

**Emerging Technological Solutions to Access to Justice Problems: Opportunities and Risks of
Mobile and Web-based Apps**

Knowledge Synthesis Report
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KEY MESSAGES

Canadians experience multiple barriers to accessing justice, including financial constraints, psychological barriers, informational obstacles and physical barriers. Members of marginalized and equality-seeking communities, who are more likely to face multiple justiciable problems as once, experience these barriers acutely. Apps that purport to facilitate access to justice by providing assistance with legal tasks are increasingly being deployed in the legal services arena. This Knowledge Synthesis develops the groundwork for a nuanced analysis of the social, political and legal implications of access to justice apps, canvassing the risks and opportunities inherent in the use of apps in the legal context, considering existing best practice guidance relevant to legal apps and proposing future policy and research directions in this area.

- There is virtually no Canada-specific scholarly work, regulatory consideration or policy initiatives addressing legal apps generally, or access to justice-enhancing apps in particular. While the American experience may be instructive, and there are lessons to be learned from app use in comparable disciplines, like the health field, a Canada-specific approach to legal apps is necessary.
- Apps present a range of opportunities for improving access to justice including: mitigating the financial, psychological, informational and physical barriers associated with traditional legal services; addressing needs beyond conventional legal services; providing insight into interrelated legal needs and modernizing public legal education. Using apps to address access to justice needs also carries significant risks, including: privacy and security issues, the propagation of the digital divide and unequal access to justice; regulatory issues connected to the unauthorized practice of law; uncertain reliability of the information provided; and skewing the access to justice debate away from the ongoing need for structural change.
- There is no best practice guidance specific to access to justice enhancing apps. General guidance on best practices in app development from sources including the Privacy Commissioner on issues of privacy and security and the World Wide Web Consortium on accessibility for persons with disabilities should inform best practices for legal apps. Guidelines on health care apps promulgated by the Canadian Medical Association are highly transferable and may provide a useful starting point for the creation of parallel guidelines in the legal context.
- Future research is urgently required to gain a more complete picture of the state of access to justice apps in Canada and to assess the potential for these apps to contribute to improving the state of access to justice for Canadians. More information is needed on topics including: the demographics of app users and their usage patterns; whether access to justice outcomes are in fact improved through the use of apps; and, the regulatory options available and the risks and benefits of regulation of apps in this area.

Context

There is a widely acknowledged access to justice crisis in Canada. Many Canadians do not have access to legal information, lawyers, courts and the broader conditions of legal empowerment needed to resolve legal issues. Studies indicate that individuals experience a variety of interconnected barriers to accessing the justice system, including: financial constraints connected primarily to the significant costs associated with hiring a lawyer; psychological barriers including fear, embarrassment and stress in relation to pursuing or defending legal rights; informational obstacles including a lack of knowledge about the legal system and available legal support services; and physical impediments linked to the unavailability of local legal services in many rural and remote communities. These barriers are acutely experienced by members of marginalized and equality-seeking communities, such as persons of Aboriginal ancestry, members of visible minority groups, persons with disabilities and those who receive social assistance, who are all more likely to face multiple justiciable problems as once.

While strategies targeting the access to justice crisis in Canada have historically focused on refining existing court processes and increasing access to legal representation, technology is increasingly acknowledged as a means of creating new pathways to justice. To that end, mobile and web-based apps intended to assist individuals with legal tasks are now being deployed in the legal services environment. Although these apps are recent additions to the access to justice world, they are already changing the ways that Canadians interact with the legal system. This Knowledge Synthesis develops the groundwork for a nuanced analysis of the social, political and legal implications of access to justice apps, canvassing the risks and opportunities inherent in the use of apps in the legal context, considering existing best practice guidance relevant to legal apps and proposing future research directions on this topic.

Findings

1. Inventory of Access to Justice Apps

We created a comprehensive inventory of access to justice apps in Canada and a parallel inventory of apps in the United States. We coded these inventories according to: (1) developer(s); (2) intended users; (3) type(s) of law the app engages; (4) brief description of the app; (5) cost accessibility; and (6) function(s) served by app (i.e., providing legal information, offering administrative information, document/form creation, evidence collection, legal advice, self-help). These inventories illuminate three trends about access to justice apps.

First, private developers are responsible for most access to justice apps. However, Canadian government actors and public bodies have recently increased their involvement in promoting technological solutions to access to justice issues through, for example, public competitions like the *Ontario Access to Justice Challenge*. Law schools in both Canada and the United States are also leading innovators in the development of access to justice apps.

Second, access to justice apps target three distinct end-users: (1) lawyers; (2) the general public; and (3) non-lawyer service providers. Apps targeting lawyers are designed to improve the efficiency of legal service delivery, often through streamlining practice management issues or litigation tasks. Apps for the general public focus on making legal services or information easier to access. A significant number of these apps shift the way that individuals interact with the legal system by allowing users to bypass the need to retain a lawyer or minimizing the amount of time a lawyer needs to spend on a legal issue. Examples include apps that: provide legal and procedural information; allow users to create legal documents including contracts and wills; automate the common steps of a legal transaction like a divorce; and, assist with legal research. The final category targets service providers like social workers by providing a tool for them to conduct a basic “legal screening” for their clients.

Third, the majority of public-facing apps are available for free, though there may be hidden costs associated with upgrades or advanced features. Apps aimed at lawyers or that connect a user to legal advice are more likely to cost money than other kinds of apps.

2. Risks and Benefits of Access to Justice Apps

Due to the marked lack of available information and analysis on access to justice apps, it is impossible to draw firm conclusions about the potential for apps to revolutionize the legal arena. However, we identified six preliminary opportunities presented by apps to improve access to justice for Canadians.

- Mitigating financial barriers: For example, apps that allow individuals to generate legal documents without assistance or with reduced assistance from a lawyer are likely to reduce the costs associated with creating basic legal agreements.
- Mitigating psychological and informational barriers: Apps can help demystify the law and legal institutions by providing new opportunities for the public to educate themselves about the law, contributing to an increase in client empowerment.
- Mitigating physical barriers: Assuming a user has access to the internet, apps allow for legal information to be accessed on an anytime, anywhere basis. This flexibility can improve access for those in rural and remote communities who may not have easy access to a local lawyer.
- Addressing needs beyond conventional legal services: Some legal self-help apps provide tools beyond those generally offered by lawyers.
- Developing big data and insight: The data collected by apps could be used to gain insight on connections between legal issues, allowing service providers to better address interconnected client needs.
- Modernizing public legal education: Apps encourage students to communicate legal information in an accessible way, to think about the responsiveness of law to real-world legal problems, and to situate the role of lawyers in a modernized, technological world.

We also addressed five risks apparent in the use of apps to address access to justice issues.

- Privacy and security issues: Information collected by apps could be vulnerable to collection and misuse by unauthorized third parties.
- Uneven or unequal access to justice: Meaningful implementation of technologically driven access to justice initiatives requires attention to the socio-economic, geographic and digital literacy-related barriers to accessing technology. Otherwise apps will contribute to further entrenching the digital divide.
- Regulatory issues: Non-lawyers can offer legal information, but not legal advice. The line between information and advice is notoriously murky. Because most apps operate without regulatory oversight, there is concern that some apps could amount to the unauthorized practice of law.
- Uncertain reliability of information: Apps must provide up-to-date, accurate information that is validated and sustained over time. Yet, because apps are unregulated, there is no way for users to confirm that the information provided by an app is reliable.
- Skewing the access to justice debate: Apps may lessen the general sense of urgency about the access to justice crisis in Canada, and could distract from the ongoing need to improve the affordability and accessibility of real-time legal and court services.

3. Best Practices for Access to Justice Apps

There is no best practice guidance tailored to apps operating in the legal context. However, existing guidance on the development of mobile and web-based technologies more broadly is worth consideration. For example, on issues of privacy and security, the Federal Privacy Commissioner has published a best practices document outlining privacy practices for mobile apps, which includes reference to how Canada's federal and provincial privacy legislation applies to the collection, use and disclosure of personal information retained by apps. Similarly, because Ontario mandates that publicly available information be accessible for persons with disabilities, developers of some apps must ensure that their apps comply with the guidelines developed by the World Wide Web Consortium, an international standards organization for the Internet. Finally, the specific guidelines on mobile health apps developed by the Canadian Medical Association are transferable in large part to the legal context, and could provide a starting point for the creation of a parallel document for legal service providers.

4. Knowledge Gaps

There are significant knowledge gaps on access to justice apps. To gain a more complete picture of the state of these technologies and their potential to improve access to justice outcomes for Canadians, more information must be gathered on: (1) the backgrounds, expertise and motivations of app developers; (2) the demographics of app users and their usage patterns; (3) whether apps actually facilitate or improve access to justice outcomes for users – and if so, are there differentials in these users' improved access to justice; (4) which access to justice needs remain unmet by apps; (5) the risks posed by access to justice apps, particularly in relation to privacy issues, the reliability of legal information provided and uneven access to apps; (6) regulatory options and the costs and benefits of regulation in the app context; and (7) the ways in which apps are transforming legal practice and the lawyer-client relationship.

A. Context

1. The Access to Justice Crisis in Canada

There is a crisis in access to justice in Canada. While there is no single, agreed upon definition of access to justice, in this Knowledge Synthesis we adopt a broad and purposive view of the concept as including more than simple access to legal practitioners or courts. We understand and use the term access to justice to include conditions of legal empowerment for all and a justice system that is responsive to a broad range of individuals' needs. As the Canadian Bar Association's *Reaching Equal Justice* report describes, access to justice encapsulates "a truly equal justice system, one that provides meaningful and effective access to all, taking into account the diverse lives that people live."¹

Despite our expansive view of access to justice, most empirical research by legal scholars and policy-makers focuses on access to the courts and to lawyers. For instance, a comparative study found that Canada lags behind similarly situated "developed" nations in ensuring that all citizens can effectively access our justice system.² Other studies have concluded that Canadians are losing confidence in the justice system.³ This lack of confidence may be one of the reasons that only 7% of respondents in a recent national survey reported appearing before courts or tribunals to deal with a legal problem and only 19% reported consulting a lawyer.⁴ This survey indicated that individuals are more likely to use the internet (33%), speak with friends and family (61%) or deal directly with the other party (75%) in attempting to resolve legal issues.⁵

A lack of confidence in the justice system and in lawyers is in no small part a result of their real and perceived inaccessibility, often discussed in terms of financial constraints. The average adult Canadian with a legal issue, for instance, will spend approximately \$6,100 to have it resolved.⁶ This is particularly troublesome given that almost half of Canadians will experience a legal problem over a three-year period.⁷ Moreover, individuals experiencing certain life events, like divorce, may find that retaining a lawyer is far beyond their financial means. A 2015 survey of Canadian lawyers found the legal fees charged for a contested divorce range from \$6,145 to \$87,974.⁸ Given these costs, it is not surprising that an "extraordinary" number of individuals are now self-represented in Canadian courts.⁹ Although legal aid programs are in place across Canada, the financial support provided by legal aid does not meet the legal needs of many Canadians. Not only is legal aid variably funded across the country, the types of matters that legal aid programs fund often focus primarily on relatively serious criminal law issues.¹⁰

In addition to financial constraints, Canadian studies also report that individuals experience multiple psychological and informational barriers to accessing justice, including: (1) a lack of knowledge about the legal system and the resources available to assist members of the public in accessing the legal system; (2) fear, embarrassment and stress in relation to pursuing or defending legal rights; and (3) concerns about jeopardizing privacy.¹¹ These barriers are experienced acutely by members of marginalized and equality-seeking communities. The cost

of accessing justice, for example, is uniquely burdensome for persons of Aboriginal ancestry, members of visible minority groups, persons with disabilities and persons who receive social assistance, who are all more likely to face multiple justiciable problems at once.¹² It is well documented that homeless individuals – a heterogeneous mix of people who are otherwise marginalized in the legal system for reasons of race, social class, disability, and sexual orientation/identity – experience “a gamut of unresolved legal issues.”¹³ As summarized in the Canadian Bar Association’s *Reaching Equal Justice Report*, “legal problems tend to ‘cluster’, multiply, and have an additive effect and this pattern of cascading problems disproportionately impacts people living in marginalized conditions.”¹⁴

Physical barriers also impact access to justice. For example, in one Ontario study, “participants identified distance as the number one barrier to obtaining legal information and services in rural or remote areas of the province.”¹⁵ In this study, “[l]egal service providers spoke about their rural clients walking an hour or more, or hitchhiking, to keep appointments with legal clinics or to attend administrative or court proceedings.”¹⁶ The study further reported that financial, informational and psychological barriers to accessing justice may be pronounced in rural settings due to disproportionately high rates of poverty, higher cost services due to reduced economies of scale, possible “‘cultural barrier[s]’ between people in rural communities and service providers located in cities”, and a lack of public awareness of available services.¹⁷ Supply gaps in rural and remote areas have also been identified. For example, a 2015 report concluded that individuals navigating family law issues in rural and remote contexts are under-served due to a lack of lawyers, and a belief that problems should be dealt with inside the family structure.¹⁸

