

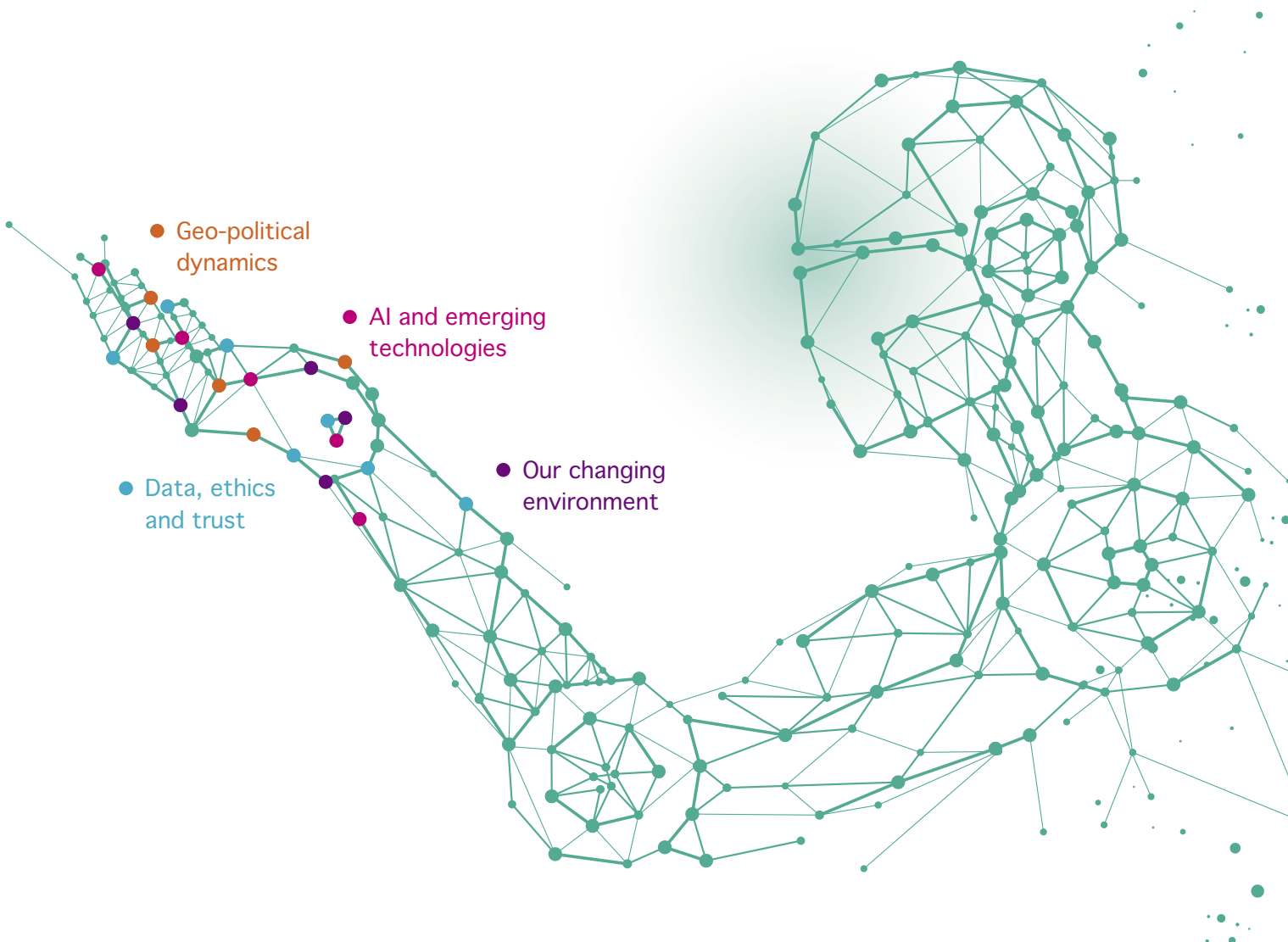


The Law
Society



Future Worlds 2050
FW2050

Images of the Future Worlds Facing the Legal Profession 2020-2030



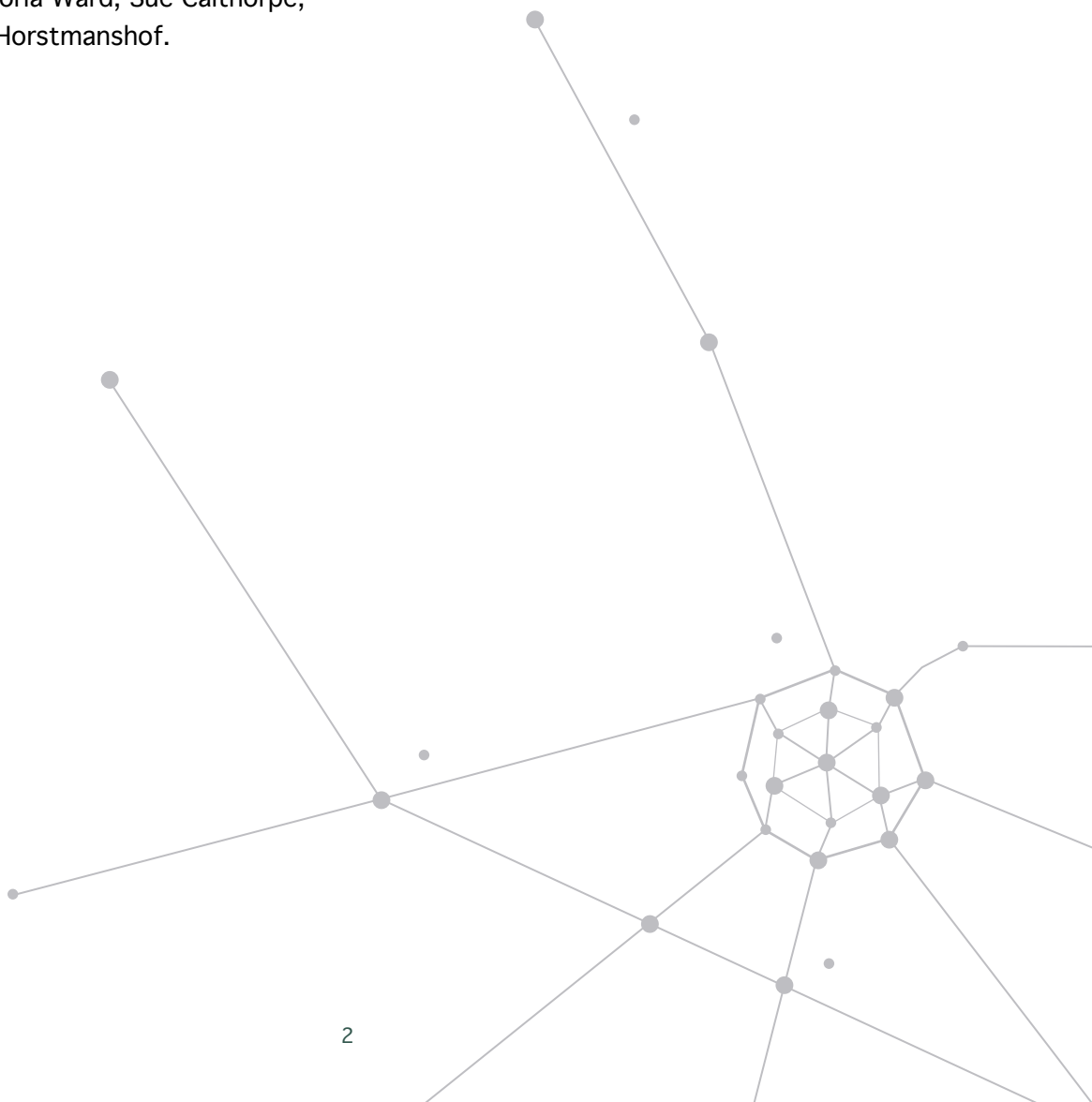
Acknowledgments

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Foreword

The legal profession is at a pivotal point, as is the world within which we live. There are a plethora of forces shifting our collective experience and the business environment. Alteration of traditional organisational structures; a rise in resources directed to the use of data; the lack of a clear ethical framework guiding AI development; the continuing mixing of cultures; exponential increases in the exchange of ideas; all these trends create new possibilities for the practice and application of law. We live in an era of mass charisma. Now the lives of everyday people (i.e. the birth of countless YouTube stars) become just as vital to us as the Hollywood blockbusters. All the while mega businesses encourage us to devour record levels of products and digital content. However, there is a cost to all this consumerism; inequality is increasing; ecosystems are eroding; more animal species are becoming extinct; mental wellbeing is deteriorating, and fundamentalism across the world is intensifying. We are becoming the products we consume, bodies with multiple personalities that shift and change based on whims and desires. Television shows us images of vistas beyond, history is replayed in modern tones, and the fate of humanity is constantly predicted. If we've learnt anything from 2020 it is that the future can still catch you largely unaware! So:

What will be the key trends shaping the world in this coming decade?

How will this future world impact and change the legal profession?

As a solicitor or partner in a law firm how could you prepare for this future?

These are some of the questions we posed to our expert contributors during this futures research. This report outlines the answers we received and focuses on what the next decade could bring. The findings have opened as many personal questions for me as the answers they have provided, but of two things I am certain. The rule of law and access to justice will remain critical yardsticks by which we measure the quality of our collective experience.

Dr Kion Ahadi

Director of Strategy, Futures and Insight



Executive summary

The Law Society's Future Worlds 2050 project was set up to bring an exceptional group of thinkers to the table for raw, frank and honest discussions around future client needs, to postulate the legal business models that will meet them.

Then suddenly, 'bring to the table' looked different in 2020.

Paradoxically, the rapid disruption we have all experienced over the past year presented our researchers with an invaluable opportunity to focus deliberations through new lenses. Cataclysmic change was suddenly real, not hypothesis. Governments used agile 'law' to enable, govern and protect communities and collective intelligence in a bid to solve an unprecedented challenge.

In just 12 months, novel legal needs around employment rights, data capture, new technologies and protection of intellectual property, requiring global standards for localised use have given us a glimpse of just some of the possible demands on our sector in the run-up to 2050.

Our Future Worlds project has harnessed a reinvigorated appetite for debate with this first report – others will follow, as we explore specific aspects of our increasingly uncertain future.

Our initial work addresses four themes across best, and worst, case trajectories focusing on:

1 Geopolitical dynamics

- By 2050, it is expected that the E7 nations will have overtaken the G7 in terms of economic strength; with a significant shift towards the Indo-Pacific region in future decades.
- Nationalist superpowers are shifting; China overtakes the US as the world's biggest economy by 2026.
- Nationalism is likely to increase while globalisation retreats.
- Implications and uncertainties surround political events (e.g. Brexit, US Presidency; Iran and North Korea nuclear programmes)
- Many countries have realised the dependence of their supply chains on other nations, leading to global supply chains being replaced by more regional, supply webs and networks.
- Generation Z begins to reshape global politics as we see a generational shift in allegiance and identity, alongside the lasting impact of Black Lives Matter and other social movements.

2 AI and emerging technologies

- AI will contribute \$15.7tr to the global economy by 2030 (PwC 2017).
- 85% of job concepts in 2030 do not yet exist, and 50% of people think that the roles and skills of the next 10-15 years are impossible to predict within their industry.

- Skillsets and mindsets for a 21st century knowledge workforce mean keeping up with changing technology, with significant emphasis on STEAM and soft skills.
- 80% of the world's population (c.6.4 billion people by 2024) will have a digital identity.
- The cost of running the process necessary to brute-force an AI application might be too expensive in terms of the environmental impact (electricity and heat dissipation).
- A new complex of trust systems, such as blockchain, is reorganising value chains in radical ways.
- It is possible to transfer experiential knowledge from one organism to another via an 'experience chip' (already effective in mice in 2020).

3 Data, ethics and trust

- The proliferation of personal data and its commercialisation and commodification raises important questions of who will be able to own, access and use data in the future.
- Data regulations and jurisdictional divergences in how data is protected and controlled create huge opportunities across all sectors and business sizes.
- Growing global competition for data and AI hegemony, not least between US and China, but with other regions such as Africa rising in influence.
- Data is increasingly collated in smart ways with data from currently unconventional sources to produce more nuanced interpretations.

- Algorithms that are addictive and exploit divisive content have the potential to cause serious harm at an individual level and impact the perceived credibility of institutions.
- COVID-19 measures expand the use of surveillance technology in coming years.
- The pace of development and the application of AI and other emerging technologies raise some key challenges in terms of potential for breach, harm, ethics and liability, and how accountability can be baked into new innovations.

4 Our changing environment

- Climate change will have disastrously far-reaching effects, depleting food, water and energy sources, and permanently flooding low-lying coastal areas.
- Geopolitical relationship difficulties will hamper a collective global response.
- The thermodynamics and physical resource constraints of bringing our 'silver bullet' technology solutions to fruition remain grossly underestimated.
- Rise in the number of climate litigation cases and charges of 'greenwashing'.
- Current gaps in the regulatory system and limits of enforceability are demonstrated by the difficulty of adjudicating cases when there is no clear way to quantify harm.
- The role of the law in achieving the Sustainable Development Goals is often overlooked.
- New opportunities around green funding, company formation and sustainability, requiring legal input and advice.

This report aims to provoke discussion with our membership, our stakeholders and our wider communities to identify challenges and present opportunities for our profession. This project will help our members to provoke, predict and prepare for this new legal ecosystem, raising difficult questions for further debate. When clinging to the status quo is likely ruinous, what must our profession be ready to supply to meet seismic shifts in client demands?

The importance of the concept of ‘trust’ emerges as the key requirement for the survival of the legal profession in all our scenarios. We encourage our members to consider what that means now, and is likely to mean to you and your firms in the decades to come. How will the rule of law coexist with complex ethical, moral and social issues? What effect will upcoming generations have on the mindset of our sector? What kind of neurodiversity, education, training, applications and business models will be needed to assure processes and reassure clients? How does a profession proudly rooted in history develop and convey future-proofed agility?

Things we saw as science-fiction until recently, we know, are now suddenly becoming routine.

And what happens if the law in the jurisdiction in which we currently practise simply isn’t the law our client requires?

We actively welcome contribution to, collaboration on and co-development of further research as part of our Future World 2050 project – there will be multiple opportunities for involvement as the project evolves.

Our research has thrown up startling statistics. Sources cite that 85% of job concepts predicted for 2030 do not currently exist. That 97% of global growth will come from developing countries. That AI attains such status, it will have a vote on the Board.

Future World 2050 is a unique opportunity to examine the challenges ahead, to debate socially and intellectually, to glean the best from the brightest minds to illuminate our path ahead.

This is a path we all tread together. Future World 2050 is our first step on that path.



1 Introduction: Future worlds and foresight fluency

You are robust if you can withstand shocks without flinching or changing who you are. But you are antifragile if shocks and disruptions make you stronger, more versatile, and better able to adapt to each fresh challenge.

