



**The future
of the courts**
A white paper



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Introduction

We set ourselves the challenge: what will the courts look like in 20 years' time?

To provide possible answers to this question, we combined external opinion and internal expert views to create a composite forecast of the likely directions of court technology and procedural development in the coming decades.

We sought insight from common law jurisdictions in the United States, the United Kingdom, Australia and elsewhere. We were struck both by the variety of progress we saw in modernization, and by the commonality of themes. Across this broad geographic spread, the same questions concern the judge, the court clerk and the legal professional.

We see converging **trends**: in digitization, virtualization, and the challenges of a data-driven world.

We see inspiring **opportunities**: transforming the delivery of law to our community, increasing access to justice, removing disadvantage in the face of increasing inequality.

But most of all, we see increasing demands on **people**: tomorrow's judges and their colleagues in the administration of justice will need a new approach to strategy, more empowered decision-making in the new digital world, and most of all the adaptability and agility to lead a court system that keeps pace with the rapidly changing demands of society.

This paper is unreservedly focused on technology and information. Successful attempts to predict the future are rare, especially where technology is concerned: experience shows that new technology is unpredictable in both its evolution and its impact. Therefore what follows is no more than an attempt to paint a picture of potential directions.

A changing context

The potential power of information technology to support the judiciary's role in the delivery of justice is readily acknowledged. A 2011 survey by the Conseil Consultatif de Juges Européens (CCJE) found that a majority of respondents saw the advantages of IT in terms of efficiency, speed and cost, access to legal information and service to the community.¹

However the application of technology to court systems depends on a complex interplay of factors, budgetary, cultural and political, both within and outside the court itself.

In the US, a National Center for State Courts study in 2011 listed a number of changing social and political contexts playing a role in the decade from 2010 to 2020, including changing and aging demographics of court users, increasing demand for transparency and accountability, and greater expectations on the ability to access information and transact with the court remotely.²

The **politics of payment** for justice will continue to be a significant factor. Current pressures to reduce the cost of providing justice can be expected to continue, with courts driven to deliver results faster and with fewer resources. Given the complex intertwining of two of the three arms of government, we can expect to see further tension between the government departments who fund justice and the courts that consume those funds. With "no votes in courts" it seems likely that funding will go down further.

Courts leadership and justice departments around the world will be required more and more to re-examine their focus, their relationship with their justice partners, and their perceived priorities – an examination of the implications of "doing less with less" that will require fundamental clarity about the role that courts must play in their community and as a branch of government.³

In this context we may expect to see a divergence of the criminal and civil justice systems. Criminal justice will be expected to continue to deliver visible results, and will require adequate funding in order to do so. The same is to be expected of administrative law disputes where the interests of the individual and the state are opposed.⁴ However civil justice will continue to be affected by the question of how much will be funded by the community via government.

- Different sorts of matters may be better resolved in different ways – we may see further divergence of how matters are settled in different fields, for example family law versus commercial disputes. The growth of various ombudsmen, ADR and other routes to redress grievances in particular fields indicate that courts may realistically seek to re-assess not only how they process different types of case, but whether they need to accept them at all, save for exceptional circumstances and where the acknowledged authority has failed to deliver.
- Courts may seek to achieve financial independence through the development of new funding models, in tandem with the trends towards specialization, standardization, moving online and providing services to unrepresented parties. A more efficient and digitally enabled court will seek to deliver increasingly reasonable scales of user charges. The proportion of court costs that is recovered from user fees is rapidly rising in many countries, and approaching 100% in civil cases.⁵
- Commercial matters may in some jurisdictions be challenged for court access other than on a user-pays model.

These developments have the potential to affect not only the types and numbers of party who choose to go to court, but also the professional and financial

1. Reiling, 2011, "Technology in Courts in Europe", at www.iaca.ws.

2. Martin and Wagenknecht-Ivey, 2001, "It's a New Day: Future Trends Require revolutionary Changes in Courts", at ncsc.contentdm.oclc.org.

3. Martin and Wagenknecht-Ivey.

4. The Hon Justice Peter McClellan, Chief Judge at Common Law, Supreme Court of New South Wales, 2008, "The Australian Justice System in 2020", at www.austlii.edu.au.