Marginalized and equality-seeking groups may also face exacerbated barriers in rural and remote contexts. Persons of Aboriginal ancestry in remote regions face difficulties in accessing appropriate legal services in part due to generalized ignorance about the history and position of their unique communities and disproportionately high rates of poverty.¹⁹ The lack of specialty services in rural communities may also have a detrimental effect on the legal needs of youth, elderly, and people with disabilities.²⁰ Rural women experiencing intimate partner violence face particular challenges in navigating conflicts and maintaining confidentiality in close-knit communities where the number of available lawyers may be small.²¹ In such circumstances, rural women may find it difficult to see a lawyer without childcare or adequate transportation to travel outside their communities.²²

2. Towards Technological Solutions to Access to Justice Problems: A2J Apps

Discussions about solving the access to justice crisis have historically focused on refining established court processes and increasing access to legal representation.²³ More recently, however, scholars and policy-makers have recognized that meaningful access to justice requires more than simply access to courts and lawyers.²⁴ Technology is now a broadly acknowledged means of creating new pathways to justice.²⁵

In 2015, Chief Justice Beverley McLachlin implored the legal profession to “accept the idea of change”, including the reality that some tasks that have been traditionally performed by lawyers can now be more effectively performed through technological means.²⁶ There is also significant interest internationally in using technological means to facilitate access to justice. For example, included among the recommendations in the American Bar Association’s 2016 *Report on the Future of Legal Services in the United States* is a recommendation that state bar organizations “explore how legal services are delivered by entities that employ new technologies and internet-based platforms and then assess the benefits and risks to the public associated with those services.”²⁷

One technology increasingly deployed in the legal services environment is mobile and web-based applications (“apps”). In simple terms, “a mobile app is a software application designed to run on mobile devices such as smartphones and tablet computers.”²⁸ Mobile apps may come “preloaded” on such devices or may be available for users to download through app stores like “Google Play” or Apple’s “App Store.”²⁹ In contrast to a mobile app, a web-based app or “web application” is hosted on the web and accessed from a browser on a computer or mobile device.³⁰ Although “the general distinction between an interactive web site of any kind and a web application is unclear,”³¹ in this Knowledge Synthesis we adopt an inclusive definition of access to justice apps (A2J apps) as including both mobile and web-based resources that purport to assist individuals with a specific legal task or set of tasks.³²

Canadians use apps widely. For example, a 2014 study conducted by the Information and Communications Technology Council found that there are roughly 18 million app users in Canada.³³ Notwithstanding this extensive use, we have not located any comprehensive data detailing who uses apps in Canada and how those apps are used. Research by private technology company Catalyst reveals that “app hoarding” on smartphones is decreasing – meaning that Canadians are keeping fewer and fewer apps on their phone.³⁴ In 2014, for example, the average Canadian had just under 27 apps on their phone, while in 2016 this number fell to 18.³⁵ The Catalyst study also found that “[m]onthly app download behavior increased year over year, but so did monthly app uninstall behavior, indicating a fickleness among the general population towards apps, especially apps that go unused.”³⁶ It is unclear whether these general trends include or are reflective of legal apps. It is worth noting that the Catalyst study found that app usage in another specialized sector – health—is on the rise: 30% surveyed had one or two health apps on their smartphone and 7% had three or more.³⁷

B. Implications

The information contained in this Knowledge Synthesis will assist government, lawyer regulators, legal service providers, app developers, and legal educators to better understand the potential benefits and limitations of using apps as a means to address Canada’s ongoing access to justice crisis. The analysis contained herein is timely as, although A2J apps “are in their nascent stage of development and usage”, these technologies are already beginning to change the ways that Canadians interact with law.³⁸ There is a risk that discussions about A2J apps will follow the pattern of many early discussions about access to justice and technology

generally and will “reflect[] an overly narrow, instrumentalist view of technology that fails to adequately take account of possible broader political and social implications as well as this technology’s transformative potential.”³⁹ This Knowledge Synthesis seeks to avoid this risk by developing the foundation for a nuanced analysis of the social, political and legal implications of access to justice apps, canvassing the risks and opportunities inherent in the use of apps in the legal context, considering existing best practice guidance relevant to legal apps and proposing future research directions on this topic.

C. Approach and Limitations

For this Knowledge Synthesis, we employed a variety of research techniques, particularly conventional subject and citation searching in the following areas:

1. Mobile app stores to identify and gather information about relevant apps;
2. Google searches to identify and gather information about mobile apps and web-based apps;
3. Scholarly journals and monographs within relevant disciplines, including law, media studies, computer science and technology;
4. Grey literature, including law school curricula and legal trade publications;
5. Newspapers and popular media sources including blogs; and
6. Policy reports and documents from government agencies, non-governmental organizations and professional bodies.

A complete bibliography of works consulted is included as Appendix A. Additionally, we conducted a short survey of all Canadian law societies on legal apps. The survey questions are included as Appendix B, below, and results from this survey are incorporated into the Results, below.

Our preliminary research revealed virtually no Canada-specific scholarly work, regulatory consideration or policy initiatives addressing legal apps generally, or A2J apps in particular. We thus expanded our research to include: (1) American sources on A2J apps; and (2) research on health-related apps, including evidence-based apps for use by health professionals and health and fitness apps designed for use by the general population.⁴⁰ Health apps are a meaningful comparator, as the legal and health environments share many key features, including the involvement of experts delivering specialized services in a self-regulated environment, and privacy and security concerns related to sensitive patient or client information.

This Knowledge Synthesis is subject to some limitations. First, the research was conducted entirely in English and lacks sufficient engagement with scholarship published in other languages, including French. Future research may be done in collaboration with colleagues from French-speaking Canada. Second, much of our research draws from the American experience in part because there are significantly fewer A2J apps in Canada, and accordingly, less associated literature (see inventory of Canada apps, Appendix C, versus inventory of American apps, Appendix D). While the American experience is instructive, it will be necessary to develop a

Canada-specific approach to A2J apps and to addressing the opportunities and risks of these apps, discussed below. Third, while the research at the core of this Knowledge Synthesis is comprehensive, it is by no means exhaustive. For example, our work here is limited to the North American experience with A2J apps, but there are many apps grappling with access to justice issues internationally and in other jurisdictions.⁴¹ Similarly, in creating our inventories of A2J apps, we focused primarily on those apps available through mobile apps stores and simple Google searches. It is probable that there are additional apps not located through these searches that could be included in our research.

D. Results

1. Inventory and Taxonomy of A2J Apps

This Knowledge Synthesis was motivated in part by the lack of consolidated data on available A2J apps in Canada. To date, there has been no attempt to comprehensively list or categorize Canadian A2J apps. Our inventory and taxonomy seeks to fill this gap. Additionally, as noted above, given that the US has more experience with these apps, we included those in our data gathering for the sake of comparison and in order to provide a broader set of data. The Canadian and American apps gathered in Appendix C and Appendix D, respectively, were coded according to six features:

1. the developer(s) of the app;
2. the app's intended users or target audience;
3. the type(s) of law the app engages (i.e., family, criminal, tax);
4. a brief description of the app (as provided by the app itself);
5. the accessibility of the app (whether it is free or for a fee); and
6. the function(s) the app serves (i.e. providing legal information, offering administrative information, document or form creation, evidence collection, legal advice, self-help, or 'other')

All efforts were made to ensure the information listed in Appendix C and Appendix D is accurate. Some limitations should be noted, however. First, this information was collected between May and August 2016 and some of the information may have changed in the ensuing months. Second, information on the six features listed above was obtained from public resources located by our research team. It is possible that there may be additional information contained in private sources or other public sources that is not included here. Third, we did not independently verify information about an app provided by its developer(s). For example, if an app developer indicated that the app performed a certain function, we included this function in our taxonomy and did not use the app to confirm that the app in fact performed the stated function.

The information gathered in the course of creating the inventories in Appendices C and D sheds light on a number of trends emerging in A2J apps in North America. We summarize three of our key findings about A2J apps, below.

a. A2J App Developers

First, private developers are responsible for most A2J apps.⁴² Although detailed information about the backgrounds of these developers is generally not available, our inventory suggests that developers range from small developers working alone or in small teams to large developers with significant financial and human resources capacity. One example of the latter is the company LegalZoom, which has systematically entered the legal services delivery field on a large-scale basis and offers multiple apps to the public.⁴³

There are more public developers in the United States than in Canada. One reason for this may be that the United States' Legal Services Corporation, "an independent nonprofit established by Congress in 1974 to provide financial support for civil legal aid to low-income Americans" has recently required that its grant recipients leverage resources through technology.⁴⁴ Additionally, as a result of a national technology summit in 2012, the Legal Services Corporation recommended that legal aid service providers take advantage of mobile technologies to reach the public more effectively.⁴⁵ That our United States inventory includes multiple apps developed by American legal aid organizations is at least in part attributable to the Legal Service Corporation's interest in technology. Also notable in the United States is the fact that a number of civil liberties organizations have developed A2J apps. For example, close to 20 state chapters of the American Civil Liberties Union (ACLU) have created *Mobile Justice* apps that allow "users to record law enforcement, to alert other Mobile Justice...app users to nearby law enforcement encounters and to submit videos and incident reports automatically to the ACLU."⁴⁶ Finally, a number of American courts have developed apps that provide information about court proceedings to the public and lawyers.⁴⁷

In Canada, there are fewer public developers of A2J apps. Apps created by public developers include a Legal Aid Ontario app that allows citizens to assess their financial eligibility for partially subsidized legal representation in Ontario,⁴⁸ and an app created by Halton Community Legal Services that provides a "legal health check-up" for individuals in select Ontario communities.⁴⁹ Recently, government actors and public organizations have become more involved in the support and promotion of technological solutions to access to justice issues. For example, in 2013, CanLII developed an application programming interface (API) to allow developers to access the CanLII database of case law and legislation for use in their apps. CanLII also co-hosted a hackathon with the University of Ottawa Faculty of Law's Centre for Law, Technology and Society that aimed to facilitate the development of technological solutions to access to justice issues.⁵⁰ In 2016, two high-profile public competitions targeted legal innovation: *The Pitch*, co-hosted by the Canadian Bar Association and LegalX (a team "dedicated to moving the legal sector forward through enterprises — whether startup or established corporates and law firms" and housed at the Toronto-based MaRS Discovery district innovation hub);⁵¹ and the *Ontario Access to Justice Challenge*, a partnership of the Ontario Ministry of the Attorney General and the Legal Innovation Zone at Ryerson University. Both competitions intended to "foster the growth and success of startups that are developing products, technologies, processes, and solutions that have a direct positive impact on access to justice in Ontario."⁵²

Interestingly, law schools in the United States and Canada are also playing a role in the development of A2J apps. Law professors and law students are leading innovation through courses that serve as think tanks on how to use technology to address access to justice issues. An Osgoode Hall student in a course entitled *Legal Information Technology* developed the idea for *JusticeTrans*, an app that provides legal information on human rights related to gender identity to the transgender community.⁵³ Similarly, students at Thompson Rivers University enrolled in *Lawyering in the 21st Century* designed *SUMMONS*, an app currently in demo mode that “allows court administrators to provide live updates of court schedules and when litigants or their lawyers are to appear to help cut down on these expenses.”⁵⁴

Similar trends are apparent in the United States. Georgetown Law hosts an annual *Iron Tech Lawyer* competition, where students test apps created in their *Technology Innovation and Law Practice* practicum.⁵⁵ The group that won “Best Iron Tech Lawyer 2016” developed *iHeal* for the National Immigration Law Centre, to “help low-income immigrant and mixed citizenship status families determine health care coverage eligibility.”⁵⁶ Stanford University’s Legal Design Lab⁵⁷ and the Centre for Legal Services Innovation at Michigan State University College of Law⁵⁸ are centers dedicated entirely to examining how technology can improve access to justice and legal services delivery. Some of the development work in the educational sector is happening in collaboration with industry partners. For example, Neota Logic, which produces “an advanced and innovative AI [artificial intelligence] platform” to be used by non-programmers to develop apps, provides support to the Georgetown Law *Iron Tech* competition as well as a similar competition at Melbourne University Law School.⁵⁹ A sample of access to justice and technology courses and programs currently on offer at Canadian and American law schools is at Appendix E, below.

b. Diverse end-users, functions and areas of law

Our inventories reveal that A2J apps target several distinct end-users: (1) lawyers; (2) the general public; and (3) non-lawyer service providers engaging with the public.⁶⁰ The diversity of functions performed by A2J apps and the different areas of law they cover are discussed in this section in relation to these three end-user categories.