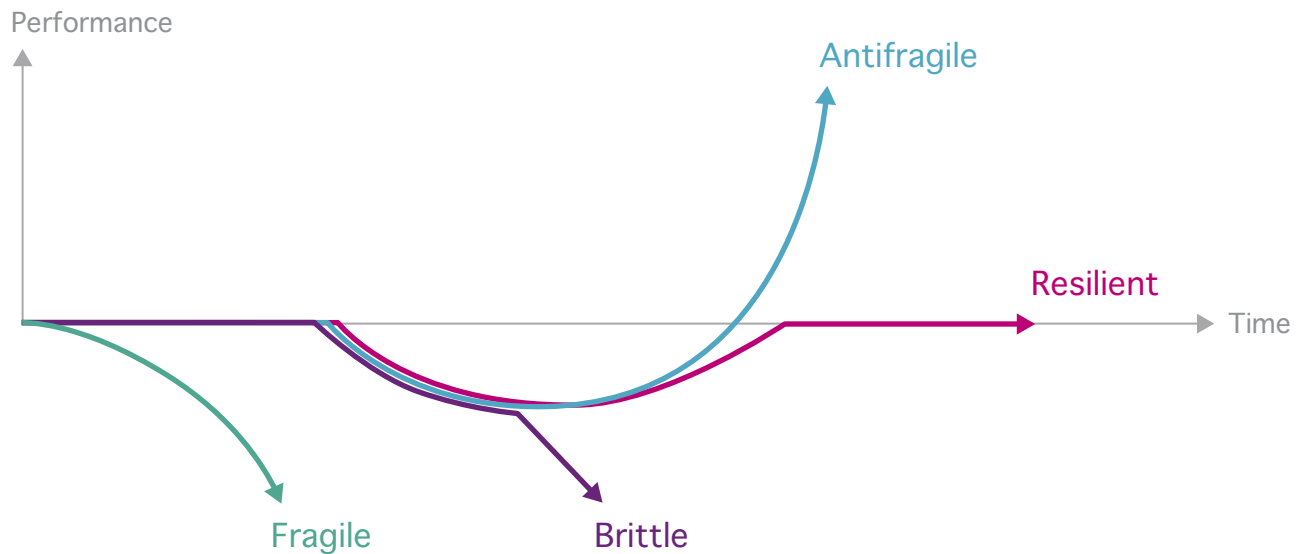
(Nicholas Taleb 2012)

Who could have predicted on 1 January 2020 that, within three months, more than 100 countries worldwide would be living in full or partial lockdown to contain one of the most lethal pandemics in living memory?

Change challenges us all. Change generates turbulence and uncertainty, calling into question much that we take for granted while also expanding what we can achieve. Futures research and foresight can help people, organisations, communities, businesses, and governments explore, anticipate and manage change.

This does not mean that we should try to ‘predict’ the future. Rather, foresight information focuses on heightening our awareness of difference, spotting emerging signals of change and exploring their implications. Asking where certain trajectories of change might take us, and how those possible paths align with our values and preferences, can help us prepare for and shape how our future unfurls. The earlier we think through the implications of transformative and disruptive changes, the better our options for response, whether we aim to influence change or merely adapt to it.

In *Shock Treatment: developing resilience and anti-fragility* (Leading Edge Forum 2020), the authors build on Taleb’s (2012) idea of ‘anti-fragility’ to explore the notion of being antifragile and surviving shocks. They argue that systems are critical, but ‘people even more so: behaviour change and group dynamics are often more important than shoring up the processes and infrastructure.’

Figure 1: Resilient organisations are not antifragile

[Leading Edge Forum 2020, p.15]

1 Fragile

Impact on organisational performance/workforce protection immediately after a shock occurs. Organisational failure occurs almost immediately after a shock.

2 Brittle

Business operates as normal for a short term, but soon sees the impacts on business performance and workforce protection. Organisational failure occurs shortly after a shock.

3 Resilient

Although a significant dip in organisational performance occurs, the business is able to make changes to its service model, core operations and IT systems to enable the organisation to return to near normal performance.

4 Antifragile

The organisation adjusts as in 'resilient', but is now seeing growth in the business or other positive response to the changed measure. Antifragile organisations not only respond to shocks but seek and embrace them.

Figure 1 highlights that being resilient is not the same as being antifragile. In fact, those businesses that embrace anti-fragility will experience greater growth and preparedness for the future than those displaying resilience. It is with this kind of preparedness – anti-fragility – in mind that the Futures & Insight team at the Law

Society commissioned two foresight projects in 2020, conducted in partnership with Acritas and Infinite Futures.

The outputs of these two projects are now being brought together, to maximise the value that the application of foresight and horizon scanning

methods can bring to the Law Society, our members and the wider operating environment. This is particularly important at this unstable time as we try to make sense of 2021 and beyond.

This first report (other outputs that will follow) focuses on the emerging themes that look likely to dominate and affect the law, the legal profession and society in 2020-2030.

1.1 About the Future Worlds 2050 project

The Future Worlds 2050 project had three main objectives:

- 1 To produce a robust piece of work** underpinned by strong empirical analysis, consolidated secondary research, and expert commentary and to publish outputs accessible to members.
- 2 To explore changes and uncertainties** in the legal profession in England and Wales over the next 30 years, through the lens of global trade and competition.
- 3 To refresh this body of work periodically,** and translate findings in creative and communicable ways, helping members think proactively about the future.

The project began in January 2020 and encompassed desk research, three rounds of a Delphi Panel, economic modelling and depth interviews with 45 experts across a range of industries (see Appendix 1). We started with the assumption that we cannot look to the future of law in a silo: what happens society-wide across industries will be influential in shaping the future

legal operating environment. Therefore, we situated our in-depth exploration of emerging signals and innovations across a range of meta themes:

- **Smart Cities** (inc. infrastructure, transport, architecture, gov/politics, public services)
- **Populations** (inc. ageing, healthcare, migration)
- **Industrial Sectors** (inc. labour, skills, employment, professional services)
- **Digital Revolution** (inc. AI, nanotechnology, biotechnology)
- **Energy** (inc. resources, electricity, gas, fuel)
- **Food, Biosphere and Water** (inc. agriculture, climate change, environment, ecology)
- **Production and Consumption** (products and services, retail, manufacturing)
- **The Imaginative Other** (innovation, creativity and the speculative)

2 The legal sector context

The Law Society's latest Annual Statistics Report reveals that in the 12 months to 31 July 2019, the number of solicitors with practising certificates (PC holders) reached 146,953 – the highest recorded so far. Women PC holders outnumbered men by over 4,500, a gap that has grown over the past two years; women also made up close to two thirds of all new trainees. Black, Asian and minority ethnic (BAME) groups reached 17.5% as a share of all PC holders, based on those with known ethnicity, growing steadily. Trainee registrations rose by nearly 10% in the year to July 2019, with almost 90% located in private practice firms, while the number of private practitioners increased by 1,200, a 1.3% growth from 2018. These figures suggest a reasonably healthy profession and one growing in diversity.

The global legal services market reached a value of nearly \$766.3 bn in 2019, having grown at a compound annual growth rate (CAGR) of 5.4% since 2015. By 2023, the global legal services market is expected to grow at a CAGR of 6.5% to nearly \$986.7 bn. According to figures published by Statista Research Department, (Nov, 2020), in 2021, the global legal services market is projected to recover and reach \$767.1 bn after the COVID-19 outbreak, which led to a global economic slowdown. North America accounted for 51.6% of the global market in 2019, followed by Western Europe and Asia-Pacific, the latter is expected to outpace North America and Europe in the coming years.

In 2018, the legal services sector's activities in the UK generated £39.79bn of direct GVA and a further £11.87bn of indirect GVA through the legal services sector's UK supply chain. The UK legal sector has seen a GVA growth of 20% since 2013, compared with 11% for the UK economy as a whole. The sector supported approximately 552,000 full-time employees

(FTEs) in 2018, including 358,000 directly employed in the legal services sector and 150,000 employed in the UK legal services sector's supply chain. However, employment levels in the sector have been stagnant in the last 5 years with a 0.5% decrease since 2013, indicating the impacts of technological efficiencies and process automation on the sector's business models. The picture of 2020 will already look very different to this, as the profession struggles to adapt under COVID-driven restrictions. It is uncertain, as we enter 2021, what form the longer-term future route for legal practice will take, especially as Brexit, the pandemic and the impacts of other recent drivers of change, all add complexity to business vision and planning.

The legal sector has faced an operating environment of accelerating change for many years now. Liberalisation of the market through the 2007 Legal Services Act, changes to the provision of Legal Aid, and new regulations that enable solicitors to work and offer 'freelance' services to the public outside of the traditional legal entity models, are just a few of the drivers that have already affected the way legal services are delivered in England and Wales. However, it is technology that is currently expected to deliver the greatest changes in the sector. During the pandemic, many regulations have been temporarily suspended – not all of these will return, as more attention is paid to whether lighter-touch regulation is needed to stimulate economic growth post-COVID. The 'precautionary principle' may give way to the 'innovation principle' and studies suggest that advancements in technology, as well as growth in adoption, are likely to bring new industries to offer services in the legal sector; equally new industries may generate their controversies that require a legal resolution. This in turn may require more legal professionals to specialise

in technology-related law with an expectation of new intellectual property laws and increased litigation around patents and trademarks.

To imagine the legal profession in 2030, 2040, 2050 and beyond is to envision the context in which our members and their clients might find themselves, driven by a whole range of factors that together can radically redefine societal processes and services. Our recent exploratory work on the potential of artificial intelligence, the impact of automation on the workforce and future skills has already led to significant questions for the legal profession around future workforce planning, ethics and changing client needs (Law Society 2018; 2018a; 2019; 2019a; 2020).

A strong talking point during the expert interviews was the impact of technology on the legal profession particularly the rise of

automated self-service legal tools and the implications around global data usage and ownership. A central question emerged: in what is likely to be a more competitive landscape, how can lawyers of the future differentiate themselves? Trust was seen as a key factor in promoting lawyers' knowledge and relevance as well as the judgment and reasoning they can bring to complex situations.

Conducting this research project against the backdrop of a global pandemic and unprecedented fiscal policy highlighted the importance of precautionary measures – ensuring that law firms of the future build anti-fragility as well as resilience to face the next Black Swan event. Asked how well law firms are equipped to respond to these types of challenges and the legal market of the future, one interviewee responded:

They're not ready. The best way to prepare themselves is probably to stop thinking of themselves as lawyers. That has a lot of historic and cultural baggage, I think a lot of the problems that the legal industry faces at the moment arise from that baggage. If you went back 20 or 30 years, there was virtually no difference between the legal profession and the legal services market. There's a big difference now because you have different players in that market who are not lawyers, they're not law firms. There are two reasons they've been able to do that. One is because lawyers have not been providing the services that clients want to buy, and the second is that the regulatory framework has allowed those new entrants to come in pretty well without supervision.

(Professor Stephen Mayson)

Looking back 20 or 30 years, we can recognise the changes to the current market as Mayson highlights above. How much more might have changed when we are looking back to now from 20 or 30 years in the future?

3 Emerging disruptions and uncertainties

3.1 An introduction to arrangements of the data

The presentation of emerging trends and patterns from our Future Worlds 2050 project takes two forms in this report:

Exploring the landscape. The first arrangement is thematic, clustered around four broad emergent themes, observed and then interrogated for the possible implications for the law and the legal profession. As part of this approach, we imagine future legal worlds in their more conservative and disruptive forms, around the same themes.

Unfolding time. Secondly, we arrange some of the material through the lens of three overlapping horizons of time unfolding between 2020-2030.

While our 2050 ideal stretched the imagination to the farthest horizon, we must also acknowledge the near-term uncertainties which will have informed thinking, in particular, a year of massive COVID-triggered disruption, an autumn of US electioneering and a winter of will-we-won't-we Brexit with a deal, and new viral variants. The uncertain near-future is dominating current discourse for many businesses. As we start to gain perspective and hindsight, and the past is just a factor in the evolving present, we can start to stretch our imaginations and look out to extended horizons.

3.2 Exploring the landscape

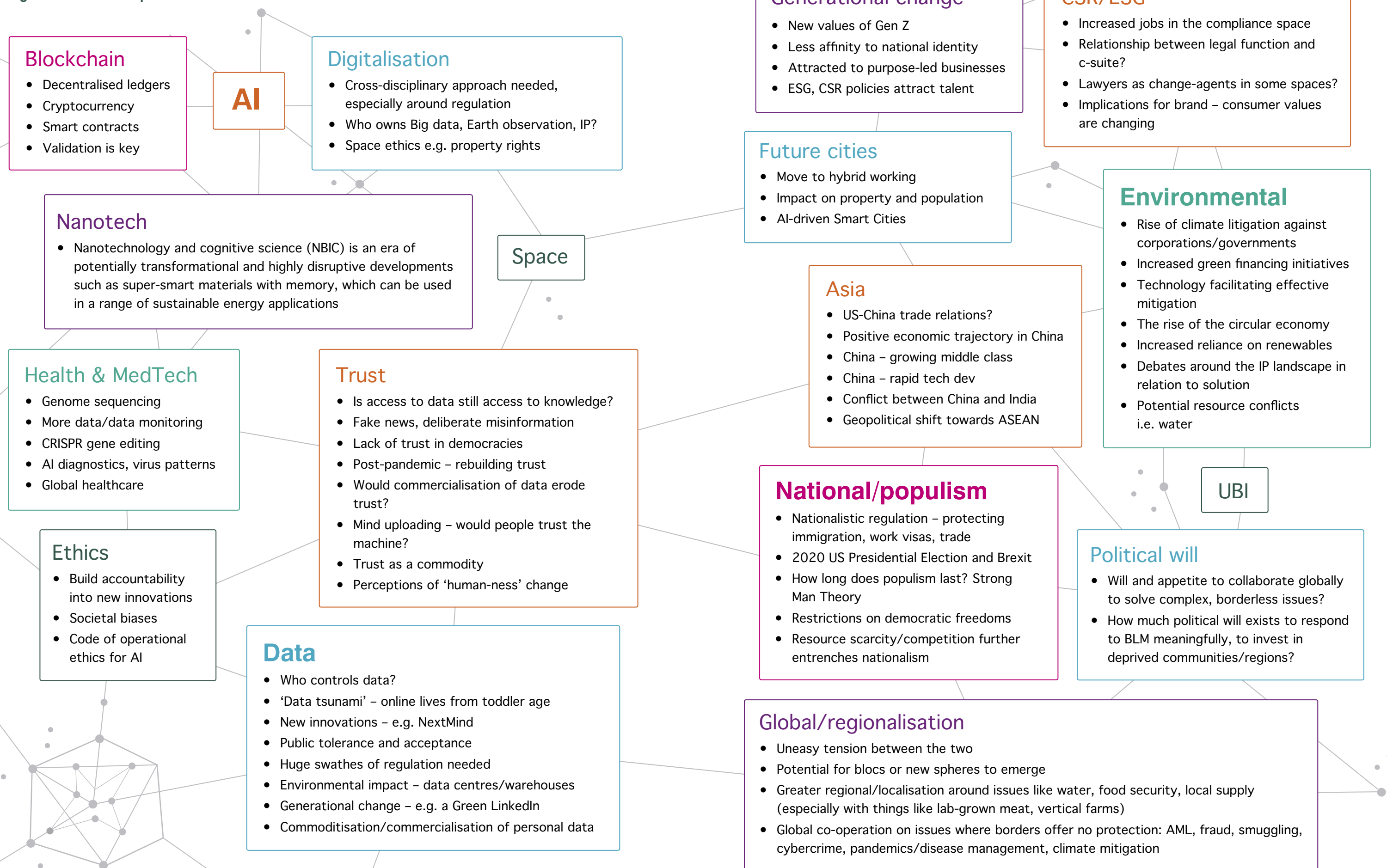
Figure 2 presents a visual snapshot of some of the themes and ideas emerging from our interview data. Across our research, four main interwoven threads impacting global economics and trade, and the legal profession itself, emerged:

- the dynamics of the Geopolitical Sphere
- applications of Artificial Intelligence (AI) and emerging technologies
- expectations and implications of Data, Ethics and Trust
- the challenges of the climate and Our Changing Environment

The first of these factors – encompassing the tensions between globalism and nationalism – makes for a wildly uncertain near-term future. The key trends within the other three strands all have clear, and major, implications for the legal services sector, not least the potential of emerging and developing technologies, the proliferation of personal data and associated implications and the effect of the climate crisis on humanity's ability to subsist.