5. Hague Institute for the Internationalisation of Law (HiIL), 2013, at www.futureofcourts.org.

make-up of their litigation strategy. For example, speculative litigation funders will play a growing role in the market, on the basis of fixed fees or percentage of money recovered.

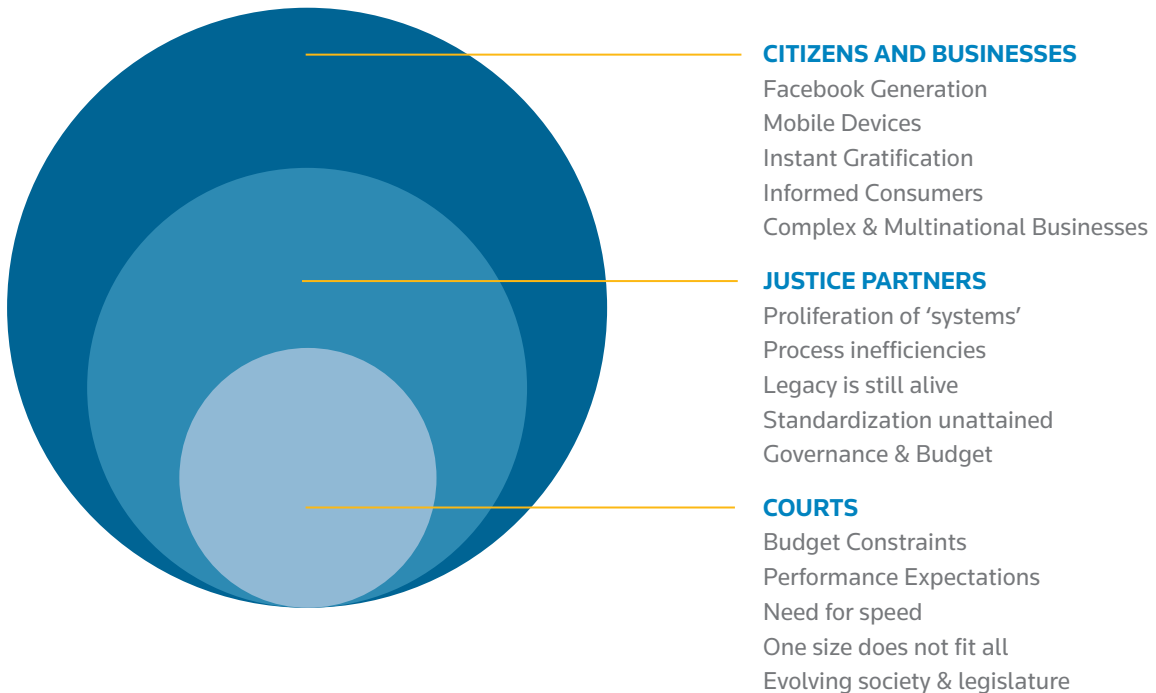
An interesting side-effect of this is that the demand for large-scale, reliable and analyzable data from the courts will increase as both law firms and financial services companies seek ever more up-to-date and comprehensive case information – not just about outcomes and judgments, but also about real-time progress – as a basis for effective and data-driven assessment of merits and predicting outcomes. This represents not only a challenge for the courts of tomorrow but an opportunity.

Alongside this context we must also set the growth in **professional technologies** for court systems. Historically, Attorneys General and Justice

departments may have favoured internally grown solutions. With the advent of serious computing power, an industry of specialist suppliers has arisen, and this is likely to grow further, stimulated by the rise in more efficient government buying markets. As government spending controls tighten the pressure will be on the software and information industries to deliver competitive and flexible options for the commissioning leadership of courts systems globally.

“Change may be abrupt or at other times an almost imperceptible evolution. When considering whether existing systems of justice are appropriate we can be certain that if the courts do not recognise when change is required and respond to it the legislature will.”⁶

CHALLENGES OF AN EVOLVING ECOSYSTEM



Virtualization, ODR and access to justice

VIRTUALIZED COURTS

With spending cuts continuing to hit court systems globally, sales of court real estate are trending upwards. The tendency to optimize costs by maintaining a smaller number of central hubs with more courtrooms necessarily implies greater travel and logistics costs for courts staff, judges, police and other agencies, and parties.