(1) End-users: Lawyers

A2J apps targeting lawyers are generally designed to make legal service delivery more efficient. For example, the app *StandIn* uses location services to connect lawyers who are available to appear in court for one another.⁶¹ Another lawyer-targeted app is *iProBono*, which allows lawyers to view current *pro bono* listings in Arkansas and request cases through the app.⁶² Many of the North American apps directed at lawyers target discrete practice management functions such as billing, time-tracking and case file management or focus on litigation tasks such as managing e-discovery and document review functions, assisting in preparing court forms and keeping track of court dockets.⁶³

An emerging area in lawyer-facing apps is legal analytics. Legal analytics tools “analyze past legal reference data to provide insights into future outcomes.”⁶⁴ For example, in the United States, Lex Machina offers five different types of *Legal Analytics Apps*: (1) *Courts & Judges Comparator*, which “enables attorneys to compare up to four federal districts and judges, to gain critical insights regarding caseloads, timing to key milestones, case resolutions, specific findings, and damages”; (2) *Law Firms Comparator*, which “enables powerful side-by-side comparison of up to four law firms, with instant display of a broad range of case-specific data”; (3) *Early Case Assessor*, which “enables lawyers to quickly assess the threat posed by a new case....[by] [e]nter[ing] the name of the plaintiff and the plaintiff’s law firm, and immediately get[ting] an overview of the plaintiff’s litigation history”; (4) *Motion Kickstarter*, which “makes it easy to draft winning motions by helping attorneys compare the arguments and motion styles that have been successful before a specific judge”; and, (5) *Patent Portfolio Evaluator*, which “gives attorneys the complete litigation history for an entire patent portfolio in one report.”⁶⁵ In Canada, Loom Analytics “use[s] a combination of machine learning and legal analysis to classify case law along multiple vectors allowing for statistical analysis... [to allow users to] see how a particular judge has ruled on specific motions or claims at trial, what kinds of cases make it to court most frequently, the average decision turnaround time, and the average cost and damage awards broken down by case type.”⁶⁶

Another focus of lawyer-facing apps is the use of machine learning to provide answers to legal questions or allow lawyers to more efficiently analyze legal documents. For example, *Blue J Legal* “analyzes fact situations using deep learning” to provide “authoritative answers” relating to a number of specific legal subjects such as determining if an individual is a resident of Canada or of another country for tax purposes.⁶⁷ Another example is *Beagle*, which uses artificial intelligence to read contracts, highlight the important information, and facilitate lawyer review.⁶⁸

(2) End-users: General public

Our inventories include a wide variety of public-facing apps. A number of these do not disrupt the conventional modes of delivering legal services but focus on making existing legal services easier to access. For example, there are many apps that simply connect individuals with legal issues to lawyers, either in private practice⁶⁹ or through legal aid and pro bono systems.⁷⁰ There is also a range of apps that allow users to access conventional legal services in innovative ways. For example, *Notarize* allows users to notarize documents online with e-signatures – users upload their documents, and a notary public who has a video profile with the app notarizes the document.⁷¹

There are also a significant number of apps that seek to materially change the way that individuals interact with the legal system by allowing users to engage in self-help either by bypassing the need to retain a lawyer or by minimizing the amount of time a lawyer needs to spend on the legal issue at hand. Examples of these types of apps include:

- **Apps that provide legal and procedural information:** For example, *JusticeTrans* is a web-based app that offers legal information about transgender rights in Canada.⁷² Other examples include multiple American apps designed to assist individuals with expungement (i.e. a court order that removes an entry from a criminal record)⁷³ and *Maryland Law Help App* which helps users find courts, lawyers and law libraries in Maryland, produce official court documents, and seek self-help through self-help questionnaires.⁷⁴
- **Apps that allow users to create legal documents:** For example, *Ontario Small Claims Wizard*, an app that is currently in development, aims to guide individuals through Ontario small claims processes by advising users on which documents they need to file for their legal issue, and allowing the forms to be completed online.⁷⁵ In the United States, *CitizenshipWorks* guides users through the steps of a citizenship application and connects users with free legal help if they face problems.⁷⁶ As mentioned above, *LegalZoom* is an industry leader in providing online products that facilitate legal document creation.
- **Apps that streamline conventional legal processes:** For example, *Wevorce* uses “mediation and technology to make divorce less adversarial and costly” and automates the common steps of the divorce process so that “lawyers can focus on the unique aspects of the divorce”.⁷⁷ Another example is *Equalyzer*, an American web-based app that allows users to build a discrimination report that is then submitted to a Civil Rights attorney for review.⁷⁸
- **Apps that assist with legal research:** In some cases, legal research apps are designed specifically for individuals who are not legally trained.⁷⁹ In other cases, it is clear that the intended end-user is either a lawyer or an individual with a fairly sophisticated level of legal expertise.⁸⁰ A Canadian example is *Rangefindr*, a tool designed to help lawyers and judges quickly determine appropriate sentencing ranges in criminal matters.⁸¹

A final category of apps provides legal self-help tools and assistance of the sort not typically offered by lawyers. Some are directed at providing real time support to citizens who are stopped by police. In the Canadian context, *LegalSwipe* aims to inform people of their rights when stopped by police but can also “send emergency contacts a personalized message with ongoing updates of [one’s] geographic location” and “record audio and video to be e-mailed to emergency contacts and uploaded to synchronized Dropbox accounts.”⁸² An American app, *HeatSeek*, provides a system whereby tenants have a specially designed temperature sensor installed in their apartment for no cost and *HeatSeek* analyzes the temperature data from the sensor to determine heating code violations.⁸³ The data obtained can be used to provide “objective evidence” about heating code violations in housing court.⁸⁴

(3) End-users: Non-lawyer service providers

A final set of A2J apps targets users who are non-lawyer service providers, including social workers. For instance, *Debt and Eviction Navigator* “enables social workers to perform quick legal screenings for homebound and disabled seniors.”⁸⁵ Like the public-facing apps, above, apps targeting non-lawyer service providers have the potential to democratize legal information by increasing the number of people who understand a given legal issue or problem and know how to take steps to remedy it.

c. Costs

Affordability is an important consideration in determining the degree to which an app might contribute to improving access to justice. The majority of the A2J apps we canvassed are available for free, especially those targeting the general public. However, apps aimed at lawyers or law firms, and those that connect a user and a lawyer for a legal consultation or advice are more likely to cost money.⁸⁶ Even apps that are free, however, may have hidden costs associated with upgrades or advanced features. These hidden fees may impact the potential reach of certain legal apps. For example, in the health care context, a survey found that over half of mobile phone users in the United States had downloaded a health-related mobile app, but that half of these users stopped using apps due to high data entry burden and the hidden costs, especially charges for upgrades.⁸⁷

2. Policy Issues: Opportunities and Risks

As mentioned above, there is virtually no scholarship or policy literature in Canada that specifically discusses the opportunities and risks associated with legal apps. There is some helpful commentary, however, relating to technology and legal services delivery generally. This commentary is discussed below, along with American literature on the use of technology in legal services delivery and literature focused on health apps. Preliminary assessments of the potential opportunities and risks presented by A2J apps are also provided.

a. Opportunities

Here we consider six opportunities to improve access to justice issues presented by mobile and web-based apps: (1) mitigating financial barriers; (2) mitigating psychological and informational barriers; (3) mitigating physical barriers; (4) addressing legal needs outside of conventional legal services; (5) the use of big data to generate new insights; and (6) the modernization of public legal education.

(1) Mitigating financial barriers

We did not locate any empirical studies addressing how legal apps might mitigate financial barriers to accessing justice. Moreover, given the diversity of A2J apps traced in our inventories, it is impossible to make a universal statement regarding the ability of apps to address financial

barriers to access to justice. Here we can offer some general comments about the potential of certain categories of apps to make legal services more financially accessible to members of the public.

With respect to those apps targeting lawyer end-users, there is little empirical evidence as to whether such apps in fact make legal services less expensive and, if so, whether the cost savings are actually transferred to clients. For many of these apps – for example, apps targeting discrete practice management issues like file organization and billing – it seems doubtful that any cost savings to an individual client would be significant. For example, in “personal plight” areas of legal service, like family law and criminal defense, where there exist profound access gaps, it is unlikely that an app yielding even relatively substantial cost savings would materially impact the overall access to justice issues that exist.⁸⁸ For these types of very costly matters, even if a legal app generated a significant cost savings – say, for example, a 20% reduction in fees – it is unlikely to be the difference between being able to afford a lawyer or not for many individuals. In addition, as noted above, many members of marginalized and equality-seeking communities experience psychological, informational or physical barriers to retaining lawyers. The fact that legal services might be cheaper because of an app will do little to overcome the non-financial barriers that prevent individuals from contacting a lawyer in the first place.

More promise for improving the accessibility of legal services resides in A2J apps directed towards the public or non-lawyer service providers. In particular, those apps which allow individuals to generate legal documents, like contracts or wills, without retaining a lawyer or with reduced assistance from a lawyer, have the potential to increase public access to certain legal services at significantly reduced costs. For example, LegalZoom now charges \$79 to prepare an online will which is reviewed by a lawyer, in contrast to the several hundred to several thousand dollars it might cost to retain a lawyer to perform the same task.⁸⁹

Ultimately, as with the case of lawyer end-user apps, there is little research as to who uses legal apps directed to members of the public and whether the use of such apps results in individuals obtaining legal services that they would not otherwise be able to afford. More research on this topic is needed.

(2) Mitigating psychological and informational barriers

The existing literature includes general discussions of how technological interventions may provide opportunities to demystify legal institutions by creating new opportunities for the public to educate themselves about the law.⁹⁰ It is argued, for example, that technology can offer greater transparency about the legal system through free public resources and offer tools to people who are either unable to access legal services or who are self-representing in a legal matter.⁹¹ Once again, the diversity of A2J apps precludes any umbrella conclusions as to whether apps in fact realize these sorts of benefits. Moreover, the fact that we do not have reliable empirical information about who uses A2J apps and how they are used means that we are unable to reach definitive conclusions regarding how such apps might help mitigate psychological and informational barriers to access to justice.

However, a review of A2J apps in light of what we know about the psychological and informational barriers to accessing justice faced by many Canadians suggests significant opportunities for apps to address some specific obstacles. The Canadian Bar Association's *Reaching Equal Justice* report, for example, notes that one significant barrier faced by individuals attempting to resolve a civil justice problem is "lack of knowledge about the legal system and resources available to support individuals, especially knowledge regarding how to access legal aid or affordable legal services and information."⁹² Apps that assist users in understanding the legal aid system and available *pro bono* services can help address this informational gap. Similarly, access to the courts through mobile or web-based apps can be useful for communities who feel disenfranchised from the legal system. Focus group members consulted during the development of the Washington State Courts' *Access to Justice Technology Principles* shared that they were mistrustful of courts and thus preferred the idea of dealing with the justice system remotely.⁹³

A2J apps can also help overcome psychological and informational barriers by providing more holistic or client-centered assistance to the public than that generally offered by simple legal advice. For example, *CitizenshipWorks*, an American app that walks citizenship applicants through various calculations, study aids, and document checklists, presents itself as a problem-solving assistant, enabling it to be more helpful to its user than a lawyer offering strictly legal information, who may not understand other aspects of the citizenship process.⁹⁴ Further, legal apps may contribute to greater legal literacy by increasing the quantity and quality of legal information available online.⁹⁵

The impact of A2J apps in addressing informational or psychological barriers may depend on whether mobile or web-based apps are used. For example, in explaining the motivations behind a number of A2J apps, American legal aid lawyers suggested that immigrant communities were more accustomed to handheld technology than to computers.⁹⁶ Similarly, the impetus for *LegalSwipe* was the founder's observations that young black men between the ages of 18-30 years old were alienated from public legal education resources, but displayed disproportionately high mobile phone usage.⁹⁷

In light of these opportunities, A2J apps hold promise for contributing to an increase in client empowerment. While the conventional legal world tends to situate clients as relatively uninformed recipients of legal information, in the health care context, the adoption of technological innovations including the use of apps has facilitated a cultural shift from a passive patient culture to consumer empowerment and patient-centered care.⁹⁸ As a result, there is growing recognition in the health care world of the "e-patient" who is empowered and informed by virtue of the availability of health information through various online tools and apps.⁹⁹ Similarly, A2J apps may contribute to the evolution of an "e-client" in the legal realm by increasing the availability and accessibility of legal information.

(3) Mitigating physical barriers

Apps can be accessed on an anytime, anywhere basis, assuming that an individual has access to the internet.¹⁰⁰ This flexibility may be particularly helpful for remote users who may have difficulties obtaining appropriate legal information and services in-person due to a lack of local lawyers. Indeed, the United States' Legal Services Corporation has endorsed the use of mobile technologies as part of a cohesive strategy to triage the legal needs of remote users into a harmonized system.¹⁰¹

(4) Addressing legal needs outside of conventional legal services

As noted above, there is a set of legal apps – including *HeatSeek* and the police encounter apps *LegalSwipe*, *MobileJustice* and *Stop & Frisk* – that provide legal self-help tools and assistance of beyond that typically offered by lawyers. These apps appear to be filling a set of legal needs not currently provided for by the conventional legal services market.