For each of the four themes we present a short description of the emerging patterns, disruptions and uncertainties, followed by a summary of some inferences about impacts on the legal profession. We end each section by clustering some of the more positive and the concerning views related to each theme.

Figure 2: A visual snapshot of the interview data



3.3 The geopolitical sphere





Key trends 2020-2030

- America-China tensions continue in the Asia-Pacific region.
- China overtakes the US as the world's biggest economy by the middle of the decade.
- Increased remote/hybrid working.
- Implications and uncertainties surrounding political events (e.g. Brexit, US Presidential Election; Iran and North Korea nuclear programmes).
- Rising social movements and resurgence of the civil rights movement. Lasting impact of Black Lives Matter and other social movements; a generational shift in allegiance and identity.
- Generation Z begins to reshape global politics.
- Indications of cooperation and multi-organisational problem-solving that cut through borders in a crisis (e.g. with pandemic vaccine production).
- Rise in extreme weather events, including severe earthquakes in the US, impacts global relationships and trade.
- Political tension over access to resources (esp. water).
- Acceleration of previously gradual changes across all sectors.

A key question arising from our research was how long the current wave of populism will endure; many of our interviewees felt it would at least continue through the next decade given that periods of recession and economic turbulence have historically created conditions in which nationalism can thrive. Around a third of those we interviewed also felt that it would take a crisis of enormous magnitude to break the deadlock and facilitate greater international co-operation around climate action, trade and defence.

Regardless, we inhabit a digital, and increasingly, borderless virtual world. Acceleration and intersection of these trends seems inevitable. ‘Borderless’ issues (such as cyber, anti-money laundering, smuggling) may lend themselves to a globalised approach, but greater regionalisation around water, food security and supply chains may create future flashpoints on the international stage.

Changes in global economic prospects will have a considerable impact on the nature of finance in the future. By 2050, it is expected that the E7 nations (Emerging 7 – China, India, Russia, Brazil, Mexico, Indonesia and Turkey) will have overtaken the G7 in terms of economic strength. However, GDP per capita within these nations will remain much more unequal than that of the G7 (PwC 2017a). Commitment to the ‘One China’ policy has implications for commercial interests in Taiwan and Hong Kong. Broader questions also arise around how the UK and other nations will continue to do business with this authoritarian state.

Irreversible acceleration: the political impacts of the coronavirus in advanced economies could be as substantial as the economic effects. A radical rethinking of how we operate economically, socially and intellectually will spill over into all areas of business. Adam Greenfield, author of *Radical Technologies: The Design of Everyday Life* (Verso, 2017) described globalisation as ‘a practical difficulty’ arising from how people have changed their behaviour in response to the current coronavirus pandemic:

I think that, weirdly enough, so much of the world is habit. And I think we’ve gotten out of the habit of being a global world for a couple of months, and I think it’s going to be more difficult to put that back together than people assume... Once people have put a lot of emotional effort and ego into developing workarounds for things, I think that there’s a real lack of tendency to go back effortlessly to the status quo. I just think that’s human nature.

Rising Nationalism: nationalism is likely to increase while globalisation retreats in the coming decade. How countries that closed their borders early fare in the long run will have significant political consequences for attitudes

towards globalism, borders and immigration. The rise in populist leaders, pursuing their own agendas, points to a retrenchment from a path towards full globalisation, at least in the next decade.

We've never had so many populist leaders, from Putin to Trump, at the extremes, but even the likes of Macron, who is hardly an extremist but he's certainly a populist person. Boris Johnson is the nearest we've had here, [although] it's not quite the same. That's now – then you've got Erdogan in Turkey, and Bolsonaro... They're just populists in their own country and not interested in globalisation at all. It depends if these individuals do any lasting damage; it's not impossible – Erdogan isn't going anywhere and Putin's going to be around for a long time... that starts to embed a way of thinking into their countries.

(Nick Woolf, Woolf & Co.)

Nationalist superpowers are shifting: in Hong Kong dynamics are changing with the potential outcome that China will move business from Hong Kong to Shanghai. As China's global influence grows, we may see pressure to use Chinese Law in major national business, and the future desire for Common Law in the EU cannot be assumed if the UK is not there. This in turn brings implications for legal education and training content if we do not share so many laws with the EU.

The idea that big global tech companies such as Facebook could come to dominate other sectors including law was 'a fascinating conjecture' for one interviewee; however, he was certain that *'it won't be Facebook; I think Facebook's best days are behind it.'* Rather, he speculated on the general idea:



The notion is provocative, but I think it depends on what jurisdiction we're talking about. I think the United States – that's an interesting prospect. I think that as long as the tech firms in question remain headquartered in the United States and there's a kind of gelling of capacity, will and acculturation, that makes that a very interesting prospect for me to contemplate in terms of the United States. However, I don't think that's where the grandeur is already. I think the centre of gravity has moved to China. I think China has a very different legal system. I think it wouldn't necessarily occur to the Chinese players at scale to offer that kind of service and I think if they tried, at least within the near term, they would get it culturally all wrong. It's a very interesting idea.

(Adam Greenfield, writer and urbanist)

China is actively bolstering its position as tech superpower, but technology is by its very nature global, and data does not respect national boundaries. As more people work remotely, participants pondered whether nation states could continue to set the rules or if tension in global interoperability would drive design for

global standards, but with localised use. As technology enables collaboration across borders, participants felt there would be a greater desire, certainly amongst researchers and scientists, to work collaboratively and share knowledge. The tension was also recognised should populist leaders try to shut down such knowledge flows.

I'm quite convinced that businesses will globalise and they will carry on globalising because it doesn't make sense not to. There's a huge incentive because AI only works with a huge amount of data – so if you prevent yourself from getting that data, you're basically in trouble. Although at the national level you'll have politicians fighting against the Chinese, you'll have researchers and scientists at the layer above who will insist on collaborating because they have to move forward. And you'll also have a civil society who will collaborate unless they are completely blocked from that.

(Liselotte Lyngsø, Future Navigator)

Global problems require global solutions:

global responses to the pandemic may also have accelerated the rise of global response systems more broadly. Alexandra Phelan, an adjunct professor at Georgetown University Law Center, observed that *‘the last four years have seen a profound shift to governments that are protectionist and nationalistic and who argue the multilateral system doesn’t benefit them. Those of us who work*

in global health or other international problems know we’re interconnected. That global problems require global solutions’ (Safi 2020). While countries closed borders to control infection rates, the production of a vaccine and global vaccination distribution programme highlighted the ability to transcend borders at speed in a crisis – though this is not without its own associated regulatory and legal ramifications.

Coronavirus is probably not going to be the last pandemic in 100 years. Glacial melt is introducing new viruses into the ecosystem all the time so it’s likely that we’ll have more events like this. We need a globally co-ordinated response to this sort of stuff... from a localised supply chain perspective, having a system capable of supporting itself is critical, but, on a big issue front – on global economics, on travel, on disease management, on resource management as it relates to environmental sustainability, and on climate mitigation – we’re absolutely going to have to be global.

(Brett King, Moven)

One interviewee spoke of a broken trust between nations, leading *‘to a fragmentation and isolated approach to problems that need to be taken care of from a global perspective, because everything is connected to everything else – you can’t take care of marine life in the Venezuelan Caribbean, when the plastic waste is coming from India. Even if you go into isolation, these kinds of things are dependent – that’s clearer than ever.’* He argued that only by opening knowledge so that it is accessible to the global public, rather than a very few private companies, can we find solutions to global problems: *‘you are enabling the collective intelligence of the world in order to solve the biggest challenges we have – which can’t only be resolved by an American-centric or Western-centric view of how the problem should be solved. What works in Puerto Rico or Miami or Barcelona might not work in Indonesia’* (Tomás Díez, FabLab, Fab Cities).

Economic and business sector shifts: largely as an impact of the pandemic, across 2020-2030 we will likely see growth in the pharma and health sectors, but the impacts of lockdown weigh heavy on an already collapsing High Street. We should expect a downturn in business travel as companies realise that the practicalities of virtual conferencing and secure virtual working spaces replace the need for physical proximity in many cases. Consumer travel is likely to spring back towards pre-pandemic levels over a longer period as issues with borders, quarantine and global hot lists delay the resurgence, and as more people choose to take a ‘staycation’ or are unable to afford travel at all.

Participants were confident that the growing dominance of China on the world's economic stage would manifest change in the next ten years. With that came uncertainties around

global political relationships and whether these would trigger a more significant shift towards the Indo-Pacific region in future decades.

I think it's pretty likely that China will become the world's biggest economy, and I'm not certain about what the world looks like when that happens. You know, one day China will be the second and the next day it will be the first, you know, it's not a dramatic thing per se, but I think it's going to have a big impact on how China's regarded and how America deals with China... The uncertainty is what will that do to the sentiment of America and its allies and also how will China deal with it in terms of being exposed to a level of scrutiny and attention which it's never really had to have before. Yes, it's getting a vast amount of that now, but once it's in the preeminent position economically, it's even more intense.

(Professor Kerry Brown, Director, Lau China Institute)

I'm sure India will be very, very significant, and India's using, weirdly using the Chinese special economic zone. So it's sort of, in a weird way, it's aping what China's doing and it might be able to build the vast amounts of infrastructure it needs, so this is going to be an Indo-Chinese sort of world in 2050. Is India going to offer a sort of reasonable alternative to China for the West? I don't think so because India's not easy to deal with either. I don't know we should seek much comfort in the Indo-pacific, I'm not sure. But I don't think India will be able to overtake China.

(Professor Kerry Brown, Director, Lau China Institute)

Although some see limits to their application, Special Economic Zones are expected to continue to play a major role in providing the facilities for accelerating change and improving trade efficiency.

Changes in trade: in 2020, many countries will have realised the dependence of their supply chains on other nations. In the coming decade, some countries may seek to be more self-sufficient (especially around the production of food and essential medical equipment) so as to be better prepared for new global crises or disease outbreaks. Participants expected that we will see global supply chains replaced by more regional, consumer-oriented supply webs and networks.

Goods producing chains are becoming less trade intensive, while value chains are becoming more knowledge intensive. Cross-border trade in services is growing more than 60% faster than trade in goods, and these services generate far more economic value than traditional trade statistics capture. Value-added services contribute to exported goods, the intangibles companies send to foreign affiliates, and free digital services made available to global users (Lund and Bughin 2019).

China, in particular, may seek even greater control over global flows of data, knowledge and services as it shifts its economic value from the manufacturing side towards trade of knowledge work, albeit within a Nationalist frame. In the past decade, the Chinese Government has accorded strategic priority to the development of services and in particular Trade in Services (TIS). China not only aims to enlarge the scale of its TIS, but is also increasing its technological and knowledge intensity to enhance its international competitiveness. The opening up of the financial sector is a major objective of

China's new service sector reforms. In further improving access and cross-border trade in this area, the reform aims to promote cross-border payment solutions, allow the mutual recognition of professional qualifications, improve market access for overseas professionals to the Chinese market, and promote international cooperation (Weller 2020).

Elsewhere, trade relations between the UK and the world will evolve on the back of Brexit. The UK could become a massive exporter of Legal Tech. A combination of software advancement, wider adoption of cloud computing and an increasingly entrepreneurial spirit in the legal sector has created ideal conditions for the emerging Legal Tech market, both in the UK and more broadly. The Global Legal Tech Report (2020) found that the UK Legal Tech market is growing, with different areas at different stages of development from emerging through to flourishing. Strong grassroots movements have created organisations like UKLTA, Legal Geek and Legal Hackers and when asked about their ambitions to expand outside of the UK, over three-quarters of Legal Tech founders indicated that they are looking to do so. The Global Legal Tech report also observed that 77% of Legal Tech founders in the UK had previously worked in legal industry, either in a law firm or related legal or business capacity. Having legal industry experience, knowledge and networks helps founders mitigate risk and build better products for the legal market by leveraging relevant experience and domain knowledge, thus widening global appeal.

The geopolitical sphere 2020-2030: some legal inferences

Competition: competitors to the current providers of legal products and services come both from without (in the form of competing foreign law) and within, powered by the outflow of lawyers to provide independent, innovative or different products and services as the economy reshapes.

New, interconnected, demand: multiple regulatory uncertainties and developments create the need for new policies around, for example, societal equity, workplace practices and unemployment benefit. We see the growth of a new kind of co-operation between providers (legal and non-legal) to better meet client needs for a holistic problem-solving service.

Acceleration: the acceleration of a global crisis response demands a matching acceleration and cut-through capability to provide flexible, agile, workable governance and legal frameworks. This is likely to be a new normal for the coming decades.

Complexity and boundary spanning: as problems become more complex there arises a need for effective interdisciplinary, international approaches to problem-solving, which in turn will require effective capability and community building across the legal sector and its networks, to identify and deliver the best solutions.

Tension in South China Sea: as different nations with competing territorial and jurisdictional claims seek to exert greater maritime influence, the South China Sea will become a focal point for access to reserves of oil and gas and wider control of key shipping lanes. With this competition comes legal questions around rights, access and conflict in jurisdictional laws.