In this context we expect that the current first steps being taken in the world of **virtualization** will be accelerated in the near future, as more and more elements of human participation in the justice process are uncoupled from the physical environs of the court building – and in some areas, cases come to be conducted entirely online. Virtualized proceedings will be deployed to overcome distance, logistics, and the associated scheduling inefficiencies, delays and costs that currently bedevil court systems the world over. In addition they will facilitate cross-jurisdiction access by mitigating issues of time zones and working hours.

The advent of paperless courts, with its attendant reduction in costs, is a necessary first step.⁷

Obvious next steps currently being taken around the world include the introduction of electronic systems for sharing of case documents and access to evidence and bundles, to match the increasing sophistication of law firm case management systems and facilitate the management of incoming submissions and information.

We anticipate at the same time an expansion in the use of **limited, online-only disclosure** for lower multi-track claims in the future, so that less time and costs are spent on the process. Supporting online systems would need to store large files, and also meet acceptable standards for searchability, document organization and filtering of files according to user-specified criteria.

At the same time, an increasing amount of communication originating from the court will move into cyberspace. The use of online services or email rather than postal services will reduce costs and

also speed up communications. Currently, the service of legal proceedings via social media is unusual and mandated on a case by case basis; the tendency to use this route in future may increase if its effectiveness can be proven.

Increased online communication will go hand in hand with increasing use of electronic verification of documents, as electronic signatures tend to replace written ones. Proper standardized systems of authentication – increasingly interoperable between jurisdictions – will be required.

In the area of **hearings management**, the courts world will see greater use of video evidence, videoconferencing or telepresence technologies. This is already increasingly used in criminal proceedings to facilitate the testimony of vulnerable witnesses, or to mitigate significant logistical costs (for example, allowing a prisoner to attend a bail hearing via video link from his or her facility).

This technology will continue to develop in respect of absent defendants, witnesses and expert witnesses to streamline the court process, saving time that would otherwise be lost because of unavailability or geographical issues.

We can expect to see the extension of this technology to other parts of the process, moving towards the “paperless, people-less court” - the conduct of a criminal or civil hearing online from start to finish.⁸ Online Dispute Resolution driven by the court will become increasingly the norm.

There are numerous examples around the world of types of court procedure that have been taken almost completely online so far as the court user is concerned: for example, the Money Claim Online and Possession Claim On Line systems in England and Wales, which support full electronic transactions, or the Vancouver Civil Resolution Tribunal online system for adjudication of homeowner construction disputes – an example which not only moves the process online but diverts it from an adversarial to a collaborative approach.⁹

7. See for example UK Ministry of Justice press release “‘Digital Courtrooms’ to be rolled out nationally”, 2013, at www.gov.uk.

8. Terry Carter, ABA Journal, 2013, “Is a paperless, people-less court in our near future?” at www.abajournal.com.

9. Hiil, 2013, “Online courts – are they imminent?”, at www.futureofcourts.org/odr.

Though the benefits of virtualization are easily enumerated, courts' strategic decision-making in this area must necessarily also take account of any wider impact that might be expected from measures that distance the judiciary from the community it serves. As former Australian High Court Judge Michael Kirby AC CMG wrote as long ago as 1998: "The right to see in public a judicial decision-maker struggling conscientiously with the detail of a case is a feature of the court system which cannot be discarded, at least without risk to the acceptance by the people of courts as part of their form of governance".¹⁰

ADR, ODR AND NEW PATHWAYS TO JUSTICE

It seems certain that court systems and justice departments of the future will adopt a conscious strategy of pushing work out of the courtroom, where appropriate, and promoting ADR and other routes for the resolution of disputes.

- There may be further tightening of how cases are managed and allowed into the courts. As predictive tools are developed to better assess the likely success of a case, might we see potentially higher costs associated with taking through a matter with little chance of success, especially in a commercial context?
- In the criminal sphere, we may see more criminal matters handled "at source" – for example in the police system.
- Some jurisdictions may experiment with changes to the adversarial system, and a move to a more codified and bureaucratic set of processes, taking out some competitive elements.
- There may be an increase in the use of early neutral evaluation, alternative dispute resolution and new forums including online arbitration.
- "Human" life matters may be handled outside the courts. Currently a good deal of commercial arbitration happens outside the courts. Could we see this trend also increasing for family law?

The increasing availability of ADR and other routes to justice can be expected to partly influence how the 21st-century court views the scope of its duties.