(5) Big data and insight development

There are few studies about the use of data generated by legal apps. This may be due to the newness of the technology or concerns about the collection, ownership and use of data generated by the apps. At the American Bar Association's recent *Equal Justice Summit*, however, there was a brief but important discussion about using data collected by legal service providers to gain insight into connections between legal issues. New Mexico Legal Aid, which employs an online triage tool for new service users, found a correlation between automobile repossessions and home evictions within a three-month period. New Mexico Legal Aid does not typically assist with automobile repossessions; however, they are now considering whether they should help service users on these issues knowing that it could help them avoid bigger legal issues down the road.¹⁰² An additional interesting use of data generated by an existing legal app is *HeatSeek's* use of temperature data from individual apartments to “track patterns of abuse” and assist users in working with “responsible landlords to diagnose problems with their buildings’ heating systems.”¹⁰³

(6) Modernization of public legal education

The possibilities presented by new technologies like A2J apps present important pedagogical experiences for law students. Having law students study and create A2J apps enables them to see law as a system, to communicate legal information in an accessible way, and to demonstrate the responsiveness of the law to users' individual problems.¹⁰⁴ Professor Tanina Rostain, one of the instructors of the *Technology, Innovation, and Law Practice: An Experiential Seminar* course at Georgetown Law, finds that law students' roles in building legal expert systems enable them to gain a better understanding of user needs.¹⁰⁵ Similarly, Ronald Staudt and Andrew Medeiros explain how the *Justice & Technology Practicum* at Chicago-Kent College of Law teaches both established lawyering competencies, like empathy and client-centered professionalism, and new core competencies like legal project management,

collaboration, and transactional problem-solving.¹⁰⁶ These pedagogical experiences are a useful gateway to get students thinking broadly about the role of lawyers in a modernized, technological world.

b. Risks

This section identifies five risks inherent to using mobile and web-based apps to address access to justice issues: (1) privacy and security issues; (2) the perpetuation of uneven or unequal access to justice; (3) the unauthorized practice of law and other regulatory impediments; (4) the uncertain reliability of legal information; and (5) skewing the access to justice debate.

(1) Privacy and security issues

There is little analysis of the privacy and security issues arising from the use of legal apps. There is, however, significant discussion of these risks in relation to apps generally, and in relation to health apps, specifically. This discussion provides useful insight that should be considered in thinking about the privacy and security issues inherent in A2J apps.

That apps collect data gives rise to a significant set of privacy and security risks. As John Torous and Adam Powell note in their discussion of the use of apps for tracking mood disorders in the health care context, data collection can be both active and passive.¹⁰⁷ Active collection of data requires direct participation from users (in the case of the mood disorder apps studied by Torous and Powell, active collection would involve, for example, providing mood logs or records of subjective experiences) while passive collection involves the app autonomously gathering data through a GPS or other sensors.¹⁰⁸ Both passive and active data collection raise privacy and security concerns.

The most obvious, and perhaps most significant, issue is that data collected by apps could be vulnerable to collection and misuse by unauthorized third parties (i.e. hackers). The risk that collected data could be misused is real: even sophisticated app providers like, for example, the ride-share service *Uber* have experienced security breaches resulting in the misuse of users' personal information.¹⁰⁹ Another issue is that app users may not understand how app developers are using their data. In the health care context, for example, many of the companies who produce wearable fitness products, like *Fitbit*, reserve rights to the data they collect. This enables the companies to commercially share the data, analyze it, provide the information to government authorities and/or dispose of the data as an asset in the event of a bankruptcy or corporate merger.¹¹⁰ User data can thus be shared or sold to third parties for purposes unrelated to the specific mandate of the app, like advertisers, insurance companies, or drug companies.¹¹¹ Concerns relating to the misuse or selling of data are likely to be particularly acute in relation to A2J apps given that sensitive personal or financial information may be collected by such apps.

One potential means of ensuring that A2J app users understand how their information will be used is to employ detailed terms and conditions. However, individuals using apps may not carefully read the terms and conditions or have the capacity to meaningfully understand their content, giving rise to issues of informed consent. Moreover, the terms and conditions themselves may not be clear or fully forthcoming. Research by Open Effect found the terms of service of fitness wearables have variable policies relating to access to, collection of, or deletion of the data collected by wearables, do not disclose the duration of data retention, fail to disclose with whom data is shared, and often require consumers to agree to a dispute resolution process outside of domestic courts.¹¹² More dramatically, recent social science research found that 98% of participants agreed to sign fictional terms and conditions to access a fictional website notwithstanding that they included a clause requiring users to give up their first born child as a form of payment.¹¹³

Further, when A2J app users need to use public spaces or public computers to access apps, they could be at risk of identity theft or data breaches.¹¹⁴ Low-income and/or homeless people without ready access to a personal computer or reliable internet connection may be particularly at risk. While low-income people are targeted less often for identity theft, they suffer greater harms from identity breaches.¹¹⁵ As a result, people who have concerns about the protection of their sensitive information – such as those living with mental health issues, survivors of intimate partner violence, or homeless veterans, for instance – may be disinclined to use open, web-based technologies to address legal issues.¹¹⁶

Issues of confidentiality have an additional regulatory dimension in cases where an app delivers legal services and thus creates a lawyer-client relationship. Subject to narrow exceptions, lawyers have a mandatory duty to “hold in strict confidence all information concerning the business and affairs of a client acquired in the course of the professional relationship.”¹¹⁷ The Law Society of Upper Canada has confirmed in its Technology Practice Management Guidelines that “[l]awyers using electronic means of communications shall ensure that they comply with the legal requirements of confidentiality or privilege.”¹¹⁸ Data storage is also an issue. For example, in cases where third party “cloud computing” providers are used to store data online, significant privacy concerns can arise when the third party provider is located in a different jurisdiction and subject to different (and potential more lax) privacy and security regulation.¹¹⁹ In cases in which a lawyer-client relationship is not created – for example, where an app offers only legal information as opposed to advice – there is a risk that members of the public will not understand that the confidentiality protections inherent in the lawyer-client relationship do not attach.

(2) Uneven or unequal access to justice

The use of technology in access to justice initiatives “raises the specter of a digital divide that [further] institutionalizes a two-tiered system incapable of delivering appropriate justice to low-income persons.”¹²⁰ It is clear that meaningful implementation of technologically driven access to justice initiatives requires consideration of socio-economic, geographic and other barriers to technology access in Canada.¹²¹

We do not have any reliable data about who is using A2J apps in Canada or the groups of people who might benefit from such apps but experience barriers in accessing these kinds of technologies. That said, it is apparent that a number of potential barriers should be considered. One major set of challenges relates to literacy. As Patricia Hughes has observed:

Individuals using information, however acquired, must be able to read it, understand it and apply it to their own situation. Each of these tasks requires an increasing level of literacy. Yet a significant minority of people lack the required literacy even to understand the information, particularly since it is often difficult to avoid legal terminology and the information can quickly become complex.¹²²

In a 2008 report prepared for the Law Foundation of Ontario, Karen Cohl and George Thomson, observe “[i]nternet and other text-based solutions are of limited use to people who do not have the literacy skills to use them or to use them effectively.”¹²³ Cohl and Thomson further caution that “vulnerable people, because they face language barriers, isolation, poverty, or a cluster of other difficulties that often accompany a legal problem, [ideally] need to receive direct services rather than to rely on self-help [through either digital or paper-based resources].”¹²⁴ Notwithstanding this caution, the authors ultimately find that “self-help is often a necessary or reasonable choice, even for vulnerable persons, and it is simply unrealistic to suggest that the desired level of legal support can always be available” and, with respect to receiving legal support, “technology seems to be on the cusp of becoming a realistic, affordable means of supporting wider access to expert legal advice and services.”¹²⁵

In the specific case of technological tools aimed at enhancing access to justice, the existing literature emphasizes the importance of “tailoring design to ensure that these technologies do not in fact exacerbate the access to justice gap for these intended beneficiaries.”¹²⁶ Bailey et al note in their literature survey that “the use of plain language, availability of content in multiple language formats, design to accommodate visual and other physical impairments (including through adherence to principles of universal design), provision of human assistance to augment technological assistance, as well as special precautions to enhance privacy at public internet access points, and linking marginalized community members with trusted intermediaries have all been suggested.”¹²⁷

There are more specific considerations about the barriers to technology faced by particular communities. For example, incarcerated men and women often have little access to any technology as a result of security precautions within the correctional system.¹²⁸ More broadly, individuals living in supervised institutions, such as juvenile corrective facilities, psychiatric institutions, immigration detention centers, and nursing homes, are not readily able to access technology in their day-to-day lives.¹²⁹ For these individuals, it may be that apps designed for use by non-lawyer service providers, like social workers or community support workers, offer the most promise for improving access to justice.

A second set of concerns relates to access to technology itself. For example, access to and use of internet and wireless services varies between urban and rural or remote regions in Canada. In 2015, the Canadian Radio and Television Commission reported that rural and remote communities have fewer local consumer options available.¹³⁰ Consequently, these populations pay more for internet and wireless services than their urban counterparts.¹³¹ Further studies confirm that this is particularly true in Northern regions such as the Yukon and Northwest Territories, which continue to have poor broadband connectivity.¹³²

In addition to the particular challenges faced by rural and remote populations, the issue of affordability poses the general risk that those who could benefit from A2J apps will not be able to access them due to financial constraints. In 2015, the Public Interest Advocacy Centre (PIAC) conducted research on the affordability of communications services in Canada and found that, for low-income households, “[c]ommunications service expenditures tend to make up the fourth largest household expenditure, coming out ahead of other household expenses such as clothing, medical expenses, and childcare” and that many such households carry significant debts in relation to communications expenses (with the average being \$1,520.28).¹³³

(3) Unauthorized practice of law and other regulatory impediments

In Canada, only lawyers (and, in some cases, paralegals) can deliver legal services. The delivery of legal services by non-lawyers – known as the unauthorized practice of law (UPL) – is illegal and those who engage in it are subject to prosecution by provincial and territorial law societies.¹³⁴ The regulation of UPL by law societies is justified as necessary to protect the public from negligent or fraudulent delivery of legal services, although there are compelling critiques that the manner in which the legal profession has historically engaged in UPL prosecutions is also motivated by commercial interests.¹³⁵

Although non-lawyers cannot deliver legal services, it is well settled that they can provide legal information. The line between legal information and legal services is notoriously murky. As Bond et al. have pointed out, there is a lack of jurisprudence on UPL, an absence of regulatory guidelines, and no regulation of legal information in Canada.¹³⁶ Proactively seeking a legal opinion on whether particular services amount to UPL is expensive, raising access to justice questions about who can afford to experiment with legal information innovations.¹³⁷ The fact that there is little to no guidance for developers of A2J apps in Canada on how to navigate the boundaries between legal information and legal services in order to avoid engaging in UPL may be a barrier to innovation.¹³⁸

The Canadian law societies surveyed in the context of this Knowledge Synthesis indicated that they have not received any complaints in relation to legal apps. Multiple law societies, however, expressed worry with respect to certain types of legal apps operating without regulatory oversight. For example, the Law Society of Newfoundland and Labrador indicated, “in the context of regulation in the public interest, the use of apps which purport to give legal advice, without corresponding oversight or insurance to address potential negligence issues, is of concern.”

In the United States, initial regulatory responses to technological innovations in the delivery of legal services largely sought to defend the status quo. For example, several American bar associations proactively issued opinions or letters stating that LegalZoom's online document preparation services amounted to UPL.¹³⁹ More recently, however, there has been more willingness to accommodate new approaches. For example, as part of a consent agreement resolving an anti-trust lawsuit initiated by LegalZoom, the North Carolina State Bar agreed to support legislation, passed in 2016, which amended the state's definition of law practice to permit websites that offer interactive legal documents.¹⁴⁰ In its *Report on the Future of Legal Services in the United States*, the American Bar Association recently acknowledged that many of the innovative legal services providers that have emerged in recent years "have positively contributed to the accessibility of legal services" in the United States.¹⁴¹

The American legal community has also considered whether innovative technological solutions for delivering legal services and information should be further regulated, explicitly subject to regulatory exceptions or left to be developed with minimal or no regulatory oversight.¹⁴² The American Bar Association's *Report on the Future of Legal Services in the United States* suggested that unnecessary regulation of entities that use new technologies and internet-based platforms to provide legal services directly to the public "could chill additional innovation, because potential entrants into the market may be less inclined to develop a new service if the regulatory regime is unduly restrictive or requires unnecessarily expensive forms of compliance."¹⁴³ The *Report* further notes, however, that "narrowly tailored regulation may be necessary in some instances to protect the public" and that further regulation may assist innovators by giving them "express authority to operate and a clear roadmap for compliance" in relation to UPL provisions.¹⁴⁴ The ultimate recommendation was further study of entities engaging in innovative models of legal services delivery, collecting data on the extent to which such entities are benefiting or harming the public and a determination of whether there are already adequate safeguards against potential harms.¹⁴⁵

(4) Uncertain reliability of information provided by legal apps

To be reliable, an A2J app must provide up-to-date, accurate information that is regularly validated and sustained over time.¹⁴⁶ Once again, we lack information in this area: there is no comprehensive data regarding the accuracy or currency of the information and advice offered by A2J apps. To the extent that A2J apps are unregulated, regulators have no ability to ensure that the information provided by apps is in fact accurate and current. Concerns about the correctness and currency of information provided by legal apps were repeatedly raised by provincial and territorial law societies responding to our survey.

