

# How can the adoption of new technology be accelerated to improve the efficiency of the justice system?

## A memorial debate in memory of The Rt Hon Sir Brian Neill

Date and Location: 20th June, 2018 at The Royal Society

Chair: The Earl of Selborne GBE FRS  
Chair, The Foundation for Science and Technology

Speakers: The Rt Hon Sir Geoffrey Vos  
Chancellor, The High Court of England and Wales  
Susan Acland-Hood  
Chief Executive, HM Courts and Tribunals Service  
Professor Richard Susskind OBE FRSE  
President, Society for Computers and Law

Panellists: Andrea Coomber  
Director, JUSTICE

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Audio Files: [www.foundation.org.uk](http://www.foundation.org.uk)

Hash tag: #fstjustice

**SIR GEOFFREY VOS** said that he was honoured to open the debate and pay tribute to Sir Brian Neill, who had been hugely respected for his enthusiasm in promoting new technology in the legal system, right up to the end of his life.

Improving the efficiency of justice by adopting new technology was of huge importance. Today's young people would rightly not tolerate justice at the ponderous speeds of the past. He made four introductory points. First, the Government was already engaged in the largest new investment project in the courts for decades, which would transform how cases were handled. Second, in the Business & Property Courts, online filing and digital case management systems were starting to be introduced. He had been

able to participate in a large Court of Appeal case without using any paper at all. Third, in the context of Brexit, the UK business courts were facing fast growing competition internationally from other jurisdictions wishing to offer commercial dispute resolution and arbitration in English and applying forms of a common law approach. Fourth, currently the UK had more technological innovation in this area than elsewhere in Europe, and the potential for artificial intelligence to take over more routine aspects of legal work was immense.

Though other countries were catching up, the opportunity for the UK was that its regulatory climate was more benign, and the scale of digital financial services transactions was massive, and effectively borderless.

Adoption of new technology had started but needed to accelerate. In the Business Courts, the cultural change of all participants in Courts learning quickly to operate digitally was needed. Technological options to reduce the number of hearings should be pursued. Training for lawyers and judges had hardly changed in 40 years and needed to be modernised. The objective of a digital business justice system should be speedy and dependable outcomes at a proportionate cost. Claims should be started and conducted online, with each participant having appropriate access to a common record. Some preliminary and interlocutory issues could be resolved without a physical hearing. Hearing participants could log on at times convenient to them, within an appropriate time window, and respond to questions from judges. Global law firms were restricting the travel of their staff, and courts could do likewise, also through using telepresence meetings. These approaches could be used when interim relief was sought in a business case and when factual and legal issues needed to be resolved in a “trial”. Parties would need to provide full and frank disclosure, as they did today. Even cases involving multiple parties and witnesses could be resolved wholly or partially in this way, with preliminary issues resolved online and evidence given online or by Skype.

Even in cases where time in court remained crucial, it would be sensible to avoid written submissions being reiterated orally before and after the oral evidence. Many factual disputes in trials were irrelevant to the outcome. If judges were more participative online, the majority of even lengthy trials could probably be concluded by an iterative online process. The system was too hidebound by procedural rules and long-established practices. When a hearing was required the judge should already be fully familiar with the evidence, and the proceedings limited to what really had to be established. Global financial businesses would not want disputes on smart contracts and borderless digital ledger technology resolved by physical hearings.

Two caveats were necessary. First, simultaneous transcription and case management services were expensive, and they would need to become available in less complex cases too. Second, the principles of open justice and access to justice must continue to be respected, with justice not happening behind closed doors, and the vulnerable and less wealthy not excluded.

The Business & Property Courts were doing well in terms of efficiency and providing state of the art litigation processes, but continued investment would

be needed, alongside adoption of well evaluated innovations from Legaltech start-ups.

**SUSAN ACLAND-HOOD** said that she had been delighted to meet Sir Brian Neill at the online hackathon in 2017. The current investment in digital court systems being implemented by the Service she led espoused the ideals which he had enthusiastically promoted.

Justice needed to protect the rights of all, but it tended to empower the stronger more, and to be driven by the interests of producers. Reform had to avoid complexity, and to make justice accessible and quicker. It had to be governed by the principles of justice.