However at the same time courts will continue to review their approaches to driving efficiency in all areas that remain within their purview. We can expect continued debate on the topic of access to justice for individuals. It can be argued that in many jurisdictions, civil litigation works well for businesses, business lawyers and business problems. For the private individual, the traditional approach to court is difficult, expensive and offputting; bringing us closer to an unpalatable situation where "only the rich or speculatively funded poor will embark on litigation".¹¹ Court systems around the world suffer from inefficiencies and delays of which a significant proportion are caused by physical scheduling and attendance issues.

Taking a lead from the rise of ODR alternatives to traditional courts, offering individuals and very small businesses new ways to resolve issues, we may anticipate an acceleration of the bifurcation already seen in some court systems: splitting their activities into separate entities and processes for different kinds of dispute according to the most cost efficient means. While traditional court settings may continue to cater for complex, high-stakes litigation, alternative or online paths may be developed for smaller disputes, offering parties in these cases a way to avoid the cost burden attached to a labour-intensive and variably efficient physical trial process.

It is even possible to envisage a future in which the development of online dispute paths is accelerated by the outsourcing of particular types of matter to private providers or other bodies, geared to the swift provision of outcomes in particular industries, with the court maintaining a background presence for the enforcement of resolutions from such systems. Given sufficiently compelling benefits in terms of time and cost, and the requisite underlying authority, contracting parties may choose to shift jurisdiction in the event of dispute to a provider other than the civil courts. Privatisation clearly brings a new range of considerations and possible controversy, but the benefits might be felt both by the citizen who can avail themselves of a faster,

¹⁰. Former Australian High Court Judge, Michael Kirby AC CMG, 1998, "The Future of Courts – Do They Have One?" at www.hcourt.gov.au.

¹¹. McClellan.

cheaper system, and the government or justice department that saves money on the processing of small claims.

In the field of ODR and mediation, there are already significant examples: for example a UK Ministry of Justice portal operating for personal injury claims.

At the same time, requirements for access to justice may mandate alternatives to online processing for parties without internet access, or the provision of terminal-based presences in court buildings. In the modern world, where internet access is so relied upon as to be almost a public good, justice must not fail those who remain excluded from online transactions.

“The litigant without access to the internet will be akin to the illiterate litigant of former generations.”¹²

SELF-REPRESENTED PARTIES

Jurisdictions across the globe are seeing an increase in volume of self-represented parties, especially in the context of reductions in central funding of legal aid. The impact of this is to introduce new delays and burdens into an already straining system. Lack of understanding of process and legal issues imply an increased need for support from the bench to achieve a fair hearing. The court may be forced to reinforce its case management techniques to shore up the gaps left in representation, to mitigate against miscarriages of justice. For example, in criminal trials, unused material disclosure may have to be conducted in such a way that the defendant is easily able to access and understand the implications of the material.¹³

The increased use of technology may provide a solution for unrepresented parties. As more and more aspects of the courts move online, we can expect virtualized courts to play a part in overcoming difficulties for unrepresented parties. As services are

designed for the online environment and tomorrow’s community needs, it is in the courts’ interests to ensure those services are coupled with strong guided support for self-represented litigants, to provide a quicker, less costly and more accessible route to justice for the citizen and reduce burdens on court staff, the judiciary and opposing parties.

Numerous initiatives at the state court and legal aid provider level in the USA are reported to be exploring the viability of this approach:

- The Legal Services Corporation strategy aims to “create unified “legal portals” in each state that direct persons needing legal assistance to the most appropriate form of assistance and guide self-represented litigants through the entire legal process via an automated triage process”, “deploy sophisticated document-assembly applications to support the creation of legal documents by both legal services providers and litigants”, and “take advantage of mobile technologies to reach more persons more effectively”
- Lone Star Legal Aid in Texas is redesigning online services to be more accessible for mobile phones, recognizing that these are the only access to the Internet for many low-income citizens. “Recognizing that disasters can bring system outages, Lone Star Legal Aid is designing a mobile Interactive Legal Information Delivery System (I-LIDS) system for disaster survivors who may find themselves in areas without dependable Web access. I-LIDS will quickly and conveniently deliver helpful, wireless, paperless information, including forms that they can file with FEMA and the courts to obtain the assistance to which they are entitled.”
- The Minnesota courts are testing whether “an e-filing system is a viable tool for low-income, self-represented litigants”.
- The New York courts are deploying document assembly solutions to suit cases that are low priority for legal aid programmes but lend themselves to “do-it-yourself law”, such as adult name changes.¹⁴

12. McClellan.

13. See for example: McClenaghan, 2014, “Family courts: self-representation hinders justice say magistrates” at www.thebureauinvestigates.com, and Bowcott, 2014, “Judges criticise impact of legal aid cuts”, at www.theguardian.com.

