

Justice Innovation: Technology Reshaping Justice Systems



New and emerging technologies are reshaping justice systems and transforming the role of legal practitioners and court management processes.

In 2017, there were 200 billion app downloads, an increase of 32 percent from the prior year. Technology can assist individuals with legal tasks and has potential to reshape the justice system, improve access to justice and demystify legal institutions. Justice innovation opportunities have various challenges associated with the digital divide, including; accessibility issues, ethical challenges raised by dehumanisation of legal processes and various privacy, security and confidentiality risks.

There are three main ways in which technology is already reshaping the justice system, they are: supportive technology - used to inform, support and advise people in the justice system. Replacement technology - replaces the functions and activities that were previously carried out by humans and disruptive technology - which provides for very

different forms of justice that can include replacing human decision-making.

The problem

Changing and emerging technologies have considerable relevance to the continuing evolution of alternative dispute resolution (ADR) processes and justice systems in general. Justice innovation can make legal services easier to access, guide users through their legal choices and allow them to engage with self-help processes. In the context of the COVID-19 pandemic, innovations have ensured processes can adapt appropriately with video conferencing technology and justice apps. There are some issues that arise with the use of Artificial Intelligence (AI) in the justice sector including; the legality of decisions made by AI Judges, translating law into code, discretionary judgements and algorithmic bias. That is, programmers can replicate bias without intending to do so in AI systems.



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Research Methodologies

Professor Tania Sourdin utilises a combination of doctrinal and experimental methodologies including; literature review work, interviews and development of technology. Professor Sourdin gave extensive oral evidence to the Access to Justice (A2J) Review in 2016 undertaken by the Victorian Government. Which translated her evidence-based research relating to the use of technology. She was cited frequently throughout the Report.

- Online technologies have the capacity to create new distribution channels for legal information, and therefore make information about the law and justice system more accessible to the public.
- Online systems are expanding rapidly and online dispute resolution is moving from the private context of online consumer transactions into mainstream public justice processes.

Further contributions to the Justice Innovation arena include the development of an ethical framework to help judges make decisions in individual cases involving AI and how to consider systemic reforms.

Research impact

Evaluations by the Judicial Commission of Victoria in late 2016 stated that judges gained 'new skills' and 'better understanding' as a result of Professor Sourdin's work. She was cited extensively in the Victorian State Government A2J Volume 1 Report and Recommendations. The Governments response agreed with recommendations put forward by Professor Sourdin that Victoria Legal Aid should continue to explore the ways in which technology can support its role. In addition, Professor Sourdin developed a framework to evaluate justice apps in 2020 as part of establishing an ethical approach to the development of AI and technology. The four stage framework requires consideration of; ease of use, effectiveness, privacy and security considerations and interoperability. Although, the weight or emphasis given to each sub-objective within each factor may vary. Developing a clear approach in terms of evaluation will support further developments in this area.

Professor Sourdin's work has attracted over 8,000 paper downloads on SSRN (eLibrary for research papers) and built a network of 3,600 on LinkedIn demonstrating substantial impact and reach.

Milestones and Research Impact

2003: ARC Grant for project titled 'The Development of Legal Decision Support Systems in Discretionary Domains'

2007: Conference titled 'Criminal Sentencing, Intuition and Decision Support' Advances and Innovations in Systems, Computing Science and Software Engineering

2008: ARC grant for project titled 'The Development of Negotiation Support Systems that Focus upon Complying with Notions of Equity'

2011: ARC grant for project titled 'Australian Centre for Court and Justice System Innovation'

2015: Journal article titled 'Justice and technological innovation' *Journal of Judicial Administration*

2015: The Australasian Institute of Judicial Administration grant for project titled 'Using Artificial Intelligence Systems to Discover more about Litigated Cases'

2016: Cited in 'Access to Justice Review' Volume 1 Report and Recommendations, Victorian State Government

2017: Journal article titled 'Justice in the Age of Technology: The rise of Machines is upon us' *Precedent*

2017: Interview with Law Institute Victoria 'Arbitration, Dispute Resolution and Mediation'

2018: Journal article titled 'Using Technology to Discover More about the Justice System' *Rutgers Computer and Technology Law Journal*

2020: Book titled 'Digital Technology and Justice: Justice Apps'

2020: Conversation article titled 'People are using artificial intelligence to help sort out their divorce. Would you?'

2020: Journal article titled 'Humans and Justice Machines: Emergent Legal Technologies and Justice Apps' *Precedent*

2020: Journal article titled 'Court Innovations and Access to Justice in Times of Crisis' *Health Policy and Technology*

2020: Journal article titled 'Judge v Robot: Artificial Intelligence and Judicial Decision-Making' *Journal of Soochow University Law Edition*

2020: Journal article titled 'COVID-19, Technology and Family Dispute Resolution' *Australasian Dispute Resolution Journal*

2021: Book titled 'Judges, Technology and Artificial Intelligence'

2021: Journal article titled 'Regulatory approaches to managing artificial intelligence systems in autonomous vehicles in Australia' *International Journal of Law and Information Technology*

To learn more about this research program:

Professor Tania Sourdin

University of Newcastle

Email: tania_sourdin@newcastle.edu.au

Phone: + (02) 492 15839

Web: <https://www.newcastle.edu.au/profile/tania-sourdin>