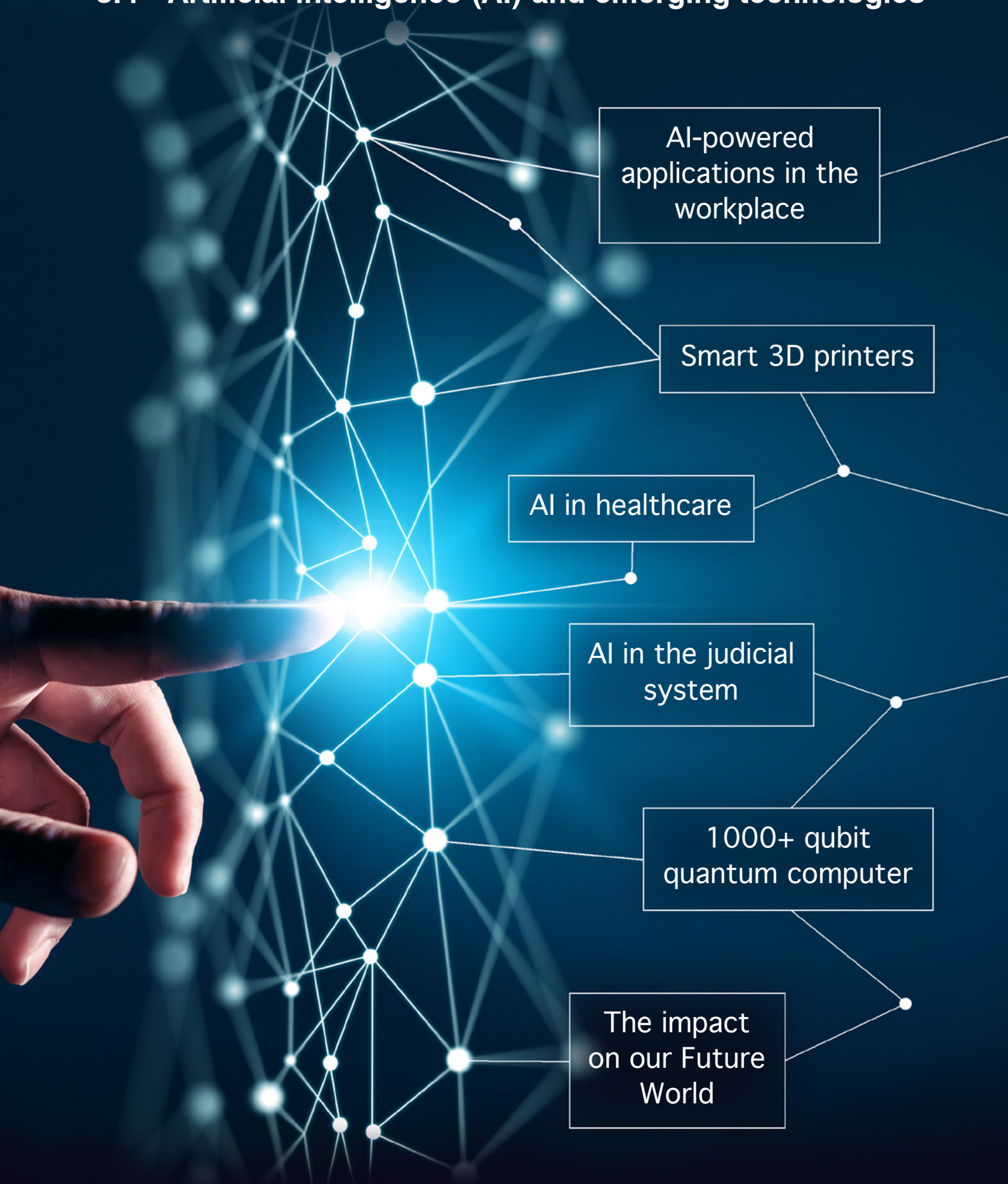
New trading routes and dialogues: in order for trade to flourish, there will be a need for new channels of legal interaction to enable business across cultures as well as boundaries. The next decade will see the post-war routes eclipsed by the power of the Indian Ocean region with new port construction plus proposed railways from coast-to-coast across South America. Novel legal needs will emerge around new, high grown trading routes.

People and skills: as the global workforce becomes more mobile, how will organisations attract and retain top talent? As identity, allegiances and values shift, both generationally and with the rise of social movements, the legal profession needs a coherent multi-generational diverse and inclusive recruitment and talent development strategy to source diverse entrants, to nurture their progress and ensure that the senior talent in the profession represents society appropriately.

Data Markets and rising Cyber Crime: cyberspace is about to undergo yet another massive change as the Internet of Things connects billions of new devices making prevention and control of cyber crime even more legally challenging. Data is a currency, with value and a price. An ecosystem for trading data is emerging and anything that is information is represented in a new data marketplace, triggering new legal cases, responses and protection frameworks.



3.4 Artificial intelligence (AI) and emerging technologies





Key trends 2020-2030

- AI will contribute \$15.7tr to the global economy by 2030 (PwC 2017).
- Displacement of work activities; by 2030, 3-14% of the global workforce will need to switch occupational categories (McKinsey 2017).
- Greater use of technology in law firms, with changing skills profile of the talent base.
- New entrants to the legal market and more multidisciplinary models.
- Trust in the decision-making of AI systems reaches the point where machines have a vote on the boards of large companies.
- Mass increase in the use of exascale computers, with unprecedented processing power and memory, to run societal problem simulations.
- One of the big tech players debuts their 1000+ qubit quantum computer.
- Smart 3D printers are ubiquitous and supplying needs from furniture and electronics to human organs.
- Increase in social platforms dedicated to preserving ‘fake-free’ information and privacy.
- 80% of the world’s population (some 6.4 billion people by 2024) will have a digital identity.
- Growth in the use of smart prostheses or implanted chips capable of sending and receiving relevant information about the user’s health.

New business and management models are developing as AI and emerging technologies are increasingly used by organisations to create greater efficiencies in pursuit of profit. Emerging technologies are changing how cities are designed, while in a post-pandemic world, long-term hybrid and distributed working seems inevitable. The pace of development and the application of AI and other emerging technologies across sectors raises some key challenges for the legal sector in terms of levels of expertise, ability to prepare for these trends and associated issues around perceptions of breach, harm, ethics and liability.

Reports vary in their predictions of how technology will impact the future of work; one example suggests 85% of job concepts in 2030 do not yet exist, and 50% of people think that the roles and skills of the next 10-15 years are impossible to predict as far as their industry is concerned (Dell Technologies 2020). A crucial debate concerns the extent to which the application of new technologies will reduce the human workforce in the near-term of 2020-

2030 and across longer horizons. Some foresee technology increasingly supporting sectors which struggle to resource themselves (e.g. healthcare) and a proliferation of new job roles and industries that seem unimaginable now. Other participants posed that technology could lead to mass unemployment, resistance and protest, and an unwell population reliant on UBI welfare provision. The IP landscape may be a key battleground determining which new technology and innovation can be deployed to mitigate climate change or improve health outcomes and whether they ethically become proprietary knowledge belonging to, and commercialised by, big tech companies.

One interviewee explored the tension between the advantages of using technology to provide free or cheap living so that those whose jobs had been subsumed by AI could afford to live and participate in the economy, and at the same time questioned whether the economy was ready for AI revolutionising the workplace and workforce faster than people could reskill.

You can automate food production, automate education, automate everything as fast as possible, in theory, all of that would become very cheap – almost free. So, if you're out of a job it would mean that you'd still have the ability to consume because you could still pay for it. There's a concept called Fully Automated Luxury Capitalism, with Fully Automated Luxury Communism being a competing idea. It means we could free people up from their jobs, and that could be glorious because it would give people the ability to do other things.

(Dr Daniel Hulme, Satalia)

Companies are driven to maximise profit, and by removing human labour they manage to remove costs... the concern is that you remove people from jobs and they can't be trained fast enough to get new jobs as AI will have taken them. This is a deep concern of mine and I don't think our economies are ready for that event.

(Dr Daniel Hulme, Satalia)

The relationship between AI and humans in the near-term raised many questions for interviewees about the unique value of 'human' and what, if anything, constituted a humanness that was not replicable in AI (in terms of working and personal lives). As a result of the pandemic, a lot of court work has transitioned very rapidly to online hearings yet concerns remain that this shift should be properly evaluated, in particular that the justice outcomes are critically explored. Evidence in the US suggests that judicial decisions made remotely or through mediation of technology can be harsher, possibly due

to reduced empathy caused by technological 'remove'. Participants felt that empathy and support can be diminished when using Zoom or Teams, and not everyone is immediately tech savvy. A lot of simultaneous challenges can arise, including remotely supervising and managing people you cannot see, and who may also be struggling with complex home contexts. Equally, the spontaneity of the 'water cooler conversation' or serendipitous corridor meeting is lost when video calls are scheduled with purpose.

Screen-based interaction requires you to schedule a meeting. The chance meeting at the water cooler is missing. You meet with someone because you have something to say, there is no spontaneous conversation, every conversation is pre-strategised for.

(Shruti Ajitsaria, Fuse, A&O)

For this interviewee, the gradual transition back to working from an office was a much harder proposition than when everyone was working at home. *'When you are all based at home, you all have the same limitations. When some people are back in the office and others are at home, for example, if you have three people in a room and one on Zoom, then the balance of power may inadvertently shift'*
(Shruti Ajitsaria, Fuse, A&O)

As well as discussing the potential of AI-powered applications in the workplace, for our interviewees other emerging technologies such as CRISPR, Blockchain, nanotech, wearable tech and even increased processing capacity are all emerging industries with huge potential to shape future worlds and the application of the law. *'We'll definitely move from a society where we*

are reactive, waiting for people to get ill, to spot early signs and make replacements well in advance. It's already happening at the genetic level. As we move towards 2050 will we have CRISPR babies as the new normal? Or do we have some lawyers telling us we should stay natural, organic?' (Liselotte Lyngsø, Future Navigator). One interviewee spoke about an 'NBIC convergence':

The N standing for nanotech, which means manipulating material on ever more precise atomic scales. In due course, I believe the vision of Eric Drexler of nanofactories duplicating what happens in biology with ribosomes will be feasible. It will transform a whole bunch of different things. So, nanobots should be on this list, along with other improvements in biology. The B in NBIC stands for biotech; I for infotech and the C for cognotech, which is understanding and improving the brain more than before, and I see little evidence... that people fully appreciate the potentially wide and sweeping changes that these technologies may bring.

(David Wood, Delta Wisdom)



The possibilities for AI in healthcare and in interaction with the substance of the human body emerged in imagination of what could be possible by 2040-2050, and will be featured in future outputs of this research. In a preview of such discussions, one interviewee described an experience chip in which it was possible to transfer experiential knowledge from one

organism to another. She discussed this as a means of addressing the fragility of human flesh and how long humans could live a mobile life, but her example also raises possibilities for sharing knowledge of the law amongst humans in the future and perhaps begins to address the question of how to train senior lawyers when junior tasks have been automated:

One way is to make an upload of everything in a chip. They already did that on a mouse. They put in a chip; it took the mouse three weeks to learn how to get to the cheese in a complex maze and then they took the chip out and put it in a mouse that hadn't seen the maze before, and it went straight to the cheese. So you can make an experience transplant already in a very primitive way. So that would be the cheap way in 2050, you'd have a back-up and then put that into a fresh new body and then when you get bored of that body you move into another body.

(Liselotte Lyngsø, Future Navigator).

As we discussed the imaginative and visionary futures of AI and emerging technologies, one interviewee sounded a cautionary note that the cost of computation necessary for certain advanced AI and machine learning tools had been grossly underestimated, and that this would be 'a complicating factor' in the advancement of these technologies:

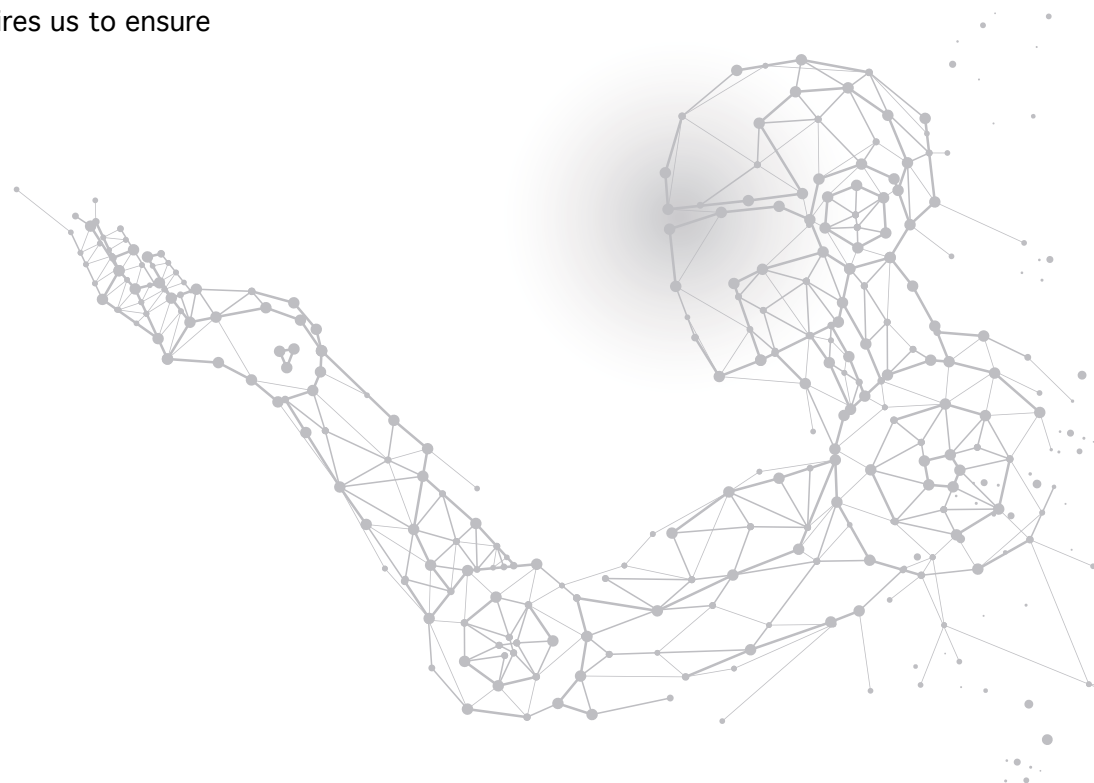
The trouble is that computation is a resource like any other – it takes place inside history, it takes place inside physics, it takes place inside the physical universe and it has a thermodynamic cost associated with it. And, what we're finding increasingly, is that at least at current capacities, that cost is too high for many institutions to bear.

(Adam Greenfield, writer and urbanist)

So, while it might theoretically be possible to throw computation at some of our global and societal problems and to run a proof of concept under laboratory circumstances, certainly in 2020-2030, *‘the actual cost of running the process necessary to brute-force an AI application like that might simply be too expensive in terms of the electricity or the heat dissipation. And that affects a lot of not merely these sorts of science-fictional scenarios, but even relatively mundane applications of AI such as voice recognition or text recognition.’* (Adam Greenfield, writer and urbanist)

For interviewees, the problem of law and regulation keeping pace with technological change will remain as relevant as ever. In one example, jurisdictions such as California have introduced legislation against malicious and misleading uses of machine learning tools (GANS) as technology in and of itself looks set to create a huge amount of legal work in the next decade and beyond. A new complex of trust systems, such as blockchain, is reorganising value chains in radical ways. There will be increased interest not only in more remote collaboration, but in fully decentralised organisations, and the governance structures and decentralised technologies which enable these. The ethical viability of such decentralisation requires us to ensure

past challenges about the risks of inbuilt discrimination or bias in data sets and algorithm training, are fully and transparently addressed. Until that point we might see increased legal action around how remote and decentralised organisations function in relation to liability, fairness and human needs.



Artificial Intelligence and emerging technologies 2020-2030: some legal inferences

Reinventing value chains: emerging technologies and their potential legal applications are radically reinventing value chains, changing delivery networks, shifting how value is added and opening up the market to new tech-enabled business models. What is the new value chain and the role of providers of legal products and services in that value chain? More complex legal/paralegal/non legal/technology delivery partnerships are emerging, for example in property conveyancing. Who controls and accredits which parts of the automated process? There is a need to map complex value chains and ecologies of digitisation and actively manage presence in rapidly changing processes.

Automation and augmentation: cost pressures on the legal sector are leading to the adoption of AI and streamlining of legal functions. Skillsets and mindsets for a 21st century knowledge workforce mean keeping up with changing technology, with significant emphasis on STEAM and soft skills. How does AI truly become a co-worker in the legal profession? Automation of tasks points towards an ever more knowledge-intensive, analytical and judgement-based approach on a human level, but will AI ever be capable of replacing lawyers in these knowledge-intensive roles? The human factors of empathy and insight in gauging client needs are likely to remain for much of 2020-2030, but AI is advancing rapidly, especially in natural language generation (Chittenden 2020).