The current systems, involving paper filing in some courts, were just about workable but expensive to operate and inefficient. There were many legacy IT systems which were expensive to change; successor systems would have to be much fleeter. The overall programme was ambitious, perhaps the most ambitious in the world, and would cost £1 billion overall. It sought to learn from what other countries had done, and no single element of the reforms was unique to the UK. It was based on constructing many components which fitted together, which was more agile and less risky than introducing entirely new large systems.

In the criminal courts, some summary non-imprisonable offences with no mitigating circumstances could now be pleaded online. Some 350 cases a week were now being handled by this system, with positive feedback from users. A common platform for use by the police, CPS and Court Service was being trialled in Liverpool. It would enable defence lawyers to have earlier access to material relating to their clients. Over the next 18 months it would be extended to handle more complex case progression, and there would be further testing of video hearings in remand cases.

In the family courts, a new online application service for divorce cases had been launched in May 2018, much reducing the error rate compared to the previous more complex paper form. A small beta trial was underway for probate. Over the next 18 months the divorce and probate systems would be extended, online application commence for some family public law cases and a start made on digitising the adoption process.

In the civil courts, more civil money claims under £10,000 were being handled after a digital service had been introduced, and this pilot would be expanded. Digital processes in social security and child support

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cases had much reduced the volume of phone enquiries about progress with cases. Work on benefit appeal cases was at a very early stage, involving judges asking questions online.

In terms of cross-cutting work on video hearings, early cases in tax tribunals had received very positive feedback, due to avoiding the need for participants to travel. It was essential to evaluate all the current projects in the investment programme carefully, to gain maximum benefit for future projects.

**PROFESSOR RICHARD SUSSKIND** said that he had presented on this subject at the Foundation four times between 1991 and 1997. Sir Brian Neill's influence on this area had been very great. Although progress had been relatively slow for 20 years, there was now the prospect of transforming the justice system. In the 1960s Haldane's work on genetics had talked about four stages of acceptance (This is worthless nonsense. This is an interesting but perverse point of view. This is true but quite unimportant and we always said so.) He felt that lawyers had only now reached the fourth stage.

In the current legal market the aim was to provide more for less, with new providers entering (like the big financial assurance businesses, which were much larger than the global law firms) and new technology being adopted. His book "the Future of Law" in 1996 had talked in terms of areas of exponential growth, and digital systems had experienced this with memory cards increasing in capacity a thousand times between 2005 and 2014. There were now fewer limitations of digital technology, with systems being able to detect accurately if a human face was genuinely happy.

The implication for the courts was that it was now necessary to consider if courts were a service or a place. They felt too costly, slow, unintelligible and combative, so needed to be focussed on the needs of users. eBay's 60 million disputes were resolved online, not by the courts. 10% of 500,000 financial disputes were dealt with by the Financial Ombudsman Service, but only 20 required a hearing in person. Lex Machina could now predict the outcome of a patent dispute more accurately than an IP lawyer.

Accordingly 21st Century lawyers would need different training to deliver the outcomes their clients wanted. They would need the skills of a legal knowledge engineer, legal technologist, legal hybrid, legal process analyst, legal project manager, legal data scientist, R&D worker, online dispute resolution practitioner, legal management consultant and legal risk manager. Legal training in the US and China seemed to be ahead of

the UK.

People did not want courts and lawyers, they wanted the outcomes that courts and lawyers brought. Sir Brian Neill had understood that very well.

## DISCUSSION

**ANDREA COOMBER** opened the discussion. She said the speakers had agreed on the challenges facing the legal profession. Many lawyers struggled to adopt new technology, although most were now recognising that they would need to adopt it. Efficiency was a problematic concept in an era of austerity, in that it was regarded as a cover for cost cutting and unfairness. However, the current analogue civil justice system was not working for many now, who were priced out of using it.

Introducing digital systems and new processes would require winning over hearts and minds, particularly that justice would not be undermined. Litigants who were homeless or in detention must not be excluded by online processes. Online processes could promote open justice and transparency if introduced well. Careful communication would be needed to reassure the public about online services. The way in which some online services were branded as part of the Government would need careful consideration when citizens were involved in litigation with parts of Government such as the Department of Work and Pensions. The move to digital offered new opportunities to collect data about how the justice system was working.