14. Sandman and Rawdon, 2014, “Technology Solutions to Increased Self-Representation”, at www.ncsc.org.

In addition, jurisdictions such as The Netherlands and Canada are reported to be developing litigant focused online portals to aid navigation of the court system, whether in particular types of case or across the board.

The use of technology-based solutions in place of court interactions can be envisaged in other large-volume areas such as probate filings – such areas could be handled by an administrative process akin to online tax return filing.

At the same time, courts aiming to truly deliver a system that can be navigated by unrepresented parties will need to ensure their systems feature strongly user-focused design and also guidance content that is robust, action-focused and delivered in plain language. When delivering enhanced technology solutions for this group of users, the New York court system has adopted court forms tailored to a fifth to seventh grade reading level.¹⁶

If the value of these types of service is accepted, many jurisdictions will find themselves needing to institute **reform of procedure rules or the statute book** to enable full implementation. In the Minnesota example above, it is reported that “One barrier to filing from other locations is that forms must be notarized. This project will also seek to identify policy solutions to eliminate this barrier.” A study of European courts in 2011 found that legislation enabling e-filing was in force in fewer than half of the respondent countries.¹⁵ In the criminal sphere, what may be required is the removal of certain offences out of the realm of the courts, for example enabling people to enter pleas online and making certain offences civil rather than criminal (and thus more administrative in nature).

¹⁵. Reiling.

¹⁶. Sandman and Rawdon.

Automation

A related byproduct of increasing digitization – and the concomitant development of technology infrastructure – is the growing susceptibility of various elements of the court process to full or partial automation.

This is not a new concept in the courts. The majority of court staff have for some years used electronic database systems to automate, simplify and optimize at least some parts of their responsibilities. Reported surveys in the EU in the first decade of this century distinguish three types of system used for managing courts: court/case management systems, financial management systems, or at the least, case registration systems, which facilitate case disposition and help to reduce the time a case is pending. The following data illustrate trends in adoption of these systems in courts in EU member states:¹⁷

Year of survey	2004	2008
Proportion of member states having case registration systems in all courts	Just over half	Two thirds
Proportion of member states having court and case management systems in all courts	Half	Just over half

Efficiencies will also be increasingly sought in the area of e-discovery and machine-reading of documents, using the growth in computing power

to assist with review of material. Trained effectively by its operators, a software programme can be used to predict the relevance of individual documents in a large volume of electronic material. Such techniques have been employed in a number of cases in the United States.¹⁸

Computer assistance and machine learning will also change the legal research task facing tomorrow's bench (and tomorrow's lawyers). Changing capabilities will potentially affect what cases are used in court, and how. Developing technology will help weed out cases for tendering and test the pertinence and weighting of those used. Computer assistance is also a de facto aid to sentencing in case management systems today (where the relevant sentencing guidelines for an offence can be automatically presented to the judge or magistrate based on the offence or offences under consideration).

Moving up the scale, some courts may seek further efficiency in some minor types of matter by using automating technology to minimize the need for any court input at all. For example, appropriate interfaces between law enforcement systems and sufficiently sophisticated court management systems will increasingly enable automated triggering and issuing of penalty notices for low-level criminal matters. Interfacing court systems with traffic photo-enforcement at street level, using automated number plate recognition, is one example.

¹⁷ Reiling.

¹⁸ See for example the Opinion of Judge Andrew Peck, of the United States District Court, Southern District of New York, in *Monique da Silva Moore et al. v Publicis Groupe & MSL Group*. The Honourable Justice Peter Vickery, Supreme Court of Victoria, 2014, "Technology and Timely Dispute Resolution", at www.civiljustice.info.

A data revolution

The courtroom in the twenty-first century is already dealing with an array of new types of information and evidence. Perhaps one of the most obvious examples is the explosion in video file evidence as CCTV plays an ever increasing role in enforcement and investigation, set to continue with automatic number plate recognition and body-worn video. Witness submissions created as indexed electronic recordings rather than document transcripts may also be used to help with testing of veracity and eliminate contentious issues around misrepresented evidence.