Shoring up the defences: at the extreme there is potential for lawyers to use the law to halt advances of AI. At a lesser degree, lawyers will have a role ensuring that functions are appropriate for the AI and subject to necessary regulation and accountability audits.

Friend or foe: new commercial opportunities are arising in the tech space, both with existing clients and emerging companies. These opportunities are advisory as well as legal and should be aligned with a strong sector strategy. They also demand good peripheral vision and creative approaches to identifying and moving on opportunities and a different appetite for risk-taking and partnership. With increasing innovation in how legal services are provided (to include ABS; start-ups; unregulated providers) how do existing providers view incomers, as competition or ally?

2020-2030: in the best of worlds and the worst of worlds...

Below we explore both positive and more concerning aspects of technology, for society, that the research data foresaw for the next decade. Future World 1 groups a more positive scenario in terms of the benefits technology can bring to society and where equality of access is achieved. Future World 2 presents a bleaker picture where regulation is failing to protect citizens, and access to advanced technology is available only to those who can pay. These are deliberately polarised views of a future where it is more likely that aspects from both worlds could occur.

Future World 1

In this world, technology fills resource gaps in sectors such as healthcare that have shortages of skilled staff and, elsewhere, supports job creation and new roles. AI is used to augment human skills and reduce the cost of food, education and healthcare. There is sufficient regulation in the tech space that individuals are informed and safeguarded during their interactions with machine systems. Access to technology is equitably distributed across society and does not further entrench existing inequalities. Technology enables more democratic processes and better outcomes in health owing to a more personalised healthcare experience. AI systems facilitate effective mitigation and adaptive measures to tackle environmental degradation. In this world, humans maximise the benefits of using AI and remain 'in the loop' of these technologies, maintaining a good management of algorithmic logic and the ability to abandon processes that create unacceptable risks.

Future World 2

In this world, the application of technologies, including AI and automation, radically reduces the demand for a human workforce. Highly compensated and creative professions are not immune to being replaced by AI systems. There is a mass rise in unemployment and individuals cannot reskill fast enough to join other industries before AI replaces the need for human workers. Politicians have not found a way to make UBI work. A restrictive, unresponsive IP landscape means innovative solutions are left undeveloped, rendering super-wicked issues unsolvable. Tech-enabled solutions to provide free access to food and education have not emerged. Insufficient regulation in the tech space means individuals are exposed to the dangers of malign use of technologies like AI, including polarisation of views and addiction. Society sees a non-democratised access to technology, including healthcare tech, which instead is distributed on an ability-to-pay scale.

Interviewees were divided in the extent to which they thought lawyers would be protected from huge technology advancements, even at the high-end of the sector:

One thing that I've been at pains to point out to lawyers is that **most of the work that lawyers themselves do is advanced pattern recognition and the deployment of templates**. AI as we understand it – and are currently developing it – is actually **best at precisely those things which are the higher creative or strategic functions**. I think there's a very dangerous tendency for people who are currently very well compensated for having executive, creative or intuitive-seeming tasks in the world [to think that their jobs are safe]; I think those are some of the things that'll get automated first.

(Adam Greenfield, writer and urbanist)

AI is incredibly useful for linear questions. You are seeing AI takeover for certain regulatory questions; for example, decision trees where you have to say, 'if I do this, will I be in breach of that?' But, **most of the work that you do in a high-end legal profession does not have a yes/no answer**. I do think that there will always be a place for that clash between commerce, regulatory, risk appetite; knowing your client, knowing the history of your client, knowing what your client's potential strategy is. There are so many variables at play.

(Laura King, Clifford Chance)

3.5 Data, ethics and trust





Key trends 2020-2030

- The limits of 5G will be reached, and 6G will be introduced – enabling faster processing and new technologies.
- 24bn IoT connected devices by 2030; a compound annual growth rate of 11% compared to 2019 (Transforma Insights 2020).
- Up to 15% of new cars sold in 2030 could be fully autonomous (McKinsey 2016).
- Proliferation of data and analytics combined with speed leading to real time information flows in sectors which have traditionally had a more time-lapse approach.
- Data will increasingly be collated in smart ways with data from currently unconventional sources – e.g. satellite imagery, crowd-sourced data, mobile phone records, remote sensing – to produce more nuanced interpretations. Context will be king.
- New ethical and moral frameworks must be developed to cover technology developments, protect non-human interests, and to respond to fluid geopolitical complex.
- There will be growing global competition for data and AI hegemony, not least between the US and China, but with other regions such as Africa growing in influence.
- While much use of data for scientific research and for global development purposes has been implemented under the ‘do good’ or ‘data philanthropy’ label, we will see growing charges of ‘algorithmic colonisation’ as a serious risk of misuse of data.

The proliferation of personal data and its commercialisation and commodification raises important questions of who will be able to own, access and use data in the future. Digital footprints are now generated from infancy and there will need to be stronger regulation around data privacy, how data is treated and who owns it.

Big tech plays a huge role here; algorithms that are addictive and exploit divisive content have the potential to cause serious harm at an individual level (in terms of mental health and wellbeing), and more widely in eroding public trust and support for institutions and democracies. Will trust become a more important commodity going forward? Accountability was a recurring theme in our interviews, in terms of how this is baked into new innovations. Technology will raise several ethical problems to be solved – for example, driverless cars and the ‘Trolley Problem’ with many seeing the law as playing a crucial role supporting ethical decision-making.

Several of our participants noted that the public may be more likely to accept use of their data where there is demonstrable personal or public benefit; there is some concern, however, that COVID-19 is being used as a cover to expand the use of surveillance technology with ‘test and trace’ data also being sold onto third parties. One interviewee thought public health had been used as a bit of a ‘battering ram’ against privacy – *‘things like test and trace, we know why these are used, but there will be a lot more insidious use of data and sensors and beacons which function more about workplace productivity rather than genuine health need’*. He gave the example from a few years ago of a major newspaper installing devices to monitor whether people were at their desks, using heat and motion sensors. Designed to record occupancy across 24-hour cycles, the devices were intended to make sure building use was efficient to reduce the amount

of power spent heating, lighting and cooling spaces. But the devices were removed almost immediately after a revolt from the journalists, who saw them as personal surveillance. This use of monitoring tech has now returned with thousands of sensors going into offices across London, apparently to measure office occupancy to help comply with social distancing and COVID-related health needs. In reality, these will be used to assess productivity and to measure other dimensions of working life. The rise of IoT and shifts to energy-saving smart buildings still bring with them the risk of human surveillance. Sensors will be invisible and embedded in all physical forms, generating machine intelligence – *‘the question is who has access to that and how might it be used to report and control human behaviours?’* (Professor Jeremy Myerson, RCA).

Anti-5G and anti-mask protests, fomented by fake news and deliberate misinformation, may be a sign of further resistance around the issue of data ownership and control in the near future. As governments and businesses exert greater control over citizens to achieve compliance or respond to crises, how do we conduct ourselves in an era of ‘surveillance capitalism’? (Zuboff 2019).

Interviewees saw advantages where businesses were able to use data, especially existing client data, to offer a more personalised and relevant service. There is particular potential here for corporate firms and in-house legal departments to provide their commercial clients with a competitive advantage.

The best law firms in the world will be able to use their cognitive diversity and the strength of their data to predict the future for their customers. Frankly, humans will always want that, we always have wanted it [...] people will continue to pay a high premium for the assurance that someone is predicting the future for them in the right way. In that, we can't lose sight of the rule of law or the need for optimised 'silver box' problem solving – it would be a shame to have a perfect projection, but to find that short term cash flow has stopped and you are no longer a viable business; or society has fallen apart while you were very cleverly using your crystal ball.

(Rob Booth, The Crown Estate)

There is a proliferation of data and subsequent analytics (including as a by-product to, for example increased regulatory demands or post-COVID monitoring needs), leading to the potential for response to the demands for regulation real-time like the model that already exists in finance. More accurate live forecasting and risk evaluation, facilitated by AI, could help design and regulate the provision of products and services to meet real-time needs, including mass citizen involvement in the sharing and shaping of data products; for example, a patient can self-monitor and report back data

to healthcare hubs to receive immediate health interventions. Resourcing the management of such large quantities of data has major implications.

Over the next decade, society as a whole, and lawyers especially, will face ethical questions around data emerging from new industries and from new types of data capture, for example industries working with space and earth observation data, as well as from the biotech and genomics sector.

Genome data does present ethical challenges: Who sees it? How do we control who sees it? Who owns that data and information, and is it a commodity that could be sold and by whom? Genomics is quite a young discipline, but it is accelerating rapidly and I think – given some of the things that we can now do – ethics and law almost need to catch up with us. Well, not catch up necessarily, but the field is moving quickly, so much so that things that were science fiction when I was still a student are now routine.”

(Julia Wilson, Associate Director at Wellcome Sanger Institute)

The past decade has already seen numerous challenges to the big tech companies on their domination of the market and legal use of personal data. Advances in technology are necessary and urgent to combat climate change and global risks, such as pandemics and we must find a way to harness the knowledge of big tech within new ethical and moral frameworks

to contain and stimulate advances. In concert, the coming decade will call for major technology ‘translation’ programmes (like science translation) to help non-experts grasp complex technical information to determine how it relates to their work so they can make informed choices and contributions.

Data, ethics and trust 2020-2030: some legal inferences

Cognitive diversity and capability of big law firms: lawyers face complex interrelated data issues and challenges in the coming decade, with examples including ethical challenges of genome work, earth observation and space data, who owns data, disintermediation in traditional systems, IP, geopolitics, legal frameworks and regulation.

Data regulations and jurisdictional divergences in how data is protected and controlled create huge opportunities across all sectors and business sizes. Data expertise is needed across all sector groups, and new sector specialisms will need to be developed (e.g. for autonomous vehicles; bio-tech). The legal profession needs to work in union with other professions, develop a new talent strategy, or partner with specialists fully to understand emerging technologies and how data is used by businesses, including the unintended consequences and wider social and political ethics. Firms will operate as learning organisations, finding ways to create meaningful dialogue to create understanding in a cross-divisional, cross-sectoral way to add value to knowledge and stay relevant and timely.

Responding to and anticipating acceleration: there are unfolding challenges and as yet unknown frontiers for lawyers, for example in the production of vaccines, and the governance frameworks needed to regulate those who develop, administer and receive them.

Change management, innovation and a foresight-enabled culture: firms’ strategies should reward/recognise innovation – a full change management approach may be needed to equip firms to enable a porous, cognitively diverse, multi-disciplinary approach while upholding the qualities and values of core legal business.

2020-2030: in the best of worlds and the worst of worlds...

Below we combine some of the positive and more concerning aspects of data and ethics that the research data foresaw for the next decade.

Future World 1

Basic universal standards for privacy and operational codes around use of algorithms, AI and other means of data manipulation have been established and are widely accepted. Stronger regulation operates around big tech in particular and their ability to commodify data. Across society, greater levels of public awareness of how data is used exist and more control resides with the individual over who possesses or can view their data. Because individuals feel confident in the regulatory measures and their own level of control, they are more likely to be willing to share their data for personal gain (e.g. health benefits) with companies whose values reflect their own. Regulation and public opinion limit the way data can be used and there has been resistance to overarching surveillance data or mass smart cities where individual level control has yet to be established.

Future World 2

Regulatory bodies are overwhelmed by their inability to control and manage the profusion of data, and its commercialisation. Big tech's political influence means individuals can't retain total control over their personal data. We see the increase of data trading on the black market and companies find ways around GDPR restrictions. Unregulated and unbridled sharing of personal data increases sharply leading to mass malicious uses, crime and fraud, and erosion of trust in public bodies. Existing societal and racial biases are further entrenched by data fed into AI tools and algorithms.

Interviewees expressed varying views around the law's role in enforcing ethics and whether lawyers and the law have a role in holding businesses accountable around ethical issues:

I'm not sure that lawyers have a great role in ethics – and I don't mean that to imply that I don't think they are ethical. But I think the role of law and ethics are different. In other words, they don't completely overlap. We would need to draw a distinction between business ethics generally and the ethics of those who provide legal services. Obviously, I would expect lawyers to provide a strong input into their own ethics or the ethics of legal services, but **I don't know that there's a great deal that lawyers generally can do in business ethics** – beyond trying to influence them – because their tool is law, not ethics... I don't think you can enforce ethics. You can enforce law, and you can enforce rules, but **I don't think you can enforce ethics** because ultimately that is a state of mind.

(Professor Stephen Mayson)

People's interest in collecting their own data has exploded during COVID. We have seen a 158% increase in the use of apps. **You still need the experts to have a legal say, to have an ethical say.** There, you need a legal body which will go in and have the human touch in order to state: 'this is a bias, that is unacceptable' and so on. And we'll see far more of these types of cases.

(Liselotte Lyngsø, Future Navigator)



3.6 Our changing environment





Key trends 2020-2030

- Global population rises by 1bn+ by 2030. 97% of growth comes from emerging or developing countries (PwC Megatrends research).

- Global demand for food, energy and water increases by around 30-45% each. Shortages are increasing, increasing international tensions (Population Institute 2013).

- Water, food, energy and other critical resources are used as weapons of war.

- Rise in the number of climate litigation cases and charges of ‘greenwashing’.

- The threat of Bioterrorism increases.

- Vast variance in the priority different countries assign to climate change policy, and the extent to which it conflicts with other policy priorities.

- More emphasis will be placed on changing citizen behaviour.

The scientific community agrees that anthropogenic emissions must be controlled to limit the global temperature increase at 1.5°C-2°C by 2100 and avoid the most pervasive impacts of climate change. These would include exacerbated adverse weather phenomena leading to mass migration on an unprecedented scale, as well as the loss of biodiversity and some low-lying countries. The repercussions of this environmental impact would have a profound effect on human ability to subsist, highlighting access to human rights and justice.

A wealth of evidence suggests climate change will have disastrously far-reaching effects and threaten life itself through the depletion of food and water sources, and destruction of existing zones in low-lying coastal areas. Industries which once relied on heavily polluting fuel sources and

unsustainable practices will be forced to change by 2050. Modes of transport will need to switch to green fuel, investment trends will need to align with governmental decarbonisation goals. Buildings and cities will change shape. Mitigation relies on advances in technology and changes in behaviour in all areas driven by regulation, taxation, legislation and communication.

Interviewees drew analogies between the global response to the COVID-19 pandemic and what a similar action responding to the climate crisis might look like. While individuals were hopeful for innovations and how technology could be used to a massive advantage, they perceived geopolitical difficulties in forming a collective global response or getting past the blocking agendas of some of the world's populist political dissenters.

My gut tells me that the response to coronavirus has given us a very accurate preview of what the response to climate is going to look like, as the crisis becomes more acute and more concrete interventions become necessary. I don't think there will be any effective co-ordinated global-scale response; I think it will be piecemeal, haphazard, more than occasionally counterproductive, heavily politicised, heavily partisan, used as a cudgel from one polity against the interests of another, and will fail.

(Adam Greenfield, writer and urbanist)

You could say that there are quite a few indicators that we're past some of those political tipping points, and that's what we're seeing in the US and Europe, and what we're seeing with the pandemic. That completely changes the analysis, then; if, instead of this being some sort of intelligent transition, it's instead a precipitous breakdown.