The subsequent discussion started with a description of the difficulties which early adopters of online systems in medicine had had in convincing patients about these systems could be trusted to maintain confidentiality. The legal profession might encounter similar difficulties over trust. It was suggested that these issues arose more in some older generations than in younger ones, and that some digital brands had established good levels of trust. The legal profession should consider experience of other sectors more.

Another comparison with medicine was that the worried-well middle class seemed to consume disproportionate resources, and this could be an issue for digital legal processes too. One mitigation to this could be not to turn off other routes to justice if the more vulnerable could not cope with digital systems. In addition, if processes were redesigned to be simpler than before then all users could benefit. Some challenges about digital literacy could be traced back

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to underlying problems with literacy itself. Canadian experience with digital civil dispute resolution had shown that only 3% of litigants had experienced serious difficulty in using the new system.

A different challenge with digital systems was that they were at risk of being hacked, not only by technologically savvy litigants but also by some foreign powers. The Ministry of Justice needed to use next generation monitoring technology. Although risks of hacking needed to be mitigated, much of the justice system was intended to be transparent and publically available. When IT systems were introduced for sensitive cases for social work, it became known that some social workers were browsing case files with which they had no involvement. However, this could be stopped, whereas the problem of inappropriate access to previous paper files had never been detected. Views varied on whether machine learning might reduce the number of lawyers needed in future, though it was clear that the skills required would be different. If brain imaging could tell whether the truth was being told then assessments of credibility could have profound implications for the judicial process. One shortcoming of artificial intelligence was that it was harder for it to provide reasons for judgements; in many cases winning the hearts and minds of participants that their case had been handled reasonably would require a human judge setting out reasons, and in some instances to initiate apologies being given. It might therefore be used more extensively in commercial rather than family proceedings. Machine learning relied on surveying past judgements, and a weakness could be that it would not therefore initiate innovation in case law. In terms of the extent to which it was acceptable to rely entirely on machines, there was an interesting parallel in missile detection, where Israeli systems incorporated an element of human involvement, but this had been dispensed with in some UK systems used in Afghanistan.

Some online legal processes were experiencing a 40% increase in case volume, due to ease of access. This would need to be resourced, and research undertaken as to the causes of changes in demand. As justice became more global there could be large variations in case load in individual jurisdictions. One way of reducing resource requirements could be to dispense

with long judicial statements of judgement; in most cases the executive summary was all that was needed.

The prospect that digitisation would lead to quicker resolution would be much welcomed in insurance, where justice and outcomes for individuals would be much assisted by a more rapid process.

In smaller civil claims the introduction of online settlement could make resolution much more readily available. Often, however, the delivery of justice involved a technically correct solution which tempered equity with mercy, and the latter might be beyond machines. In larger civil cases, the involvement of the judge in determining the relative strength of argument of expert witnesses would remain important.

There was a concern that the development of resolution algorithms would be regarded as incorporating political judgements. In Vichy France a punch card system had been hacked to avoid the death of Jews.

Although some disabled people, such as the deaf, might prefer online processes, overall personal judicial input would be required for sentencing decisions which involved discretion, and in family cases involving children.

The Government and the judiciary needed to continue to be aligned if maximum progress was to be made with new technology and new processes. Justice only worked if people had trust in those making judgements. Recent greater awareness of unconscious bias therefore needed to be taken seriously.

Initially it was easiest to progress online justice in simpler cases, where the complexity and cost of the present arrangements made them not fit for purpose. However, expensive and archaic processes in more complex cases also needed to be tackled.

The objective of criminal courts was to protect the rights of society, whereas the civil courts were principally about achieving fairness for the parties in a dispute. In both the right balance had to be struck between speed, cost and justice. Resolution of disputes about £30 utility bills needed to be rapid and free to the customer, whereas participants in a £30 million dispute would both pay to protect their interests and would accept a longer process.