Courts must develop the infrastructure to store, retrieve and display both these and emerging data formats among the deluge of structured and unstructured information that forms an ever greater adjunct to their activities. At the same time, court leaders will find themselves increasingly occupied with decisions on the management, security and publication not only of case documents but also of the huge amounts of data that are generated as a product of the increasing digitization of court processes themselves – data including records of listings, data on case progress, video files of proceedings and a host of other information.

In the wider context, “e-intake” will become the norm: e-filing, e-citations, eDiscovery – and more and more downstream activities (for example, information sharing with justice partners) will become reliant on e-outputs. The digitized court then becomes the central element of a unified e-workflow for the justice ecosystem.

As Professor Fredric Lederer has commented:

“The courtroom is a place of adjudication, but it is also an information hub. Outside, information is assembled, sorted and brought into the courtroom for presentation. Once presented, various theories of interpretation are argued to the fact finder who then analyses the data according to prescribed rules

(determined by the judge through research, analysis and interpretation) and determines a verdict and a result. That result, often with collateral consequences, is then transmitted throughout the legal system as necessary. The courtroom is thus the

centre of a complex system of information exchange and management.”¹⁹

Providing access to open data in a common XML format will confer as yet unpredictable impacts on the community and the way it interacts with the courts.

“The increasingly complex world of electronic records management requires new skills and approaches to maintaining and preserving court records. This includes greater attention to quality control; the adoption of standards; assessment of organizational capabilities; and, most of all, an approach that is both enterprise-wide and collaborative.”²⁰

As an essential function of their duty to provide access to justice, courts will also find themselves increasingly developing new ways to deliver procedural and legal information through online systems and elsewhere, in the interests of guiding unrepresented parties and ensuring equality of arms.

Improved ability to manage and publish cause lists and judgments will lead to greater consistency and reliability in how this type of “traditional” published court output is disseminated to the public, the legal community and the legal information industry.

Improved handling of case data will lead to more efficient, data-driven management of the courts themselves, and of individual cases. Enterprise resource planning techniques will assist with the reduction of delays, backlogs, and costs.

- For example, improved data on case types, length, and delay drivers such as complexity (volume of evidence, number of parties and so on) will enable courts to plan their resource more smartly for future case loads.
- Further potential will be unlocked as increasing volumes of data are linked to other governmental systems, such as the justice department. As an example, cross referencing data on demographics and travel time to physical courts could provide insights on access to justice standards.²¹

19. Raaen, 2014, “Steps to Better Electronic Records Governance”, at www.ncsc.org.

20. HiiL, 2013, “Courts and Big Data”, at www.futureofcourts.org.

21. McClellan.

- Accessible and aggregated data on costs assessment and financial awards will assist future deliberations in this area.

At the same time, growing interest in up-to-the-minute case information from other professional markets – for example financial investors – will see a growth in the nascent industry for big data from courts. Predictive analysis techniques and the application of machine learning to case data will also give rise to new solutions that help to gauge probability of success – particularly in jurisdictions where large volumes of data are available – and again these will be of particular interest to law firms, litigation funders, and other interested parties. Courts seeking new funding streams may seek to monetize specialized access to the valuable data that will underpin this type of solution, while facilitating generalized public access as a public duty.

Underpinning all of this, the judiciary and courts IT leadership must ensure they are educated in the potential inherent in their data, and the importance of the decisions they make surrounding the formats in which it is stored, structured and accessed. Central to this will be a shift in focus from document management to content management: moving on from individual documents, be they evidence files, emails or tweets, and extracting the meaning of what is contained in those documents and combining it in new and powerful ways.

COMMUNITY CONTEXTS IN BIG DATA AND ONLINE INFORMATION

Greater access to greater amounts of information affects the behavior of other actors in the courtroom as well, in ways that are unpredictable and not always welcome. “It is not difficult to see that as the means by which we identify and receive information changes, jurors will be less inclined to confine their deliberations to the evidence produced by the parties. The internet provides everyone with information on a scale which could never have been anticipated”.²²

Further, in the wider context we may imagine some impact from the growing phenomenon of the “internet of things”. In a future world where an increasing proportion of everyday objects and technology are implanted with ID codes and chips producing, storing and disseminating steady amounts of easily retrievable data, we may find that in a number of cases a growing range of defences are prevented, and the contentious nature of proof is reduced – or of course that the law develops to identify new areas of contention.