(Tim Crosland, Plan B Earth)

Tech solutions, carbon capture and storage, AI-driven modelling and uptake of renewables were all cited as potential tools for preserving a healthy environment and supporting increased emphasis on circular economies – but much depends on whether new innovations are owned by those with the power to implement new tools and technologies (some of which have not yet been created). Equally, as Adam

Greenfield noted earlier, the thermodynamics and physical resource constraints of bringing our ‘silver bullet’ solutions to fruition remain grossly underestimated. Technology and AI are also just tools that can be used for positive or for negative, and one interviewee observed that it is only through changes in human behaviour that we can genuinely have an impact on reducing our carbon emissions:

Technology is essentially used to try to remove frictions – how do you remove frictions from processes? That often needs people to make things more efficient, and by making things more efficient you reduce your carbon impact, but also you allow people to consume more, which increases carbon impact... So, I think unless people change their attitude around consumption then we’re not going to solve climate change.

(Dr Daniel Hulme, Satalia)

Other experts pointed out the current gaps in the regulatory system and limits of enforceability, demonstrated by the difficulty of adjudicating cases when there is no clear way to quantify harm. Extreme weather attribution may be an increasingly relied upon way to boost the evidentiary basis of such claims. A key trend for the next 10 years is also the growing importance of ESG/CSR (Environmental, Social and Governance/Corporate Social Responsibility) to business and the regulatory landscape around it, incentivised by EU tax allowances amongst other initiatives.

The Sustainable Development Goals (SDGs), are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. While global efforts towards achieving the goals by 2030 have begun across areas, Advocates for International Development (A4ID) argue that the role of the

law in achieving the SDGs is often overlooked. To that end A4ID is writing a legal guide with the intent ‘to outline key linkages between the Goals and current legal frameworks and concepts in a broad global sense. This guide will be a foundation stone for efforts to align the law with achievement of the SDGs’. Further, A4ID (2020) assert that ‘the SDGs mark an opportunity for lawyers to make a tangible contribution to positive social and environmental change. They provide a global framework for lawyers to engage in sustainable development and to increase access to justice for individuals and communities everywhere’.

Our changing environment 2020-2030: some legal inferences

The Green M&A landscape: new opportunities around funding, company formation and sustainability, requiring legal input and advice.

Global Green Partners: call to find global partners whose focus is identifying internal and external opportunities in the green space. These opportunities are advisory as well as legal. Identify how important sustainability is to clients, core sectors and to brand. Long-term strategic planning and thought leadership should incorporate these factors.

Understand clients' risks and needs relating to climate change: the escalating frequency and severity of extreme weather events can have far-reaching implications for lawyers and their clients across all sectors. Understand how environmental factors are impacting different sectors – for example a rise in litigation against corporates and governments; rise in immigration cases as more people are displaced through changing geo-landscapes.

Understand your own exposure to these risks – considering the balance of your 'client portfolio'.

Changes in approaches to insurance: lawyers and their insurer clients can play a crucial role in enabling innovative solutions to the risks posed by extreme weather events. In recent years traditional indemnity insurance has been gradually replaced by parametric insurance as predictive analytics and real time data capture advance.

Liability Risks and Choice of Forum: lawyers advising their clients on how to manage and mitigate liability risks will need to be aware of the variety of legal systems and grounds under which a single claim can be brought. Climate change is a global issue unattached to a particular country or jurisdiction. This allows claimants to shop for a forum with law best suited for the liability they are seeking to establish. Choice of forum is not unique to climate change litigation; however, this issue is unique for the breadth of options it offers in both types of forum and legal grounds that the claimants can choose from. In the next 30 years more than ever before will lawyers be expected to anticipate and understand these options.

Transition Risks and Stranded Assets: lawyers are becoming more involved in assisting their clients with how to avoid or manage transition risks. Risks related to stranded assets are linked to poor investment decisions. In the years leading up to the UK's 2050 Net Zero target, lawyers can expect to be called upon more often to devise innovative strategies to pursue their clients' claims against investee companies.

(See also the Law Society's Horizon Scanning report on Climate Risks, written by Nigel Brooks and Zaneta Sedilekova, Clyde & Co. LLP).

2020-2030: in the best of worlds and the worst of worlds...

Below we pull together some of the positive and more concerning aspects of our changing environment that the research data foresaw for the next decade and beyond.

Future World 1

A changing attitude towards measuring growth post-pandemic saw the increased use of economic instruments in the next 10 years which incentivised greener practice and promoted a focus on circular economies. An increased reliance on renewables sees wind as a major source of power in the UK. The international regulatory system (UNFCCC) is adhered to, including NDC's increase in ambition year on year, and sustained involvement from industrialised countries. Enforcement mechanisms for the substantive obligations have been introduced. An effective solution to the increasing number of climate refugees is agreed alongside a substantive international regulatory system to cover those in protracted refugee situations. Effective climate change mitigation occurs, the global temperature is limited to 1.5°C/2°C relative to 1990 and some of the most pervasive impacts might be avoided. (As it stands, we are predicted to reach 2.7°C-3.1°C temperature increase by 2100). Effective adaptation measures are adopted widely, including more balanced and local diets, decreased deforestation, flood barriers, switch to electric vehicles.

Future World 2

Lack of co-operation and enforcement at international level impedes global mitigation and adaptation efforts – there is no green policy signal. Carbon-intensive operations do not diversify, BAU emissions continue, bolstered by post-COVID recovery funding directed towards fossil fuel businesses. BAU emissions come at a cost to GDP each year which places strain on international and domestic political systems. BAU emissions are predicted to cause 4.1°C-4.8°C by 2100. Increased extreme weather events contribute to mass-migration and disruptions to global supply chains and the lack of investment in green tech, or ringfenced IP, meaning innovative solutions cannot be used. BAU and 1.5°C/2°C is surpassed; some positive feedback loops become 'locked-in' causing irreversible damage to the environment, with significant adverse effects for carbon-based life on Earth.

What is the law's role in assisting climate change mitigation and adaptation?

Interviewees spoke of a role for lawyers as change agents, questioning whether the legal profession would respond to climate change from an ethical perspective over the commercial demands of their clients and whether generational change would affect this stance.

Lawyers are the closest we now have to morality. Over the years, and particularly in the last 20-30 years, **the gap between their perception as officers of the court and preservers of natural justice has widened**, as the perception of them as money makers has deepened. Gen Z are incredibly bright, highly emotionally intelligent, and they will come together, and they will say ‘no’. These are the young people who are addressing climate change in a way that old people are not.

(Ciaran Fenton, Consultant)

There is certainly a role for lawyers to take in preserving the spirit of international law and cooperation.

(Tim Crosland, Plan B Earth)

Taking the example of displaced populations, Tim Crosland warned that, as whole regions of the world become uninhabitable, we will see

displaced people on an unprecedented scale – and one which international immigration law is ill-equipped to handle.

If you’re an immigration lawyer, how could you not be thinking about this? If you’re an environmental lawyer, or you’re just watching what’s happening, how could you not be thinking about this? There’s a huge role for the legal community here.

(Tim Crosland, Plan B Earth)

What is the law's role in decarbonisation?

Interviewees discussed whether lawyers are purely 'business-people' and thus, whether lawyers would advise clients in a way that enabled them to only minimally fulfil or to circumvent measures that can contribute to mitigation, rather than addressing possibilities for genuine change.

When Plan B had its first legal case, it was looking for pro bono solicitors. When it approached 'magic circle' firms, initially it got an enthusiastic reception, but the firms were later conflicted out due to their other clients [ie in the fossil fuel sector]; this has clear implications for the ability of individual lawyers – who may have been motivated to join the profession to try to build a 'more just world' – to fulfil this alongside the constraints that are imposed by the pressure to generate funds. With this in mind, lawyers need to ask, 'how do you make yourself resilient in the profession, and able to be part of a transition away from economic factors you may have come to depend upon?'

(Tim Crosland, Plan B Earth)

I don't think lawyers are going to be in the driving seat of what gets adopted and what doesn't. It'll be a combination of consumer demands – and I mean that in the broadest sense – and tech developers and promoters. Actually, in some ways I think this goes broader than tech. A large driver for the future, I think, is what we call the unregulated market. In other words, things being done by people who aren't lawyers. I think that's going to increase the momentum, and the spread will increase. So, again, it won't be the lawyers deciding what and how consumers buy legal services.

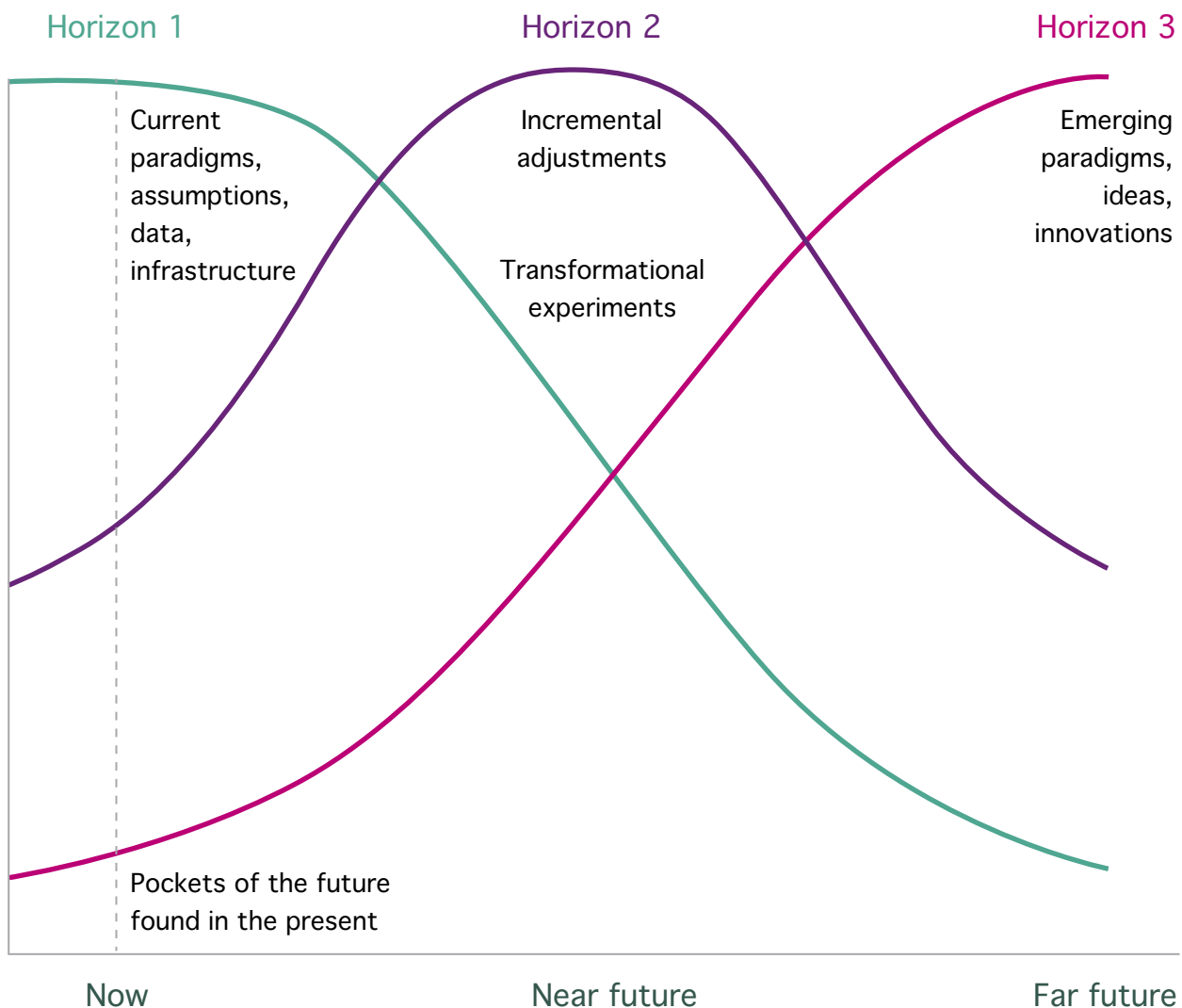
(Professor Stephen Mayson)

3.7 Unfolding over time: Three Horizons

Changes in the coming decade are unlikely to be clearly defined points where something stops and another thing starts. Rather, we can already see signals of coming change taking root and legacy systems persisting even after they have been broadly replaced. It is in the interim moments of transition that key opportunities

can arise. In this section we use three simultaneously unfolding timelines of change to help create a space in which we can start to make the futures of all equally legitimate, and include the voices of generations to come, as well as those in the present. Weighting the long future and looking at how it intersects with shorter futures is a key quality of foresight work.

The Three Horizons method¹



¹ The Three Horizons method was developed by Bill Sharpe of the International Futures Forum. Sharpe wanted to depict overlapping waves of technological innovation and change more realistically than in traditional linear roadmapping.

The first horizon (H1) is the dominant system at present. It represents ‘business as usual’. As the world changes, aspects of business as usual begin to feel out of place or no longer fit for purpose. Ultimately, ‘business as usual’ is superseded by new ways of doing things.

In the second horizon (H2), the shortcomings of business as usual have triggered innovation and transformational experiments. At some point the innovations become more effective than the original system – this is a point of disruption.

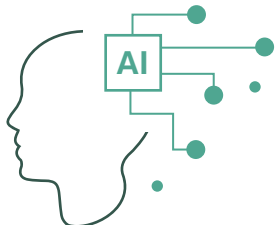
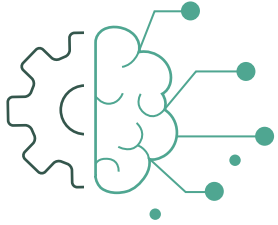

The third horizon (H3) is the long-term successor to business as usual – the radical innovation that introduces a completely new way of doing things.

This framework encourages any group to stretch its thinking intentionally in two directions. It stretches the conversation to include speculation on how the future might turn out as well as the future potential of the present moment.

In the table overpage, we plot insights from the four themes as expectations for 2020-2030 across three overlapping horizons.



Three Horizons

	Horizon 1 (now to 2023)
<p>Legal profession</p> 	<ul style="list-style-type: none"> • Call for broader role of lawyers around legal design and creative solutions for: access to justice; ESG; and ethical and legislative response to increased use of AI/automation. • Added value is about strategy and problem-solving advice rather than process. • Rise of corporates that can fund/scale tech. • Flatter structures to remain competitive.
<p>Society</p> 	<ul style="list-style-type: none"> • Increased remote/hybrid working. • Momentum around wellbeing and flexibility. • Increased demand from consumers to be protected from big business, and more regulation around data privacy and security. • Efficiency and productivity gains means more time for community activities – although increased competition for jobs, pressure to compete with new market players, and need to reskill will create psychological toll. • Mass uncertainty for many around jobs, living, health, economy, socialising, post-covid.
<p>Global</p> 	<ul style="list-style-type: none"> • The tensions between globalism and nationalism make for a wildly uncertain near-term future. • Implications of recent political events: Brexit, US Presidential Election, UNCCC. • Rising social movements and resurgence of the civil rights movement. • Increasing pressure from global trade talks and alliances.