To the extent that an A2J app is developed in an interdisciplinary team, additional challenges to reliability may arise. For example, programmers may decide to change content to better meet user needs, or improve the interface of the app, but in so doing, they could alter critical legal terms and information in the app.¹⁴⁷ Related, and in light of the discussion above on UPL, important questions arise as to whether a licensed lawyer must be involved in the creation and/or maintenance of A2J apps to ensure the ongoing reliability of any legal

information provided. In the context of health care apps, where the majority of apps are created for commercial purposes, the marked lack of involvement of medical professionals in the design of apps has prompted debate about how to safeguard patients' interests in the face of apps that provide inaccurate or outdated health information.¹⁴⁸

Existing research suggests that, while consumers often assume they are able to make educated choices about the reliability of information provided by apps, these assumptions are questionable. In a 2016 study of users of health care apps, a health sociologist concluded that in assessing the trustworthiness of an app, most users are more influenced by the design and appeal of a website than the currency and accuracy of its information.¹⁴⁹ In this survey, investigators sought to find out whether information seekers undertake to: read disclosure statements; check the credentials and institutional affiliations of those who provide information on websites; check the ownership and/or sponsorship of websites; check for financial ties between website information and the website's sponsors; check for stated goals and objectives; and check whether the online information is current and updated and/or the last time the information was updated.¹⁵⁰ In general, survey participants felt highly confident about their abilities to discern the quality of the information they found online, but the same participants reported low rates of behaviours that actually served to verify the credibility and quality of online information.¹⁵¹ As in the health care context, the consequences of relying on legal information that is low-quality, incomplete, out-dated or simply wrong can have serious legal, financial and personal consequences for individuals.

Finally, there may be particular limitations to what can be communicated in a mobile context. Commentators have noted that the writing for mobile apps needs to be brief and concise because people tend not to read, but rather, scan, mobile content.¹⁵² The inability to publish expansive or highly detailed content in the context of a mobile app may compromise the integrity of the legal information being provided.

(5) Skewing the access to justice debate

Finally, the flourishing of A2J apps has the potential to significantly change access to justice debates in North America. Many lawyers and commentators in Canada and the United States wonder whether the proliferation of A2J apps, marketed as cheaper, seemingly easier substitutes for full-service legal representation, reduces the general sense of urgency about the access to justice crisis,¹⁵³ and distracts from the ongoing need to improve the affordability and accessibility of real-time legal and court services.¹⁵⁴

3. Best Practices for A2J Apps

There is currently no best practice guidance specifically tailored to legal apps generally, or A2J apps in particular. In this section we look to existing guidance on the development and deployment of mobile and web-based technologies generally, with a view to considering the transferability of general best practice advice to the A2J apps context in respect of four specific issues: (1) privacy; (2) security; (3) usability; and (4) accessibility. Finally, we look to

comparative best practice advice on health care apps, which could serve as a meaningful starting point for the development of comparable best practices on A2J apps.

(1) Privacy

In certain cases, federal or provincial privacy legislation may apply to information obtained or transferred via mobile or web-based apps.¹⁵⁵ The federal *Personal Information Protection and Electronic Documents Act* (PIPEDA), applies to “federal works, undertakings or businesses” in circumstances where personal information is being collected, used, or disclosed in the course of a commercial activity.”¹⁵⁶ PIPEDA also applies in those provinces without substantially similar private sector privacy legislation.¹⁵⁷ To help developers and businesses administering apps comply with this legislation, the Office of the Privacy Commissioner of Canada, with the Privacy Commissioners of Alberta and British Columbia, published a document called *Seizing Opportunity: Good Privacy Practices for Developing Mobile Apps*.¹⁵⁸

The Commissioners in *Seizing Opportunity* advise, “[n]o matter what kind of app you develop, your activities are likely subject to one of Canada’s privacy laws because they may involve the collection, use and disclosure of personal information” and photographs, IP addresses, contact lists, location information and voice print biometrics (used, for example, in voice recognition apps) can constitute personal information.¹⁵⁹ Importantly, *Seizing Opportunity* confirms that “[e]ven if you aren’t generating revenue from an app, you may still be covered by Canadian private sector privacy laws....[as] [c]ollecting, using and disclosing personal information to improve user experience, which indirectly contributes to the commercial success of your app, could still be considered a commercial activity under the law.”¹⁶⁰ The best practices in *Seizing Opportunity* are of value to those developers who fall within the jurisdiction of PIPEDA, and to individuals and companies concerned with privacy generally, even if they are not captured by the federal legislation. The document contains a checklist for apps encouraging consideration the following five key privacy considerations: (1) accountability for one’s conduct and code; (2) openness and transparency regarding privacy practices; (3) collection and retention (with appropriate security measures) of only what the apps needs to function; (4) ensuring meaningful consent is obtained; and (5) appropriate timing in relation to user notice and issues of consent.¹⁶¹ In 2014, the federal Privacy Commissioner, again in conjunction with the Privacy Commissioners of Alberta and British Columbia, published *Guidelines for Online Consent*¹⁶² and *Ten Tips for Communicating Privacy Practices to Your App’s Users*.¹⁶³ These documents contain supplementary privacy guidelines for app developers.

In the United States, the Federal Trade Commission published a report entitled *Mobile Privacy Disclosures: Building Trust Through Transparency*, with recommendations for best practices on mobile privacy disclosures.¹⁶⁴ *Mobile Privacy* provides specific recommendations for app developers, including: (1) having a privacy policy which is available through the platform’s app store; (2) providing “just-in-time” disclosures and obtaining “affirmative express consent when collecting sensitive information outside the platform’s API, such as financial, health, or children’s data, or sharing sensitive data with third parties”; (3) improving “coordination with ad networks and other third parties that provide services for apps so that

the apps can provide truthful disclosures to consumers.”; and (4) considering “participating in self-regulatory programs, trade associations, and industry organizations, which can provide industry-wide guidance on how to make uniform, short-form privacy disclosures.”¹⁶⁵ *Mobile Privacy* also offers recommendations for platforms or operating system providers, advertising networks and other third parties and app trade associations.¹⁶⁶ A number of American industry organizations have also published best practice guidance on privacy in the mobile world.¹⁶⁷

(2) Security

Because of the links between privacy and security of personal information, the federal and provincial Privacy Commissioners are again a source of best practice guidance on information security in Canada. For example, the Federal Privacy Commissioner has published a self-assessment tool to help organizations determine if they are adequately securing personal information.¹⁶⁸ With respect to mobile app security, the United States Federal Trade Commission’s *Mobile App Developers: Start with Security* offers specific guidance on the topic.¹⁶⁹ Some of the issues addressed in the FTC’s security guidance are “big picture”, including, for example, the suggestion that an app development team appoint one person to be responsible for ensuring security issues get sufficient attention in the development process, while other advice is technical, including recommendations on appropriate types of transit encryption and methods for storing passwords.¹⁷⁰ The reality that best practice guidance on security will necessarily include technical standards suggests that such guidance will have to be regularly updated to keep pace with technological developments.

(3) Usability

Another area of best practice that must be considered by app developers relates to the design of a user interface (UI) that enhances usability (i.e. the “user experience” or UX). For example, both Google and Apple have recently published suggested design principles that highlight issues such as: organizing and labeling menu categories, offering different payment options (e.g., PayPal, credit card), communicating form errors in real time, making text size legible and ensuring sufficient contrast between font and background colours.¹⁷¹ Numerous additional online sources and texts address the important topic of app usability.¹⁷²

(4) Accessibility

The leading authority on best practices for making web content accessible to persons with disabilities is the World Wide Web Consortium (W3C), an international standards organization for the Internet.¹⁷³ The W3C has created two series of *Web Content Accessibility Guidelines* (WCAG). Its intention is to make web content accessible to those with “blindness and low vision, deafness and hearing loss, learning disabilities, cognitive limitations, limited movement, speech disabilities, photosensitivity and combinations of these.”¹⁷⁴ The WCAG have three levels of conformance (A, AA, and AAA), but no conformance is possible without meeting the minimum criteria as set out in Level A.¹⁷⁵

W3C has created a Mobile Accessibility Task Force to offer guidance on how the WCAG can be applied to mobile content and mobile web apps. The Task Force issued its *First Public Working Draft* on best practices and integration with existing standards in February 2015.¹⁷⁶ The *Working Draft* notes that mobile devices present a mix of accessibility issues that differ from the typical desktop or laptop, and explain how these issues can be addressed in the context of existing WCAG 2.0 standards or other suggested best practices. For example, the advice includes best practices for helping users make the most of small screens since small screen sizes are characteristic of mobile devices, and recommendations on how to ensure good contrast on mobile devices given that they are more likely to be used in environments with glare from sun or strong lighting.¹⁷⁷

The legal context of accessibility must also be considered. Canada has a patchwork of laws on accessibility of services, and Ontario directly mandates accessibility standards for publicly available information and communications through the *Accessibility for Ontarians with Disabilities Act*, which requires targeted compliance with the WCAG.¹⁷⁸ Its related regulation, *Integrated Accessibility Standards*, identifies specific standards to be met in the provision of information and communications.¹⁷⁹ Designated public sector organizations and large organizations (i.e. those with more than 50 employees) must make their internet websites and web content conform to WCAG 2.0 at Level A, with a mandated upgrade to Level AA by January 1, 2021.¹⁸⁰ There are no comparable provisions for mobile applications.

(5) Best practices and health apps

In contrast to the legal services setting, there is best practice guidance tailored to health care apps. In 2015, the Canadian Medical Association published *Guiding Principles for Physicians Recommending Mobile Health Applications to Patients*, which aims “to provide basic information for physicians about how to assess a mobile health application for recommendation to a patient in the management of that patient’s health, health care, and health care information.”¹⁸¹ This document discusses seven “characteristics of a safe and effective mobile health application”: (1) endorsement by a professional or recognized association or medical society or health care organization; (2) usability; (3) reliability of information; (4) privacy and security; (5) avoids conflicts of interest; (6) does not contribute to fragmentation of health information; and (7) demonstrates its impact on patient health outcomes.¹⁸² These guidelines followed in the footsteps of 2013 guidance on best practices for mobile healthcare apps published by the Canadian Nurses Protective Society 2013.¹⁸³ In the United States, the American Medical Association passed a resolution in 2015 calling for “the development and dissemination of best practices to guide the development and use of mobile medical apps.”¹⁸⁴

4. Knowledge Gaps and Future Research

This Knowledge Synthesis confirms the existence of several significant knowledge gaps in relation to the Canadian use of A2J apps. Future research is required in order to gain a more complete picture of the state of this technology and assess its potential to improve the state of access to justice for Canadians. Knowledge gaps requiring urgent research attention include:

1. **Developers:** Who is currently developing A2J apps in Canada? More information is needed on the educational/professional background of developers, their funding sources, whether lawyers are or should be involved in A2J app development, and the motivations of A2J app developers;
2. **Users and usage patterns:** Who is using A2J apps in Canada and how are they being used? Do some communities use A2J apps more than others? What are the usage patterns of those engaging with A2J apps? Do users download A2J apps but then fail to actually employ them in addressing a legal issue? Why?
3. **Outcomes:** How do outcomes differ for individuals who use A2J apps to address a legal issue and those who do not? How should outcomes be evaluated in this context? How do users rate their outcomes in using A2J apps?
4. **Relationship between available A2J apps and A2J needs:** To what degree do existing A2J apps meet the diverse access to justice needs of Canadians? What A2J needs are not currently covered by apps that could be? Are there some access to justice needs that are simply not compatible with technological interventions like apps?
5. **Risks of A2J apps:** To what extent do A2J apps, in fact, pose risks to the public, particularly in relation to privacy and unreliable information? What privacy and security practices are currently being used by apps and are they effective? How current and accurate is the information and advice provided by available apps? Are A2J apps available primarily to middle class Canadians, contributing to the entrenchment of the digital divide?
6. **Best practices:** What would Canada-specific best practices in relation to A2J apps look like? Are there existing best practices in the health care field that are transferrable to the legal context? What body or organization is best suited to develop and promulgate the required best practice guidelines for A2J apps?
7. **Regulation & quality assurance:** What options are available to Canadian law societies to regulate A2J apps? What are the risks and benefits associated with each of these options? What options for quality assurance are available outside of formal regulation? In relation to health apps, it has been suggested that accountability could be improved by the development of “a refereed

clearinghouse could help consumers find their way to the apps most appropriate for them, a task that is difficult in an already-saturated market” or by “the market [offering] its own quality assurances or voluntary certification processes.”¹⁸⁵ Are these viable options in relation to A2J apps?