Standardisation and globalisation

By virtue of a shared heritage, common law court systems often manifest a number of fundamental similarities, both in how they process cases internally and how they interact with the community and their partners in the justice system.

As knowledge and best practice surrounding court management become more available in a connected, online world, we may expect a further “normalization” of procedure and practice, supported also by common standards in technology and information – for instance open data – and a supply chain of technology and software vendors that is increasingly globalised. For example, the procedure for service of legal proceedings varies from country to country and is currently very complicated; can we imagine that in the future this may be simplified at an international level?

The court system will both shape its tools and be shaped by them: application of common technologies to the law, together with internet-enhanced data availability, will standardize outcomes and potentially even the very language of the judgment. The Hon Justice Stephen Gageler has commented that the impact of information technology on the common law can be felt in the way that increased access to a wider variety of judgments online has affected the production of new judgments themselves, citing increased length, more references, more quotations and increasing citation.²³

Increasing public (and judicial) access to judgments, together with common technologies used in the preparation of those judgments, may be expected to gradually incentivize a more consistent, standardized way of disposing of cases, both within jurisdictions and across jurisdictions.

We may expect the increasing standardization of procedural systems and the adoption of facilitating technology to have an impact on the “market” for international litigation. Choice of venue for cross-border disputes will hinge not only on the quality and enforceability of the judgment, but the facilities available to deliver efficient, user-friendly virtualized litigation. A court system seeking to attract business will increasingly structure its activities to meet the needs of foreign litigants, developing clear rules for serving in other jurisdictions, electronic filing, availability of translators or translating software, and opening hours to accommodate different time zones, supplemented by virtual court rooms and online-driven transactions that reduce the dependency on a physically staffed court building.

23. Hon Justice Stephen Gageler, Justice of the High Court of Australia, 2014, Australian Bar Review 146.

Challenges

The introduction of new working practices of any kind – let alone digitized or virtualized working – encounters challenges in any area of organized activity. The central role played by the courts in the community and government of the jurisdictions they serve naturally inspires a cautious attitude to change. However, the rapidly evolving needs of 21st-century societies and the budgetary pressures faced by most court systems make some form of change imperative.

Enough experiments have been conducted by innovative courts across the globe to give rise to reasonable confidence that many of the “future” technologies and practices described in this paper are in fact available today and have been proven to deliver benefits in the courts environment. However, not all experiments have met with equal success. The challenge for court leaders today, the case being accepted for transformational change, is to understand as much as possible about the potential routes available to them and the lessons learned by colleagues around the world.

The first and most obvious challenge is that introducing a new technology is, in and of itself, a cost. Owing to chronic historical underfunding, many courts have yet to achieve a basic provision of the tools and IT infrastructure needed to support digitized court hearings, including electronic case files, equipment to project documents and images, audio and video, tools to record hearings, videoconferencing, and reliable wifi in the court building.

Evidently the expected efficiency benefits of technology adoption should quantifiably outweigh the upfront cost and the ongoing commitment to maintenance and upgrading of the product. In and around this there, some **financial considerations** for IT leaders include the following:

- Proving acceptance of new systems through localized pilots – avoid “Big Bang” rollouts
- Minimising “bet-the-farm” initiatives by buying pre-existing and mature solutions where possible at confirmed costs, rather than attempting ground-up

builds (often sources of both higher initial estimates and then project overspends, a sadly recurrent feature of failed court digitization projects)

- Intelligent clienting – engaging direct with specialist suppliers at all levels, to ensure a comprehensive shared view of objectives and requirements
- Agile and collaborative working – budgeting for the time required for staff to properly engage in joint development

It is also essential for courts embarking on limited or wholesale transformation to institute a robust and comprehensive change management programme, encompassing not only court staff but any other stakeholder groups affected (for example, the legal community, justice partners or the public at large). It should go without saying that given the central role played by the judiciary, a unified approach from senior judges and IT leadership is essential to the overall success of any technology initiative.