	Horizon 2 (2023-2026)	Horizon 3 (2026-2030)
	<ul style="list-style-type: none"> • Partnership model dissolves: more fluid talent base, more part-time workers, career sabbaticals. • Broader role is advising governments, providing reform recommendations and contributing to a sense of a more just world (e.g. better systems). • Lawyers use the law to halt AI goals. 	<ul style="list-style-type: none"> • AI as co-worker – or part of lawyers if they opt for augmentation – and full integration with machine working. • Deskilling of legal profession as AI takes over. • Compensation in the profession drops dramatically. • The best strategists stand out as the best lawyers.
	<ul style="list-style-type: none"> • Instant, self-service legal advice – end users experience more routinised and objective results. • End users shift away from perceiving the judge as a human being and the lawyer as a representative. • Law becomes seen as rule – governments use tech to monitor and alert citizens to be compliant. 	<ul style="list-style-type: none"> • Tech corporations dominate. • AI and voice advisors become commonplace: everyone has a ‘free’ lawyer at their disposal, similar to Siri. • All very dependent on how accepting society is of “wholly logical justice”. • Calmer lifestyles, more caring, lower environmental footprint.
	<ul style="list-style-type: none"> • China overtakes the US as the world’s biggest economy by the middle of the decade. • Tech companies/large businesses house industry sector divisions – and become some of the biggest providers of different services. • Some sectors (e.g. law) affected by AI achieving ‘System 1’ intuition. 	<ul style="list-style-type: none"> • Global focus on using AI systems to fight AI decisions and stress-testing AI-findings. • Beyond 2030, many areas of life from the way in which we train the workforce to designing urban spaces will be impacted by some form of AI or nanotechnology.

4 Implications

4.1 Implications for the legal profession

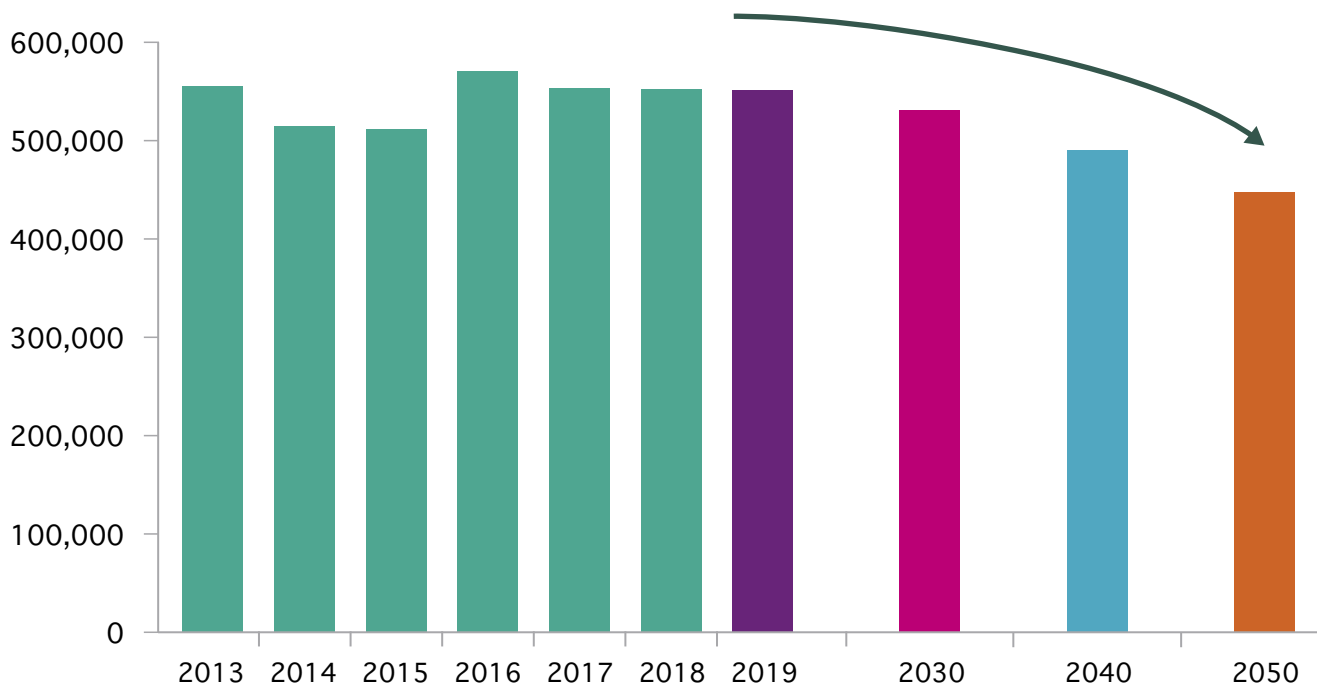
The near-term impacts on law firms and in-house teams will certainly be clustered around the fall-out from the pandemic and associated working restrictions – including adoption of new technologies and changing client needs. Beyond immediate and near-term strategies for recovery, the accelerated adoption of technology will have a longer-term impact on the workforce.

Conservative and Disruptive futures

Drawing on data from our Delphi panel, views from our interviewees and research undertaken for the Law Society by KPMG (2020), we modelled two broad possible avenues towards 2050 and their impacts on the legal workforce.

Figure 3 shows historical and forecasted FTE employees of the UK legal sector progressively declining within a conservative projection.

Figure 3: Shows a historical and forecasted FTE employees of the UK legal sector



Note: includes direct, indirect and induced FTE for the UK legal service sector

Source: historical data from Contribution of the UK legal services sector to the UK economy, KPMG (2020:7)

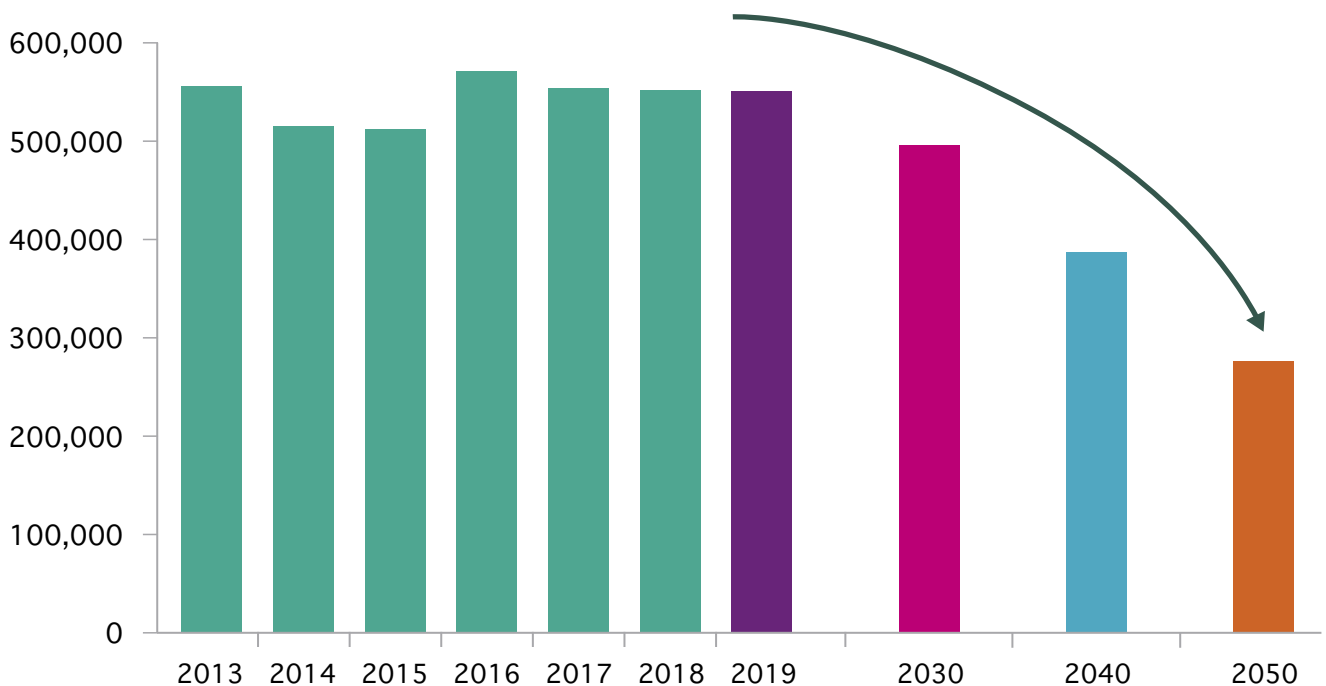
A conservative route towards 2050 suggests that:

- There are sectoral differences in the way technology impacts the human workforce, although the high-end of the legal profession is generally immune to a radical reduction in FTE numbers.
- High-street firms and legal secretarial roles are most at risk of disappearing, but new entrants in the market and a move to alternative and multidisciplinary delivery models means the legal sector includes more people from non-legal backgrounds including technologists, project managers, data analysts.
- Smaller firms fall out of the market; there is more consolidation and a rise in large corporations that can fund and scale technology.

- The current IP landscape prevails, which means innovative solutions are left undeveloped, rendering the most challenging issues difficult to solve.

Our disruptive scenario (Figure 4) shows a more severe drop off in FTE employment and assumes that the use of AI and other technologies will radically reduce the numbers of lawyers and other staff currently employed in the sector – this will be particularly marked in commoditised areas of the law and notable among ‘high street firms’ as conveyancing, wills and probate are amongst services delivered by large retail legal service providers. In corporate law firms, large swathes of routine legal advice will either be conducted in-house by clients using technology solutions, or outsourced to technology-enabled providers. Only the high value, complex or newest areas of law will need human input. Humans may also be needed in relationship management with larger clients

Figure 4: Shows a more severe drop off in FTE employment and assumes that the use of AI and other technologies will radically reduce the numbers of lawyers and other staff currently employed in the sector



Note: includes direct, indirect and induced FTE for the UK legal service sector

Source: historical data from Contribution of the UK legal services sector to the UK economy, KPMG (2020:7)

In this disruptive projection:

- The legal profession is not immune to a savage reduction in FTE (almost 50% between 2030 and 2050).
- Lawyers remaining within the profession must work alongside technology – and are required to take performance-enhancing medication in order to optimize their own productivity and effectiveness.
- There is a pressing need in many types of legal employment to reskill, retrain and move into new industries/roles.
- International cooperation and consensus in regulating the influence of big tech companies, malicious use of personal data, cybercrime, space, climate etc.
- Technology is leveraged in creative and social advantageous ways to democratise access to justice in the legal sphere, tackle environmental degradation and revolutionise health outcomes.

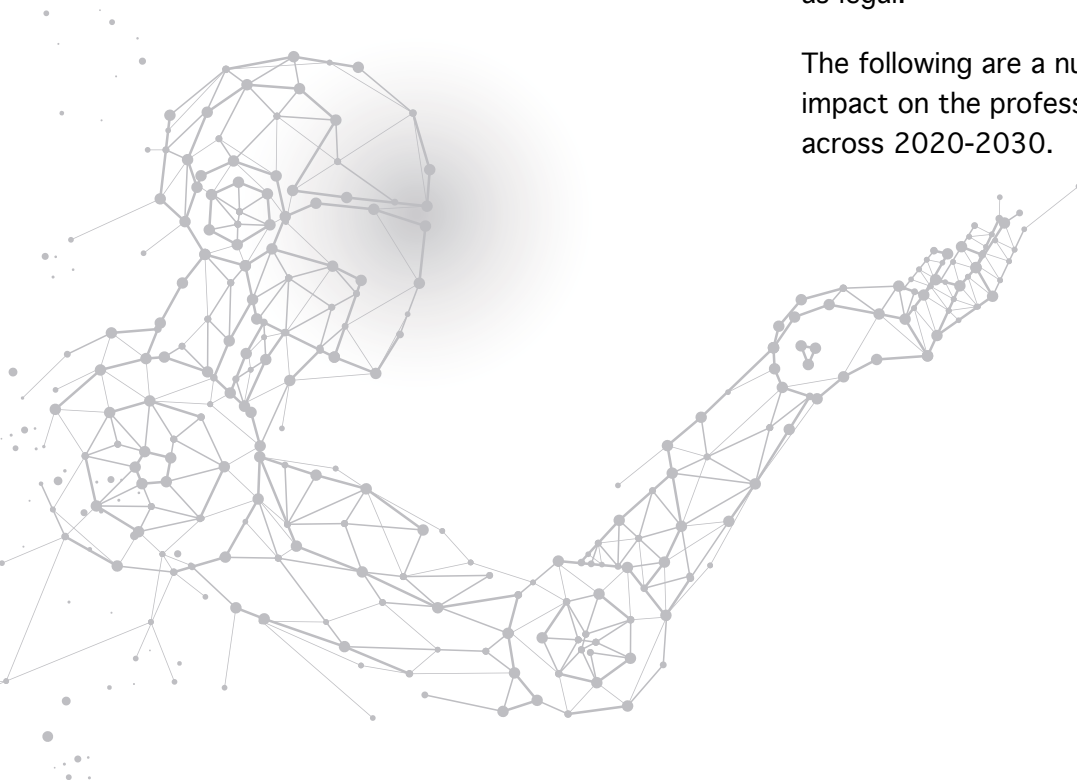
Areas of focus in the near term

Emerging technologies and their potential legal applications should be a priority across the profession. The cost pressures on the legal sector to adopt AI and streamline legal functions will lead to more work types being commoditised, automated and self-service in the near term.

The wider social and political ethics of data brings another challenge, including a drive to understand how data is used by business and jurisdictional divergences in how data is protected and controlled. Data regulations create huge opportunities across all sectors and business sizes. Data expertise will be needed in all sector groups, and new sector specialists will need to be developed – especially where use of data applies to climate risk, healthcare and implementation of society-wide technologies.

Talent strategy will require law firms and legal departments to not just have technical legal experts, but create multidisciplinary teams, bringing in tech and data experts, also finding global partners whose focus is identifying internal and external opportunities in the green space. These opportunities are advisory as well as legal.

The following are a number of factors likely to impact on the profession, its practice and people across 2020-2030.



Substantive legal issues	Changes to global trade law	Accountability with AI (e.g. medical misdiagnosis)
	Cross-jurisdictional tax disputes	Blockchain – implications for asset management
	Carbon tax regime increase	Regulation – data privacy, control, ownership
	States refusing to accept jurisdiction of international courts	Data export to lesser regulated jurisdictions
	Lack of enforcement mechanisms at an international level	Policy-shaping for new frontiers (e.g. developing regulatory instruments for space)
	Consolidation of global supply chains	Insurance claims - adjudicating matters involving unquantifiable harm
	New regulation around emerging technologies – AI in and of itself will create a huge amount of legal work and regulation	UNFCCC will be substantiated every 5 years – cascading down into domestic legislation
	Misuse of personal data	Protracted refugee situations – regulatory gaps
	Climate-related risk and litigation	Increased commercial ESG obligations

Role of law and lawyers	Change agents v. BAU enablers	Upholding status as a trusted profession, transparent systems
	Substantiating environmental law	Will the distinction between barristers and solicitors endure?
	Environmental compliance, incentivisation and accountability	Changing skills profile for lawyers and legal education
	Helping to shape and implement ethical codes	Changing business models with new market entrants
	Creating accountability around who owns and controls data and for ‘rogue’ algorithms	Developing regulatory frameworks – information, accountability and incentive gaps

Talent and skills	Cross-border and local expertise	Cross-jurisdictional application of data laws
	Protecting human rights and freedoms	Sector specific environmental expertise
	Interpreting ESG data	Solving ethical problems
	Soft skills – building trust, client relationships	Understanding the alignment between environmental law and other laws
	Understanding deep tech and how systems are built	Longer-term, moving towards more hands-on training of AI models

A number of lawyers and paralegals are talking about going freelance, so they can gain more diverse experience and be more attractive to clients. The freelance sector is growing and offers flexibility on both sides.