- 8. Transforming legal practice:** How are apps transforming conventional legal practice and the relationship between lawyer and client? Is the legal community responding to these changes, and if so, how? Do apps represent a threat to conventional legal practice or are they complementary to traditional models of legal services delivery?

E. Knowledge Mobilization

We have undertaken a range of knowledge mobilization activities in connection with this Knowledge Synthesis over the past six months, targeting a variety of audiences.

For legal audiences, we published a blog on our project at *Slaw.ca: Canada's Online Legal Magazine*,¹⁸⁶ and discussed our project in an interview with *Law Times*.¹⁸⁷ For broader audiences, we authored an opinion editorial that was published in the *Globe & Mail* in July.¹⁸⁸ We have three significant speaking engagements scheduled for October 2016, where we will share our research with stakeholder audiences. First, we will convene a panel on A2J apps at the University of Ottawa, Faculty of Law on October 13, 2016, as part of the *Cavanagh Professionalism Speaker Series*, which attracts law students, academics and legal professionals from the broader community. We have invited several A2J app developers to join us as part of this panel to provide a first-hand perspective on the promise and pitfalls of these apps. Second, we are invited presenters at the *Connect Create Communicate: Public Legal Education and the Access to Justice Movement* symposium in Toronto on October 21, 2016, an event jointly convened by LawConnect Ontario and the Action Group on Access to Justice.¹⁸⁹ Third, this research will be presented at the *Canadian Association for Legal Ethics* annual conference in Edmonton, Alberta, October 27-28, 2016.

We will continue our knowledge mobilization activities in the coming months. A version of this final report will be posted online and copies will be sent directly to interested stakeholders, including law professors engaged in teaching law and technology courses, the provincial and territorial law societies and individual A2J app developers. Over the next year, we will publish the results of this Knowledge Synthesis in the form of at least two peer-reviewed journal articles in relevant fields (e.g., law and technology, law and policy, socio-legal studies).

F. Conclusion

This Knowledge Synthesis develops the groundwork for a nuanced analysis of the social, political and legal implications of A2J apps. We have canvassed the risks and opportunities inherent in the use of apps in the legal context and considered existing best practice guidance relevant to legal apps and proposing future research directions on this topic.

Two overarching conclusions arise from this research. The first and most urgent conclusion is the pressing need for more Canada-specific research on A2J apps. Without any comprehensive statistics or scholarly research on these technologies, it is impossible to assess whether the opportunities presented by A2J apps to contribute to improving access to justice outcomes for Canadians are in fact being realized. Second, it is clear that apps will continue to populate the Canadian legal environment and lawyers, regulators and policy makers must address the potential risks to the public and the profession presented by these apps in a robust and timely fashion. A meaningful starting point would be the promulgation of best practice guidance tailored to A2J apps.

Endnotes

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- ¹ Canadian Bar Association Access to Justice Committee, *Reaching Equal Justice: An Invitation to Envision and Act* (Canadian Bar Association, 2013) at 6.
- ² World Justice Project, *Rule of Law Index 2015*.
- ³ Canadian Bar Association, *supra* note 1 at 16.
- ⁴ Trevor C.W. Farrow, Ab Currie, Nicole Aylwin, Les Jacobs, David Northrup and Lisa Moore, *Everyday Legal Problems and the Cost of Justice in Canada: Overview Report* (Toronto, Canada: Canadian Forum on Civil Justice, 2016) at 9.
- ⁵ *Ibid.*
- ⁶ *Ibid* at 13.
- ⁷ Ab Currie, *The Legal Problems of Everyday Life: The Nature, Extent and Consequences of Justiciable Problems Experienced by Canadians* (Ottawa, Ontario: Department of Justice Canada, 2008) (finding that 44.6% of all respondents to study experienced one or more justiciable problem over three years) and Farrow et al, *supra* note 4 at 2 (stating “[a]lmost half (48.4%) of Canadians over 18 will experience at least one civil or family justice problem over any given three-year period”).
- ⁸ Canadian Lawyer Magazine, “The Going Rate” (June 2015) online: http://www.canadianlawyermag.com/images/stories/pdfs/Surveys/2015/CL_June_15_GoingRate.pdf.
- ⁹ Julie Macfarlane, “The National Self-Represented Litigants Project: Identifying and Meeting the Needs of Self-Represented Litigants” (2013), online: The Law Society of Upper Canada <http://www.lsuc.on.ca/uploadedFiles/For_the_Public/About_the_Law_Society/Convocation_Decisions/2014/Self-represented_project.pdf> at 32.
- ¹⁰ Canadian Bar Association, *supra* note 1 at 37-39.
- ¹¹ See, for example, *ibid* at 34.
- ¹² For further discussion, see Currie, *supra* note 7.
- ¹³ Suzanne Bouclin, “Regulated Out of Existence: A Case Study of Ottawa’s Ticket Defence Program” (2014) 11 JL & Equality 35 at 48.
- ¹⁴ Canadian Bar Association, *supra* note 1 at 32, citing Ab Currie, “A National Survey of the Civil Justice Problems of Low and Moderate Income Canadians: Incidence and Patterns” (2006) 13:3 Intl J Leg Profession 217.
- ¹⁵ Karen Cohl and George Thomson, “Connecting Across Language and Distance: Linguistic and Rural Access to Legal Information and Services” (Toronto: Law Foundation of Ontario, 2008) at 32.
- ¹⁶ *Ibid.*
- ¹⁷ *Ibid.*
- ¹⁸ Nicole Aylwin and Lisa Moore, “Rural & Remote Access to Justice: A Literature Review” (Toronto, Ontario: Canadian Forum for Civil Justice, 2015) at 21.
- ¹⁹ *Ibid* at 17-18.
- ²⁰ *Ibid* at 18-21.
- ²¹ Cohl and Thomson, *supra* note 15 at 33.
- ²² *Ibid.*
- ²³ For further discussion, see, for example, Trevor C.W. Farrow, “What is Access to Justice?” (2014) 51(3) Osgoode Hall LJ 957.
- ²⁴ Kent Roach & Lorne Sossin, “Access to Justice and Beyond” (2010) 60(2) UTLJ 373.
- ²⁵ See, for example, discussion in Canadian Bar Association, *supra* note 1.
- ²⁶ Chief Justice Beverley McLachlin, “The Legal Profession in the 21st Century”, Remark, (2015) 2015 Canadian Bar Association Plenary (Calgary: Alberta, 14 August 2015), online: <<https://malcolmmccracker.files.wordpress.com/2015/08/cj-mclachlin-remarks-august-14-2015-2015-cba-legal-conference.pdf>>.

²⁷ American Bar Association, *Report on the Future of Legal Services in the United States* (American Bar Association, 2016).

²⁸ "Mobile Apps" Wikipedia.com (accessed 24 August 2016).

²⁹ *Ibid.*

³⁰ *Ibid.*

³¹ "Web Application" Wikipedia.com (accessed 24 August 2016).

³² For a discussion of task-centricity as a core defining feature of a web-based app, see, for example, Ciprian Borodescu, "Web Sites vs. Web Apps: What the experts think", online:

<<https://www.visionmobile.com/blog/2013/07/web-sites-vs-web-apps-what-the-experts-think>>.

³³ The Information and Communications Technology Council, *The Application of Everything: Canada's Apps Economy Value Chain* (2014) at v.

³⁴ Catalyst, "Smartphone Behaviour in Canada and the Implications for Marketers in 2016," online:

<<http://catalyst.ca/2016-canadian-smartphone-behaviour/>>

³⁵ *Ibid.*

³⁶ *Ibid.*

³⁷ *Ibid.*

³⁸ Cabral, James E et al "Using Technology to Enhance Access to Justice" (2012) 26(1) Harv JL & Tech 241.

³⁹ Amy Salyzyn, "A New Lens: Reframing the Conversation about the Use of Video Conferencing in Civil Trials in Ontario" (2012) 50 Osgoode Hall LJ 429 at 431-32.

⁴⁰ Health apps are booming: earlier this year, there were 170,000 health apps available for download on the Apple and Android app stores, and there is significant growth in wearable technologies tracking personal health-related data (Stephen Armstrong, "What Happens to Data Gathered by Health and Wellness Apps?" (2016) BMJ 2016 at 1). Health apps include, for example, those that offer self-monitoring for diabetes and psychiatric diagnoses, exergaming, smoking cessation and alcohol addiction (including relapse prevention), daily living for patients with dementia, and basic triage for things like concussions by non-medical professionals (Maged N Boulos et al, "Mobile Medical and Health Apps: State of the Art, Concerns, Regulatory Control and Certification" (2014) Online J Public Health Informatics 5(3) at 4-5).

⁴¹ See, for example, an app designed by a Malaysian lawyer intended to assist citizens in creating basic legal documents: <<http://www.malaysiandigest.com/news/520308-mobile-app-to-increase-awareness-and-access-to-justice-among-malaysians.html>>; the "160 Girls App", intended to provide step by step advice about how a defilement investigation should proceed in Kenya: <<http://160girls.org/about/>>; and the Innovating Justice initiative of the Hague Institute for the Innovation of Law < <https://innovatingjustice.com/en/>>.

⁴² This is consistent with general trends in app development. The Information and Communications Technology Council, *The Application of Everything: Canada's Apps Economy Value Chain* (2014) at v reports that more than half (51%) of Canada's apps enterprises rely on personal/family funding to get started, 26% rely on funding from other business streams, 6% rely on venture capital, and 4% rely on public funding.

⁴³ LegalZoom, which launched 10 web-based products in 2001 that focused on estate planning, business formation, and intellectual property protection, has now grown to offer a plethora of online services, including narrowly tailored services like specialized estate planning to ensure that one's pets "are provided for when you're no longer able to care for are provided for when you're no longer able to care for them on your own." The immense size of LegalZoom is quickly captured in the fact that it has now served over 3.6 million customers (LegalZoom, "About Us", online: < <https://www.legalzoom.com/about-us>> and LegalZoom, "Pet Protection Agreement" <https://www.legalzoom.com/personal/estate-planning/pet-protection-agreement-overview.html>) For further background on LegalZoom, see *infra* and Benjamin H. Barton, *Glass Half Full: The Decline and Rebirth of the Legal Profession* (New York: Oxford University Press, 2015) at 88-97.

⁴⁴ See generally, Legal Services Corporation, online: <<http://www.lsc.gov/>> and, on the Corporation's increasing interest in technology, see Ronald S Flagg, "Access to Justice: Keeping America's Promise" (2015) 24 Kan JL & Pub Pol'y at 572 – 581.

⁴⁵ The Legal Services Corporation's 2012 national technology summit included 75 representatives of legal aid programs, courts, bar associations, government and business as well as technology experts, academics, and private practitioners. The summit's mandate was to explore "the potential of technology to move the US towards some form of effective assistance to 100 percent of persons otherwise unable to afford an attorney for dealing with essential civil legal needs." The Summit's five resultant technological strategies included "taking advantage of mobile technologies to reach persons more effectively" (Flagg, *supra* note 44 at 572 – 581).

⁴⁶ This specific description is taken from the webpage that describes the Californian version of the apps (<https://www.mobilejusticeca.org/fag/>). For a list of states in which the app is available, see American Civil Liberties Organization, "ACLU Apps to Record Police Conduct" (online: <https://www.aclu.org/feature/aclu-apps-record-police-conduct>)

⁴⁷ See, for example, Court Clerk Mobile Connect app (developed by the Clerk of Circuit Cook County and which makes accessible court-related information for users in Cook County. Users can search the court's electronic docket for civil and traffic cases, search the court call roster, get updated fee schedules and locate and contact Cook County court facilities; for further details, see: <https://itunes.apple.com/us/app/court-clerk-mobile-connect/id595694855?mt=8>); Ohio Sixth District Court of Appeals app (this app allows users to follow court decisions and view the court's oral argument calendar; they can also receive notifications when new decisions are released or the calendar is updated. All cases posted on the court website are searchable in the app; for further details, see: <https://itunes.apple.com/us/app/ohio-sixth-district-court/id1001442174?mt=8>); Supreme Court of Nevada Mobile App (this app provides users with access to the latest case information, decision and news from the Supreme Court of Nevada; users can also access past oral argument recordings and watch live streaming of oral arguments from the courtroom; for more details, see [http://nvcourts.gov/Supreme/Court Information/Supreme Court of Nevada Mobile App/](http://nvcourts.gov/Supreme/Court%20Information/Supreme%20Court%20of%20Nevada%20Mobile%20App/)).

⁴⁸ Legal Aid App (for more details, see: <http://www.legalaid.on.ca/en/getting/legalaidapp.asp>).