We explore these issues in more detail in a separate white paper.²⁴

When new technology is adopted, the **risk profile** of court operations changes. As a basic example, a move to virtualized court proceedings would see a change in emphasis from the physical security of the court building to the protection of a digitized system and the sensitive data contained within it from online attack or hacking. In a world where all data is captured digitally, disaster recovery systems for such a crucial part of the justice ecosystem must be seen to be proof against both malign intent and acts of nature.

In the area of cloud computing, various court systems at US state level and elsewhere are accessing cloud-delivered services as courts technology providers expand their offerings in this space, including case management systems, telephony/VoIP, and online transfer of data to support agencies.

24. Thomson Reuters, “Lessons Learned in Courts Digitisation”, December 2015.

And naturally legal principles themselves are playing catch-up with our new digitized environment. New areas of personal privacy law continue to surface as a result of society's evolving relationship with the connected online world: for example, whether mobile phone location data in the US can be subject to government scrutiny without a warrant, or what statutory safeguards or case law can be anticipated around the rapidly evolving area of big data.²⁵ And what might be the legal effect of any greater role played by computers in assisting decisions or processing administrative penalties? What might legal challenges to these look like?

THE NEEDS OF JUSTICE

Finally – and most importantly – the consideration of new technology demands careful review of the role of the courts in society, and a fundamental confidence that important elements of that role are not being sacrificed.

A 2011 Opinion of the Consultative Council of European Judges on justice and information technologies identified a number of lines which technology should not be allowed to cross, including:

- diminishing the procedural safeguards of a fair hearing;
- undermining the court's duty to reach an individualized decision of a case on the merits;
- or hindering the judge's role in hearing the factual evidence, their freedom to take a decision with no restrictions other than those prescribed by law, or their power to compel the appearance of parties or the production of original documents.

New safeguards for judicial independence must continue to evolve as the court adopts new ways of working.²⁶ There continues to be lively debate on the merits of a criminal justice process in which some, most (or all) or the participants are not present in the courtroom.

Further, the symbolic roles of the judge visible to the community and the courts open to all comers are cited by some commentators. "Their functions are not limited solely to efficient throughput or diversion of ever increasing caseloads. Their tasks extend to the public display of the ultimate commitment of an essential institution of government in our form of society to the dual objectives of ordered lawfulness tempered by human notions of justice and fairness."²⁷ A balance needs to be struck between the measurable benefits of efficiency and the intangible benefits conferred by our court systems.

²⁵. Hiil, 2013, "Courts and Big Data", at www.futureofcourts.org.

²⁶. Reiling.

²⁷. Kirby.

Conclusion

“Lawyers, in common with much of humanity, tend to find it difficult to grasp that there is no finishing line when it comes to IT and the Internet. For the tidy mind and the control-freak alike, it is hard to accept that there are no clear parameters, limits, or finite pigeon-holes. Perhaps there is some pathological aversion, hardwired into the legal mind, to the inevitability of ongoing advancement in technology, to the notion that no system or innovation can be the last word.”²⁸

Both the challenges and the opportunities facing today’s court systems are gradually becoming understood with greater clarity. But it is a given that in keeping with the general pace of technological development, both new challenges and new opportunities will arise with fearsome frequency. Readers of this white paper will no doubt be struck by additional examples of technological innovation in the courts which this survey has failed to consider.

Such a conclusion leads us to propose that the most important factor for the future development of the courts is not big data, or online services, or eDiscovery, or any of the other technologies we have referenced. Rather it is the people who

work in the courts: the judges and magistrates who sit on the bench, the courtroom staff who manage the lists, the IT and support teams who facilitate their operations. The court is there to serve its community; and it is the way these people understand, react to and respond to the changing needs of that community, and the ongoing pressures of budgets and legislative demands, that will determine whether the courts in 20 years will be seen to have kept pace with modern times, or fallen off from the race.

Courts leaders need to display adaptability and foresight; they need to develop a keen understanding of the benefits of technology, both the technology available today and the new technology that will emerge tomorrow; and they need the courage and strength not only to defend the essential elements of their role in the community, but also to imagine a clear vision of how that role will evolve in the future to marry the best of IT-enabled services with justice that maintains and improves its reputation for transparency, timeliness and ease of access.

And then they need to take us there.

“Without strong judicial management all the technology in the world will not ensure timeliness – the modern common law needs both.”²⁹

28. Susskind, 2008, *The End of Lawyers?* (OUP).

29. Vickery.



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