John Neilson

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## References

Sir Brian Neill - A Tribute

Richard Susskind, the SCL President, offers his tribute to the Rt Hon Sir Brian Neill PC, a former President of SCL

[www.scl.org/articles/10149-sir-brian-neill-a-tribute](http://www.scl.org/articles/10149-sir-brian-neill-a-tribute)

Press release from the Ministry of Justice and HM Courts & Tribunals Service: New legislation will modernise the courts  
[www.gov.uk/government/news/new-legislation-will-modernise-the-courts](http://www.gov.uk/government/news/new-legislation-will-modernise-the-courts)

The Judicial System of England and Wales - A visitor's guide

[www.judiciary.uk/wp-content/uploads/2016/05/international-visitors-guide-12.pdf](http://www.judiciary.uk/wp-content/uploads/2016/05/international-visitors-guide-12.pdf)

## Useful URLs

UK Research and Innovation

[www.ukri.org](http://www.ukri.org)

Arts and Humanities Research Council

[www.ahrc.ukri.org](http://www.ahrc.ukri.org)

Biotechnology and Biological Sciences Research Council

[www.bbsrc.ukri.org](http://www.bbsrc.ukri.org)

Engineering and Physical Sciences Research Council

[www.epsrc.ukri.org](http://www.epsrc.ukri.org)

Economic and Social Research Council

[www.esrc.ukri.org](http://www.esrc.ukri.org)

Innovate UK

[www.gov.uk/government/organisations/innovate-uk](http://www.gov.uk/government/organisations/innovate-uk)

Medical Research Council

[www.mrc.ukri.org](http://www.mrc.ukri.org)

Natural Environment Research Council

[www.nerc.ukri.org](http://www.nerc.ukri.org)

Research England

[www.re.ukri.org](http://www.re.ukri.org)

Science and Technology Facilities Council

[www.stfc.ukri.org](http://www.stfc.ukri.org)

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Association of Innovation, Research and Technology Organisations (AIRTO)

[www.airto.co.uk](http://www.airto.co.uk)

British Academy

[www.britac.ac.uk](http://www.britac.ac.uk)

Catapult Programme

[www.catapult.org.uk](http://www.catapult.org.uk)

Courts and Tribunals Judiciary

[www.judiciary.gov.uk](http://www.judiciary.gov.uk)

Department for Business, Energy and Industrial Strategy

[www.gov.uk/government/organisations/department-for-business-energy-and-industrial-strategy](http://www.gov.uk/government/organisations/department-for-business-energy-and-industrial-strategy)

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[www.doxly.com](http://www.doxly.com)

Government Chemist  
[www.lgcgroup.com/our-science/government-chemist/#.WzKn-tJKiUk](http://www.lgcgroup.com/our-science/government-chemist/#.WzKn-tJKiUk)

Government Office for Science  
[www.gov.uk/government/organisations/government-office-for-science](http://www.gov.uk/government/organisations/government-office-for-science)

HighQ  
[www.highq.com](http://www.highq.com)

Home Office  
[www.gov.uk/government/organisations/home-office](http://www.gov.uk/government/organisations/home-office)

Juro  
[www.juro.com](http://www.juro.com)

Knowledge Transfer Network  
[www.ktn-uk.co.uk](http://www.ktn-uk.co.uk)

Learned Society of Wales  
[www.learnedsociety.wales](http://www.learnedsociety.wales)

Lloyd's of London  
[www.lloyds.com](http://www.lloyds.com)

Lloyd's Register Foundation  
[www.lrfoundation.org.uk](http://www.lrfoundation.org.uk)

London Stock Exchange Group  
[www.lseg.com](http://www.lseg.com)

Luminance  
[www.luminance.com](http://www.luminance.com)

Ministry of Justice  
[www.gov.uk/government/organisations/ministry-of-justice](http://www.gov.uk/government/organisations/ministry-of-justice)

National Physical Laboratory (NPL)  
[www.npl.co.uk](http://www.npl.co.uk)

Nesta  
[www.nesta.org.uk](http://www.nesta.org.uk)

Royal Academy of Engineering  
[www.raeng.org.uk](http://www.raeng.org.uk)

The Royal Society  
[www.royalsociety.org](http://www.royalsociety.org)

The Royal Society of Edinburgh  
[www.rse.org.uk](http://www.rse.org.uk)

Russell Group  
[www.russellgroup.ac.uk](http://www.russellgroup.ac.uk)

The Alan Turing Institute  
[www.turing.ac.uk](http://www.turing.ac.uk)

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UK Statistics Authority  
[www.statisticsauthority.gov.uk](http://www.statisticsauthority.gov.uk)

University Alliance  
[www.unialliance.ac.uk](http://www.unialliance.ac.uk)

Wellcome Trust  
[www.wellcome.ac.uk](http://www.wellcome.ac.uk)

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[www.willistowerswatson.com/en](http://www.willistowerswatson.com/en)

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