⁴⁹ Legal Health Check-up <https://www.legalhealthcheckup.ca/en/>. Legal health checks "are tools intended to help people identify and address legal problems....[and] have three main purposes: [1] to help people become aware that a problem has a legal aspect; [2] to encourage people with legal problems to get help from a legal professional, their local legal clinic, or trusted members of their community; and [3] to help community workers, other community intermediaries, lawyers or other legal professionals start conversations with clients about the law." (<http://www.plelearningexchange.ca/resources/legal-health-checks/>)

⁵⁰ For more information, see Simon Fodden, "CanLII to Introduce API" *Slaw.ca* (27 February 2013), online: <http://www.slaw.ca/2013/02/27/canlii-to-introduce-api/>; Simon Fodden, "CanLII Hackathon" (7 August 2013), online: <http://www.slaw.ca/2013/08/07/canlii-hackathon/>; and CanLII, "Welcome to the CanLII Developer Network!", online: <http://developer.canlii.org>.

⁵¹ The Canadian Bar Association, "The First-Ever Legal Innovation Startup Competition", online: <http://www.cbalegalconference.org/clc/pitch/>.

⁵² Ryerson University, Legal Innovation Zone, "A Call for Startups with Innovative Solutions that improve access to justice (A2J) in Ontario", online: <http://legalinnovationzone.ca/a2jchallenge/>.

⁵³ Benjamin Vandorpe, "JusticeTrans: Addressing Access to Justice Issues Through Technology", Winkler Institute for Dispute Resolution, Justice Innovation Blog, (21 January 2016) online: <http://winklerinstitute.ca/justicetrans-addressing-access-to-justice-issues-through-technology/>.

⁵⁴ Liam Britten, "Costly, frustrating court delays tackled with law students' app" *CBC News* 12 May 2016, online: <http://www.cbc.ca/news/canada/british-columbia/court-delay-app-1.3580285>.

⁵⁵ Georgetown Law, Curriculum Guide – Courses, "Technology, Innovation, and Law Practice: An Experiential Seminar", online: http://apps.law.georgetown.edu/curriculum/tab_courses.cfm?Status=Course&Detail=2090.

⁵⁶ Georgetown Law "2016 Iron Tech Lawyer: Linking Technology, Access to Justice" (29 April 2016), online: <https://www.law.georgetown.edu/news/web-stories/2016-iron-tech-lawyer-linking-technology-access-to-justice.cfm>.

⁵⁷ Legal Design Lab, online: <http://www.legaltechdesign.com/>.

⁵⁸ Legal RnD, The Center for Legal Services Innovation, online: <http://www.legalrnd.org>.

⁵⁹ For more information, see “Neota Logic – Who We Are”, online: <http://www.neotalogic.com/who-we-are/> “Neota Logic and Pro Bono”, online: <http://www.neotalogic.com/probono/>.

⁶⁰ Thanks are owed to Professor Tanina Rostain who suggested this helpful taxonomy of end-users.

⁶¹ StandIn (www.standin.is and <https://itunes.apple.com/us/app/standin/id972138344?ls=1&mt=8>).

⁶² iProBono (<https://itunes.apple.com/us/app/iprobono/id495613533>).

⁶³ See, for example, Rocket Matter (described as assisting with legal time and billing; <https://itunes.apple.com/ca/app/rocket-matter/id550477925?mt=8>); My Case (described as “designed for customers using MyCase’s web-based law practice management software”; <https://itunes.apple.com/ca/app/mycase/id480009836?mt=8>); DocketMinder (described as “an application which monitors changes to the Orleans Criminal Court Docket Master....[which] allows practitioners to stay informed about the latest activity in their cases; <https://loyolalawtech.org/projects/>); and Docket Alarm (described as “track[ing] court cases, send[ing] alerts of new litigation activity, and automat[ing] the checking of court dockets for your firm”; <https://www.goclio.com/features/integrations/docket-alarm/>).

⁶⁴ Ed Sohn, “The Forecast for Legal Analytics is Mostly Sunny” *Above the Law*, 18 May 2016, online: <http://abovethelaw.com/2016/05/alt-legal-the-forecast-for-legal-analytics-is-mostly-sunny/>.

⁶⁵ Lex Machina, “Legal Analytics Apps” online: <https://lexmachina.com/legal-analytics-apps/>.

⁶⁶ Loom Analytics, online: <http://www.loomanalytics.com>.

⁶⁷ Blue J Legal, online: <http://www.bluejlegal.com/>. It should be noted that at the time of writing this report, the developers indicated that this app was “in private beta (by invitation only) with major organizations, including government bodies, global accounting firms and leading law firms.”

⁶⁸ Beagle, online: www.beagle.ai.

⁶⁹ See, for example, Law Kick (connects individuals with lawyers based on the legal problem/ question the individual has and the price they are willing to pay; <https://lawkick.com>); BernieSez (users upload a photo of a traffic ticket and enter basic information (ie: offence code, city, state, ticket number), and lawyers connected to the app present competing offers to represent the user. Users compare offers and select their attorney of choice; <https://berniesez.com>) and Fixed (gives users a free estimate of the legal costs associated with challenging a traffic offence and the likelihood of their insurance costs increasing and, if required, will match the ticket with an attorney. The user then decides whether to accept the matched attorney; <https://techcrunch.com/2016/06/15/fixed-the-app-that-helps-you-fight-tickets-gets-acquired-by-a-law-firm/>).

⁷⁰ Legal Aid App (allows for people with legal issues to assess their financial eligibility for Legal Aid (partially subsidized legal representation) in Ontario; <http://www.legalaid.on.ca/en/getting/legalaidapp.asp>); National Legal Aid News (“provides news about legal aid and related programs around the states”; <http://ptla.org/pine-trees-legal-aid-apps>); Due Processr <http://dueprocessr.org/courtcal/> (This app allows users to determine their eligibility for indigent legal services in Massachusetts, and for criminal defendants to calculate their state prison sentences).

⁷¹ Notarize (described as providing an online notary service; mobile app allows individuals to notarize documents from their phone; notarize.com and <https://itunes.apple.com/us/app/notarize/id1022005141?ls=1&mt=8>).

⁷² JusticeTrans, online: <http://www.justicetrans.com>.

⁷³ See, for example, ExpungeMaryland.org – a web app created for people with criminal records in Maryland that aims to clarify criminal expungement by allowing users to fill a simple questionnaire to determine whether their case is vulnerable to being expunged (<http://www.expungemaryland.org/about>).

⁷⁴ Maryland Law Help App, online: <https://itunes.apple.com/us/app/maryland-law-help/id1023213394?ls=1&mt=8>).

⁷⁵ Small Claims Wizard, online: www.smallclaimswizard.com.

⁷⁶ Citizenshipworks, online: <https://www.citizenshipworks.org> (The app also “includes useful and unique features, including tools to help people prepare for citizenship tests (like reading and writing quizzes and touch flashcards), calculators to track savings, multimedia functionality (using audio to dictate phrases to be written in English), [and] legal assistance located near the user”; see: <https://itunes.apple.com/us/app/citizenshipworks/id666058919?mt=8>).

⁷⁷ Wevorce, online: <https://www.wevorce.com>.

⁷⁸ Equalyzer, online: <http://www.equalyzer.com>.

⁷⁹ See, for example, PlainSite (provides “non-lawyers easy to navigate access to the entire American legal system with access to public records from agencies, patent applications, corporate profiles and public federal and state case dockets. Non-public analytic data is also available”; <http://www.plainsite.org>)

⁸⁰ See, for example, *WestLaw Next* (<https://itunes.apple.com/ca/app/westlaw/id380675076?mt=8>) and *Lexis Advance* (<https://itunes.apple.com/us/app/lexis-advance/id409136268?mt=8>).

⁸¹ Rangefindr, online: <http://www.rangefindr.ca>.

⁸² LegalSwipe, online: <http://www.legalswipe.com>.

⁸³ HeatSeek, online: <http://heatseek.org/how-it-works/>

⁸⁴ *Ibid.*

⁸⁵ Jake Hertz, “PBN & JASA Collaborate on Innovative App to Help the Homebound” *Probono.net* (5 November 2014); online: <http://www.connectingjusticecommunities.com/jasa-and-pbn-team-up-to-relax-in-the-den/2014/11/>.

⁸⁶ See, for example, the Canadian apps *Jailbird*, which assists criminal lawyers in comparing proposed sentences, is listed at \$3.99 at the iTunes Store (<https://itunes.apple.com/ca/app/jailbird-ios/id1033763662?mt=8>) and *Rangerfindr*, another criminal sentencing tool for lawyers and judges costs \$79/month to access (<https://app.rangefindr.ca/signup>).

⁸⁷ Paul Krebs and Dustin Duncan, “Health App Use Among US Mobile Phone Owners: A National Survey,” 2015 *J of Medical Internet Research* 3(4) at 8.

⁸⁸ The origins of the term “personal plight” in relation to legal services is traced to a 1978 article by John Heinz and Edward Laumann (John P Heinz & Edward O Laumann, “The Legal Profession: Client Interests, Professional Roles, and Social Hierarchies” (1978) *Mich L Rev* 1111). For further discussion, see also, Noel Semple, “Personal Plight Legal Practice and Tomorrow’s Lawyers” (2014) 39 *J Leg Prof* 25.

⁸⁹ LegalZoom, “Last Will and Testament Pricing”, online: <https://www.legalzoom.com/personal/estate-planning/last-will-and-testament-pricing.html>.

⁹⁰ For a helpful summary of this discussion, see, for example, Jane Bailey, Jacquelyn Burkell & Graham Reynolds, “Access to Justice for All: Towards an “Expansive Vision” of Justice and Technology” (2013) 31 *Windsor YB Access Just* 181.

⁹¹ *Ibid* at 195.

⁹² Canadian Bar Association, *supra* note 1 at 34.

⁹³ Richard Zorza, “Some Reflections on Long-Term Lessons and Implications of the Access to Justice Technology Bill of Rights” (2004) 79 *Wash L Rev* at 393.

⁹⁴ Richard Zorza, “Multi-Faceted Mobile App for Citizenship” *Richard Zorza’s Access to Justice Blog* (January 22, 2013), online: Access to Justice <https://accesstojustice.net/2013/01/22/multi-faceted-mobile-app-for-citizenship/>.

⁹⁵ Raymond H Brescia *et al*, “Embracing Disruption: How Technological Change in the Delivery of Legal Services Can Improve Access to Justice” (2014-2015) 78 *Alb L Rev* 553 at 577 at 20. See also Milan Markovic, “Juking Access to Justice to Deregulate the Legal Market” (2016) 29 *Geo J Leg Ethics* 63.

⁹⁶ Joe Dysart, “Justice in Your Palm” *ABA J* 101 (April 2015) at 57.

⁹⁷ Interview with Christien Levien, March 2015, notes on file with author.

⁹⁸ William B Lober and Janine L Flowers, “Consumer Empowerment in Health Care Amid the Internet and Social Media” 2011 *Seminars in Oncology Nursing* 27(3): 172. The cultural shift is so great that Lober and Flowers at 176 note that patients have now moved, beyond searching for information, to sharing information about their health journeys on social media and on peer-to-peer platforms

⁹⁹ Gul Seckin *et al*, “Being an Informed Consumer of Health Information and Assessment of Electronic Health Literacy in a National Sample of Internet Users: Validity and Reliability of the e-HLS Instrument” (2016) *J of Medical Internet Research* 18(7) at 2.

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- ¹⁰⁰ The issue of access to the internet and differential access among marginalized populations is essential to consider and is addressed in the Risks section that follow.
- ¹⁰¹ See Ronald S Flagg, “Access to Justice: Keeping America’s Promise” (2015) 24 Kan JL & Pub Pol’y 572.
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Appendix B: Survey of Law Societies' Approaches to A2J Apps

The following survey was sent to all provincial and territorial law societies in Canada.

Questions

1. Is the Law Society aware of mobile and web-based apps in your jurisdiction that purport facilitate access to justice by providing, for example, legal information, legal advice, document drafting services or evidence collection functions?
2. If so, does the Law Society see any ethical risks relating to the use of such apps?
3. Has the Law Society received any complaints or otherwise initiated any investigations in relation to such apps in your jurisdiction?
4. Does the Law Society have any existing guidance or feedback relating to the development and/or use of such apps?
5. Is there anything else relating to this topic that the Law Society would like to add that is not covered by the above questions?