It is still unknown how the full implications of Brexit will play out and what will be the future preferred jurisdiction of choice in major business deals. A lot of lawyers are also qualifying in Ireland so that they can continue to work in Europe.

In 2020 and 2021 a number of training contracts have been cancelled or put on hold due to COVID-driven working restrictions and changes to the active and furloughed workforce. This raises questions about how firms are dealing with this development and where the next generation of lawyers will come from – whether the profession will find a way to train solicitors remotely or whether this pause to the traditional qualification process will enable new approaches to workforce planning and new desired skills sets to arise.



4.2 The role of the Law Society

Foresight shouldn't be seen as a stand-alone set of activities but should be integrated into the culture. It needs to run through the organisation's cultural structures and assumptions in order to overcome resistance and add maximum value to the organisation. The more foresight tools and methodologies are part of the strategic life-cycle the more robust the policy and decision-making process.

(RSA 2020: 12)

The ethical challenges of genome research... questions around who owns data... disintermediation in trust systems... intellectual property territorialism... geopolitics... new legal frameworks... international regulation... trade wars... the next pandemic...

The complexity and interconnectedness of these knotty and novel problems will ensure a constant regeneration of work in the high-value, high-risk, high-complexity segment of the market for years to come. Together they highlight how much scope there is for rethinking law, legal services and business strategy in the coming decade, reengineering the delivery of legal services and developing talent differently.

The emerging problems will demand cognitive diversity and outside-in thinking. Talent strategies will require firms and legal departments to create multidisciplinary teams, uniting tech and data experts alongside other specialists. By actively taking up an influential role in bringing together multi-disciplinary insights, and in encouraging and nurturing the talent pipeline, the Law Society can play its part in contributing to the anti-fragility of lawyers, legal firms, the legal profession, the law and society.

Our ambition is to be the engine room driving strategic insight and influence and to improve our reputation for helping members tackle uncertainty and change. Futures methods and tools allow us to systematically analyse emerging trends and impacts to anticipate possible future states. The Law Society has an important role in the interfacing of emerging trends and lawyers/law firms, especially for those who might lack the resources or time to look beyond their immediate near-term needs.

We heard in many of our interviews that more, and more diverse and perhaps uncomfortable, voices and views need to be heard, and have weight in discussions, policy development and actions. That means understanding and challenging power relations in order not to reproduce them and holding open spaces in which productive dissent can move to shared understanding and forward momentum.

The Law Society has a convening role, to bring together diverse and unusual stakeholder groups, crossing disciplines, opening up and exploring radical and demanding frontiers and the invisible spaces between professions, domains and timelines that might otherwise lie invisible. As we build fluency in foresight, we are increasingly able to make a meeting place for informed, complex and open conversations.

5 Conclusion and next steps

Our intention in this report has been to engage readers with factors that may resonate or which connect more easily to their immediate experience over the next 10 years, rather than imaginings up to 2050. That said, it is not our intention to be mired in the short-term recovery from the impacts of the pandemic and we hint towards further out possibilities as suggested by our participants. Far from being ‘sci-fi’ many of their visions for 2040-2050 are grounded in nascent technological possibilities already being researched and in large scale physical and ethical crises that will overshadow all of our time horizons.

A wealth of evidence suggests that climate change will have disastrously far-reaching effects on the planet and that human industry is largely to blame. In order to mitigate these effects, industries which once relied on heavily polluting fuel sources and unsustainable practices will inevitably be forced to change by 2050, by which time many organisations and governments are aiming for full decarbonization. Buildings and cities of the future will change shape, being self-sufficient hubs with sustainability at their core.

Population and demographic change are expected to have a huge impact on the world, with all research predicting a global population of 10 billion people by 2050. This will appear in tandem with increasing urbanisation, both to accommodate a growing population and resettle those whose coastal cities have been lost due to rising sea levels. Ageing populations around the world are expected to place heavy demands on healthcare services, with age-related diseases becoming more common.

In the coming decade we face more widespread use of technologies already available. This will include generating new forms of energy, creating new construction materials with inherently green

properties, or creating new forms of transport altogether, such as the much-hyped hyperloop. AI will be increasingly used by organisations for greater efficiencies in pursuit of profit. The proliferation of data and data analytics will shadow advances in technology, since efficiencies made through increased automation must be constantly monitored and recalibrated by constant data streams.

Geopolitical dynamics will remain rocky in the coming decade with China growing in economic dominance but populist leaders retaining the ability to be unpredictable and unstable in their global relationships. The 2020-2030 decade will see a significant shift in economic power towards the E7 nations, which, by 2050, will be stronger than the G7 economically.

Given these changes, it is necessary to consider the predicted response from governments, policymakers and the legal profession regarding regulatory development and enforcement, the use and application of different innovations and solutions. Importantly, these regulations will undoubtedly present new challenges and as-yet unknown frontiers for lawyers, which the legal sector will in turn be forced to adapt to. Nonetheless, there will be opportunities for lawyers to help shape societal responses, spot and service emerging needs, as well as bring a critical eye to changing business environments.

In the coming year we will be sharing further insights from the Future Worlds 2050 project. These won’t always take the form of written reports. Our insights will draw on a range of creative and participatory forms and we will encourage and create opportunities for our members and others with an interest to help shape the thinking we share. This co-creation will support the Law Society to play our part in securing an antifragile legal system.

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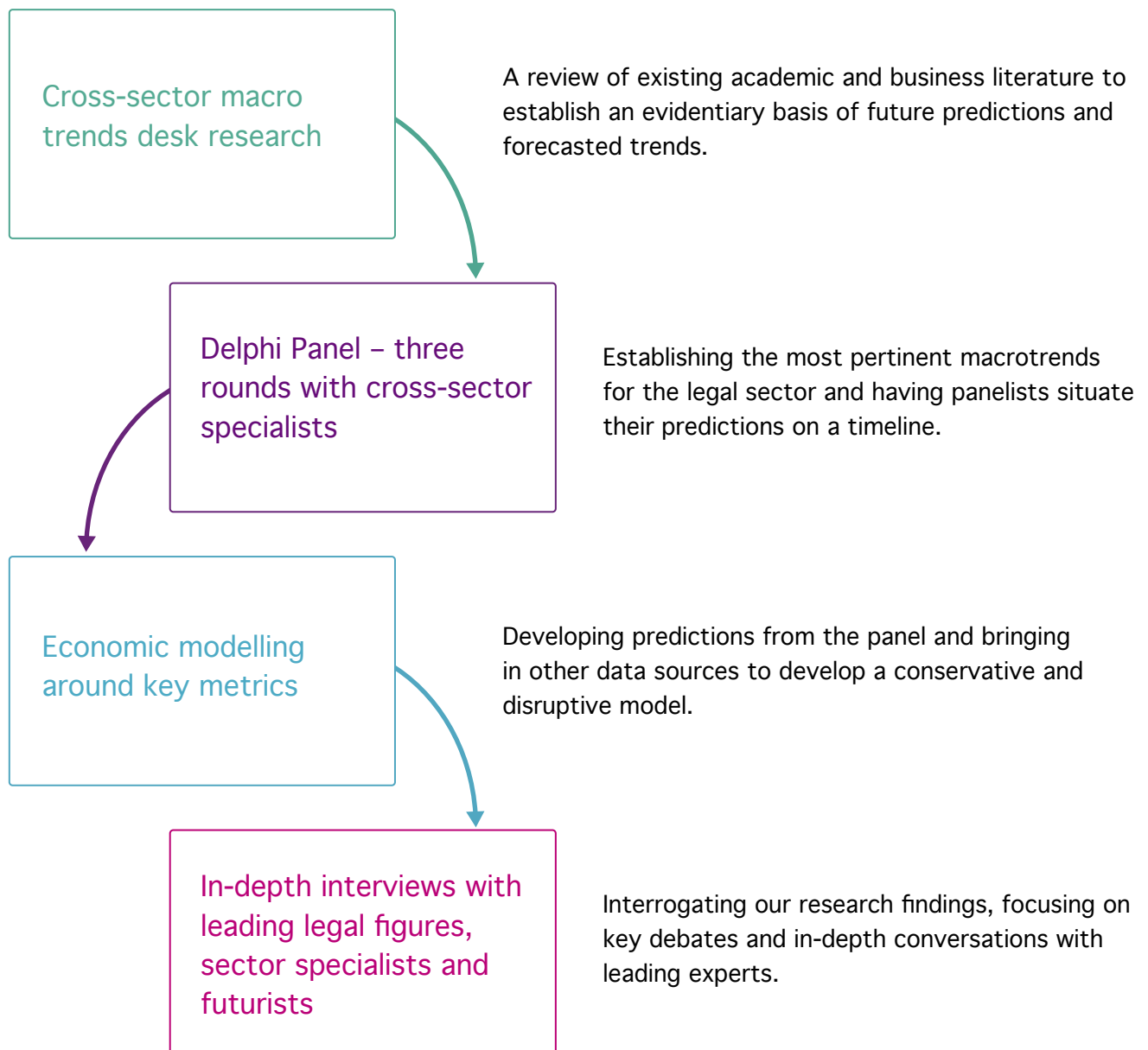
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Appendix 1 – Methodology and participants

The study was conducted alongside legal sector research specialist, Acritas (part of Thomson Reuters) and divided into four distinct stages to

help gradually build up our picture of potential Future Worlds.

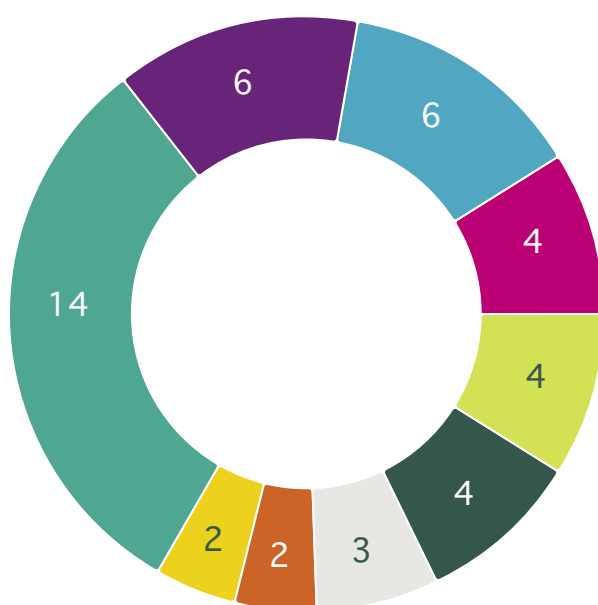


Delphi panel participants

- **Peter Betts CBE** – Former Director, responsible for the UK’s international climate policy
- **Christina Blacklaws** – Former President, the Law Society of England and Wales
- **Matthew Fellowes** – Product Owner, the Solicitors Regulation Authority
- **Richard Potter** – Chief Technology Officer, Microsoft UK
- **Stuart Popham, CMG, QC** – Former Chairman, Chatham House; Former VC, EMEA Banking Citigroup; Former Senior Partner, Clifford Chance
- **Stevie Ghiassi** – CEO and Co-founder, Legaler, focused on expanding access to justice through technology
- **Julia Hayhoe** – Ex-Chief Strategy Officer, Baker McKenzie
- **Jamie Inman** – Managing Director, planning at Weber Shandwick, one of the world’s leading global PR firms
- **Justin North** – Founder, Janders Dean, now Managing Director, Morae Global Corporation
- **Prof. Dan Rodriguez** – Former Dean, Northwestern Law School
- **Rohit Talwar** – Global Futurist, Strategic Advisor and Author
- **Penny De Valk** – Leadership Coach and Mentor

Depth interviews

Interviewees were drawn from a range of sectors:



■ Law	14
■ Futurism	6
■ Business and economics	6
■ Arts and design	4
■ Finance	4
■ Environment	4
■ International relations	3
■ Technology	2
■ Healthcare	2

Interview contributors

- **Ben Tidswell** – Chairman, Ashurst
- **Tim Crosland** – Director, Plan B Earth
- **Dr. Julia Wilson** – Associate Director, Wellcome Sanger Institute
- **Dr. Daniel Hulme** – CEO, Satalia
- **Rob Booth** – GC, The Crown Estate
- **Dan Fitz** – GC, Francis Crick Institute
- **Professor Kerry Brown** – Director of the Lau Chinese Institute, King’s College
- **Laura King** – Partner, Global Head of People and Talent, Clifford Chance
- **Tomás Díez** – Director, Fab Lab Barcelona; Founding partner at Fab City, Smart Citizen
- **Shruti Ajitsaria** – Head of Fuse, Allen & Overy
- **Hilary Carty** – Director, Clore Leadership
- **Ian Gray** – Chairman, Eversheds Sutherland
- **Morgan D. Kauffman** – Director, The Interlock Project
- **Taskeen Ali** – Head of Horizon Scanning, UK Space Agency
- **Professor Michael Mainelli** – Z/Yen
- **Dr Maria Jose Esteban** – ESADE Law School
- **Stephen McGarry** – President, AILFN; Founder of HG.org
- **Lara Pace** – Cybersecurity consultant
- **Joe Blundell** – Coles Australia (formerly)
- **Jon Mcleod** – Director of Communications, BBRS
- **Nick Woolf** – Principal and Director, Woolf & Co
- **Julia Hayhoe** – Founder, Hayhoe Consulting (past Chief Strategy Officer, Baker McKenzie)
- **Dr. Wilson Wong** – Head of Insight & Futures, CIPD; Visiting Professor at Nottingham Business School
- **David Wood** – Delta Wisdom
- **David Weaver** – Head of Professional Services, NatWest
- **Graham Peacop** – General Manager, UK Payments Administration
- **Professor Stephen Mayson**, Faculty of Laws, UCL
- **Professor Kai Peters** – Pro-Vice Chancellor of Business & Law, Coventry University
- **Laurel West** – Editor, The Economist Intelligence Unit
- **Heather Blundell** – Head of UK Client Counsel and Managing Director of Weber Shandwick Manchester
- **Angela Coulter** – Freelance researcher, (former incl. Director of Global Initiatives at the Informed Medical Decisions Foundation)
- **John Croft** – President, Elevate
- **Professor Katharine Hayhoe** – Climate Scientist, Texas Tech University, Dept of Political Science

- **Brett King** – CEO and Founder, Moven
- **Paul Turner** – Climate and Geography Expert
- **Adam Greenfield** – Writer and urbanist
- **Richard Given** – GC, 10x Banking
- **Ciaran Fenton** – Leadership Consultant
- **Professor Dale Russell** – Visiting Professor, Innovation/Design/Engineering, Royal College of Art
- **Dom Moorhouse** – MethodGrid
- **Richard Punt** – Managing Director, Legal Strategy & Market Development, Thomson Reuters
- **Professor Jeremy Myerson** – Helen Hamlyn Chair of Design, Royal College of Art
- **Liselotte Lyngsø** – Futurist and Founding Partner, Future Navigator
- **Dr. Edward Howell** – New College, Oxford University
- **Mark Spilsbury** – Economist



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