and Herbert Smith Freehills. PwC's Belfast facility hosts the largest group of blockchain specialists in PwC worldwide and the only Google Innovation Lab in Europe.

Asia-Pacific

	Universities with Legaltech Courses or Legal Technology Centres	Incubators or innovation hubs supporting Legaltech or A2J startups	Legal Tech Business	Deployment activity
Hong Kong	HKU (Hong Kong University) hosts LITE (Law, Innovation, Technology & Entrepreneurship) Lab	HK's major startup hubs (Cyberport and WHub) are beginning to show an interest in legaltech and have sponsored legaltech events. In 2018, the Law Society of Hong Kong, and the Hong Kong Computational Law and Blockchain Festival organised a hackathon. There is also an active HK Legaltech meetup group with 196 members. Thomson Reuters hosts the local Legal Hackers HK chapter, hosting the chapters meetings	Major HK legaltech businesses include: Zegal is the fastest growing Legaltech company operating across Asia Pacific and Europe, it allows clients to take their legal back-office online. Decoding Law has created an internet browser extension powered by machine-learning that simplifies legalese. Elevate (US) has acquired Cognatio Law, a Hong Kong-based flexible lawyering and legal consulting business serving in-house legal and compliance teams as well as law firms across Asia Pacific.	No larger domestic firms have yet reported significant tech activity or investment yet. Most of HK's legal tech appears to be led by global law firms with offices in HK.

	Universities with Legaltech Courses or Legal Technology Centres	Incubators or innovation hubs supporting Legaltech or A2J startups	Legal Tech Business	Deployment activity
Singapore	National University of Singapore has an active alt+Law, student-led legal technology interest group, which has presented to Singapore Government	The Future Law Innovation Programme (FLIP) hosted by the Singapore Academy of Law (SAL) is an accelerator for legaltech startups. By Oct 2018, 23 entities had signed up to FLIP, including nine small and medium-sized law firms, three large law firms, two corporate counsel and nine legal tech companies. SAL also created the Legal Industry Framework for Training and Education (LIFTED) to provide education and training of legal professionals for the future.	Singapore's TechLawFest 2018 showcased 17 local or regional tech companies (alongside international players). Most of these were offering B2B solutions	Leading Singapore law firm Rajah & Tann has purchased an e-discovery firm. Global law firms A&O and Clifford Chance are using Singapore as their Asian hub for innovation. Clyde and Co and Linklaters are both members of FLIP, as is local family law boutique Rajan Chettiar LLP. The Attorney General's Chambers is launching an automated litigation analysis work platform, called 'Intelligent Workspace', to improve efficiency in its courts.

	Universities with Legaltech Courses or Legal Technology Centres	Incubators or innovation hubs supporting Legaltech or A2J startups	Legal Tech Business	Deployment activity
Australia	Flinders University (Adelaide), the University of Technology Sydney and the Centre for Legal Innovation (CLI) at the College of Law all run courses or host legal technology centres. University of Melbourne Law School participates in technology collaboration Law without Walls X.	National firm Mills Oakley created the Mills Oakley Accelerator, “a 13-week incubator support program”.	The Australian Legal Tech Association (ALTA) has 51 legaltech business members, of whom about 10% are B2C. Major tech players include Lawpath and Legalvision who are targeting easier and more affordable access to law, via DIY documentation and fixed price services. Lawadvisor has a broader portfolio of innovative interests.	A couple of leading Australian law firms host their own in-house technology innovation platforms: Allens’ LawLab and Gilbert + Tobin’s G+T<i> initiative. The Law Society of New South Wales is promoting awareness of technology through its FLIP programme.

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Aftersteps	http://www.aftersteps.com
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ArrestSOS	http://arrestsos.com/
Attorneyfee	http://www.attorneyfee.com
Avvo	https://www.avvo.com/
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Fixed	http://www.getfixed.me/
Flightright	http://www.flightright.com
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Jurihub	https://www.hub-avocat.fr/#cols
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Kira Systems	https://kirasystems.com/
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Ticketwarrior	https://ticketwarrior.com/
Tioex	http://tioex.com/
Tomorrow	https://tomorrow.me/
Uitelkaar	www.uitelkaar.nl
Visaease	http://visaease.com
Wenigermiete.de	https://www.wenigermiete.de/
Wevorce	www.wevorce.com
Yuristiya	https://www.f6s.com/yuristiya

Annex 4: Glossary of Terms

ABA	American Bar Association
AI	Artificial Intelligence
AIDA	Artificial Intelligence and Data Analytics
AML	Anti-Money Laundering
API	Application programming interface
ASIC	Australian Securities and Investment Commission
CFTC	Commodity Futures Trading Commission
CSBS	Conference of State Banking Supervisors
DLT	Distributed Ledger Technology
FCA	Financial Conduct Authority
FDA	Food and Drugs Administration
GFSC	Gibraltar Financial Services Commission
Github	An American web-based coding platform
IMDRF	International Medical Device Regulators Forum
IOT	Internet of Things
LSB	Legal Services Board
MAS	Monetary Authority of Singapore
MHRA	Medicines and Healthcare Products Regulatory Agency
ODR	Online Dispute Resolution
P2P	Peer to Peer
SaMD	Software as a Medical Device
SEC	Securities and Exchange Commission