Appendix C: Canadian Apps

* please see limitations noted at pages 9-10, above *

CODES FOR "FUNCTION" COLUMN

- (1) legal information
- (2) administrative information (for example, court information or lawyer contact information)
- (3) document or form creation
- (4) evidence collection
- (5) legal advice
- (6) self-help
- (7) other

App	Developer/Funder/Seller	Intended User(s)	Type of Law	Description	Free	Function
Attorned http://www.legalinnovationz.com.ca/team/attorned/	Jonathan Di Feo	People looking for legal advice and lawyers needing legal support	All	This app services both clients and lawyers. Clients can post their issues online in search of legal representation and lawyers can post work that can be bid on by other lawyers.	Price unlisted	2
Bardal Factors http://www.bardalfactors.ca	PGYA Consulting	For the public and lawyers	Employment	This app "show[s] you the results of cases where Canadian courts apply the Bardal Factors." [The Bardal factors are relevant in determining how much notice or pay in lieu of notice an employer must give to an employee]	✓	1, 6
BC Laws API http://www.bclaws.ca/civix/template/complete/api/index.html	Province of British Columbia	People conducting legal research	All	This web app is an electronic library providing free and public access to the laws of BC. Users experience direct and integrated access to all of the provincial laws and regulations in a highly structured data format all under an open government licence.	✓	1
Beagle www.beagle.ai	Cian O'Sullivan	Contracting parties	Contract	This is a contract review app. Using artificial intelligence, Beagle reads a contract, highlights the important information, and makes it easy for teams to review their contractual documents.	Prices available upon request	6, 7

Blue J Legal www.bluejlegal.com <i>(currently in private beta)</i>	Benjamin Alare, Brett Jansen, Anthony Niblett, and Albert Yoon	People conducting legal research	Employment, immigration, tax, commercial, real estate	This web software analyzes fact situations using deep-learning and provides answers supported by relevant case law and materials. The system also generates detailed explanations and suggestions.	N/A	1, 5, 6
Canadian Law Apps http://www.canadianlawsite.ca/Law-Apps.htm	Earl Sands	People conducting legal research	All	This app offers access to mobile versions of Canadian legislation, including versions of the Canadian Charter and Bill of Rights and Federal Acts (e.g. the Divorce Act and PIPEDA).	\$2.99- \$9.99 / Act	1
CanLII www.canlii.org/en	Lexum	Legal researchers	All	This app allows users to search and find Canadian case law and jurisprudence for free.	✓	1
Civil Resolution Tribunal www.civilresolutionbc.ca	Sharon Salter (Chair of Tribunal); tribunal itself created by provincial legislation	Self-represented individuals	Tort, civil disputes, commercial, contract	This app is an online dispute resolution platform (available 24/7 through mobile or website) in BC for resolving small claims and strata property (condo) disputes.	\$25- \$150	6
Constitution of Canada https://itunes.apple.com/ca/app/constitution-of-canada/id474339291?mt=8	CSC Hildebrand GmbH	Anyone looking to reference the Constitution	Constitutional law	This app allows for quick reference of the Canadian Constitution.	✓	1
Cop Watch https://itunes.apple.com/ca/app/cop-watch-toronto/id757572626?mt=8	Pelau	People who have been stopped by the police	Criminal	This app allows users to video record police interactions and will automatically upload the videos to Youtube. The app also provides reference material concerning a user's right to obtain video footage.	✓	1, 4

CourtsideEDX www.edxontario.com	Michael Tweyman & Arin Klug	Lawyers and self-represented individuals in discovery	Litigation	This app allows for the electronic service of documents in civil litigation.	From free to up to \$15 /mo	7
EasyBOA http://www.legalinnovationzone.ca/team/blue-cloud/	Asim Iqbal	Law Firms	All	This app helps law firms save time and money by producing automated Books of Authorities (BOA).	Price unlisted	3
FiredWithoutCause (BC) http://www.firedwithoutcause.com/	Paradigm Shift Solutions Inc.	People who have allegedly been improperly fired	Employment, labour, tort, contract	This is an online system that draws from thousands of Canadian court cases to help a claimant understand whether their employer treated them fairly. The app also has a severance pay calculator.	✓	1, 5, 6
Jailbird https://itunes.apple.com/ca/app/jailbird-ios/id1033763662?mt=8	Sacevich Law Apps	Criminal lawyers	Criminal	This app helps Canadian criminal lawyers compare total proposed sentences in both adult and youth matters.	\$3.99	1, 7
Justice Trans www.justicetrans.com	Benjamin Vandorpe (Founder)	Legal researchers interested in transgender rights	Human rights, health, employment/labour, criminal	This app and website offers legal information about transgender rights in the Canadian context.	✓	1
Kabuk Law www.kabuklaw.com/en-ca	Asha Soares, Lucas Litwiniuk, and Babak Bagherizade	People looking for legal representation	All	This app connects users with local legal practitioners. Users can find representation based on their location, review the lawyer's profile and request a free consultation in-app.	✓	2
Law Scout www.lawscout.ca	Derek Hopfner, Shane Murphy and Travis Houlette	Small business owners and entrepreneurs seeking legal advice	Business, Corporate Commercial, IP, Tax, Regulatory, Contract	This app connects small businesses to lawyers who work online for fixed legal fees.	\$675 - \$1100 (dependent on service or product)	3, 5
LawyerLinx https://www.lawyerlinx.com	LawyerLinx Inc.	People looking for	All	Described as "a legal marketplace connecting	✓	2

awyerlinx.com		legal representation		individuals and businesses with quality, vetted lawyers and streamlining on demand legal services"		
LawyerLocate Mobile App https://itunes.apple.com/ca/app/lawyerlocate-mobile-app/id465936835?mt=8	LawyerLocate.ca Inc	People looking for legal representation	All	This app is a directory of lawyers searchable by practice area and location.	✓	2
Legal Aid App http://www.legalaid.on.ca/en/getting/legalaidapp.asp	Legal Aid Ontario	Low income persons seeking legal representation	Litigation	This app allows for people with legal issues to assess their financial eligibility for Legal Aid (partially subsidized legal representation) in Ontario.	✓	2
Legal Health Check-up https://www.legalhealthcheckup.ca/en/	Halton Community Legal Services	Low-income individuals	Multiple	This is an online "legal health check-up" tool to help people who are living in poverty identify potential legal problems and get help.	✓	1, 6
Legal Swipe www.legalswipe.com	Christien Levien (Founder) and LegalSwipe Inc (Developer)	Members of public who have been stopped by the police	Human rights, constitutional, criminal, civil liberty	This app informs people of their rights during interactions with the police.	✓	1, 4
LegalAve http://www.legalave.ca/about-legalave	Alberta Legal Information Society	Members of the public and service providers	Multiple	This app provides legal information to the public. It also includes "guided pathways" which are described as "a step-by-step approach that points users to relevant legal information that applies to them based on their answers to a series of questions."	✓	1,6
Loom Analytics http://www.loomanalytics.com/	Mona Datt (president and co-founder)	Litigators	Litigation	This app "use[s] a combination of machine learning and legal analysis to classify case law along multiple vectors allowing for statistical analysis... [to allow users to] see how a particular judge has ruled	\$25 - \$50/month	7

				on specific motions or claims at trial, what kinds of cases make it to court most frequently, the average decision turnaround time, and the average cost and damage awards broken down by case type.”		
LSUC Ontario Reports App https://play.google.com/store/apps/details?id=com.texterity.android.OntarioReports&hl=en	LSUC, LexisNexus and Gtxcel (Developer)	Lawyers, legal academics and law students looking for legal news	Ontario case law	This online app is a legal magazine that hosts leading Ontario case law. The magazine issues can be accessed offline and report from all Ontario court levels.	✓	1
Map your property www.mapyourproperty.com	Devin Tu (CEO)	Property owners, real estate lawyers	Property	This web solution performs mapping and analytics for the land development and real estate industry. The online tool streamlines the due diligence process for any properties with development potential. It also alerts users of any regulations or restrictions associated with a property and compiles them into a full report.	\$495 - \$2095 /mo	1, 7
My Legal Briefcase www.mylegalbriefcase.com	Monica Goyal	Members of the public	Multiple	This app helps “ordinary people to handle their cases with or without a lawyer” and provides assistance “in preparing simple legal documents”	✓	1, 3, 6
MyLawBC www.mylawbc.com	Legal Services Society, BC	Low-income individuals in British Columbia	Family law	This app provides “guided pathways” to help individuals resolve family law matters; information is also provided regarding available resources for legal advice.	✓	1, 2, 6
Nimonik www.nimonik.com	Nimonik inc.	Employers, in-house lawyers, auditors	Employment/labour, tort, contract, regulatory	This solution offers web and mobile apps for environmental health, safety, and quality managers. The apps host guides with updates to regulatory requirements,	✓	1, 4, 6

				industry best practices and international standards along, and software to monitor and report on compliance performance (all available in-app).		
Not Your Baby https://play.google.com/store/apps/details?id=com.metrac.notyourbaby	Metropolitan Action Committee on Violence Against Women and Children (METRAC)	Women, victims of harassment/assault	Criminal	This app is an interactive grid that guides users to select perpetrators of harassment and details of when and how the harassment occurs. The app then recommends a response to the situation based on submissions from other users. It also includes facts and personal stories of harassment as well as resources for those seeking help.	✓	6, 7
Ontario Small Claims Wizard www.smallclaimswizard.com (currently in beta)	Randy Al and Selena Lucien (Founders)	Self-represented litigants	Tort, Civil disputes, Commercial, Contract	This app guides individuals step by step through small claims processes for Ontario courts. It advises users on which documents they need to file for their legal issue, and allows them to complete forms for court processes online.	N/A	1, 3, 6
Rangefindr http://www.rangefindr.ca	No developer listed	Criminal lawyers	Criminal	This legal research tool parses through statute and case law quickly to provide criminal lawyers with sentencing ranges. Lawyers input their factual matrix and are provided with a sentencing range based on case law and statute.	\$79.00 + HST / month	1
SOQUIJ http://soquij.qc.ca	Ministry of Justice of Quebec	Legal researchers	All	This app publishes decisions from judicial and administrative tribunals in Quebec	✓	1
StandIn www.standin.is	Acme Law Corp.	Lawyers who cannot appear in court	Litigation	This app is a network of lawyers that uses location services to connect counsel who are available to appear in court for one another.	✓	7
Summons App http://inside.tru.ca/2016/05/	TRU Law Students: Servesh Jeet,	Lawyers and individuals who have	Litigation	This app acts as an interface between court registries, the public, and lawyers by	✓	2

12/law-app-could-revolutionize-court-scheduling/ <i>* currently in demo mode *</i>	Nikita Shirazian, Megan Sahlstrom, Nawel Benrabah, Harman Bains and Houtan Sanandaji	ongoing court proceedings		allowing court administrators to provide live updates of court schedules.		
Support Information Exchange (SIX) http://www.supportinformationexchange.com/home.html	Support Information Exchange Inc,	Family law lawyers and divorcees	Family	This app guides users in the exchange of financial records in divorce cases.	\$19.95 or \$39.95 / year	1, 6, 7
Thistoo www.thistoo.co	Miralaw Inc.	Self represented litigants involved in family law matters	Family law	This app is developed for self-represented litigants in divorce cases. It provides online access to resources, tools, and document templates.	\$9.99-\$199.99	1, 3, 5, 6
WiseLii www.wiselaw.net/wiselii.html	Garry Wise	Legal researchers	All	This app aids legal researchers. It hosts legal guides, case law and legislation.	✓	1
Workplace BC OHS Regulation https://itunes.apple.com/ca/app/worksafe-bc-ohs-regulation/id447269458?mt=8	WorkaSafe BC.com	Lawyers, Employees, Employers in British Columbia	Labour/employment, tort	This app allows users to search and browse OHS Regulation, Policies, Guidelines and WCB Standards. (Available for use offline).	✓	1

Appendix D: American Apps

** please see above-noted limitations at page 9 and 10 of this Report **

CODES FOR "FUNCTION" COLUMN BELOW

- (1) legal information
- (2) administrative information (for example, court information or lawyer contact information)
- (3) document or form creation
- (4) evidence collection
- (5) legal advice
- (6) self-help
- (7) other

App	Developer(s)/Founders/Sellers	Intended User(s)	Type of Law	Description	Free	Function(s)
Access Family Law https://www.accessfamilylaw.com	Lauren Weston and Roger Tomlinson	Divorcees	Family	This app guides parties through a three step process to fill and file divorce documents.	\$200 (divorce package)	3, 6
ACLU of Missouri Mobile Justice 2.0 https://www.aclu-mo.org/your-rights/mobile-justice/	American Civil Liberties Union & Quadrant 2, Inc. (developer)	People who have been stopped by the police	Criminal	This app is designed for filming encounters with police officers. The videos are securely streamed to the American Civil Liberties Union of the State and cannot be edited and/ or destroyed. The app also includes "Know Your Rights" guides produced by the ACLU of the State.	✓	1, 4, 6
AdviseHub advisehub.com	Pal Natarajan and Sanjay Yadgirkar	People seeking immigration to the US	Immigration	The solution connects users with legal advisors who can assist them through immigration processes.	\$50-140 (dependent on phone call length)	2, 3, 5
Air Help https://www.airhelp.com/en/	Henrik Zillmer	Travellers	Contract	This app lets users know about their rights when their flight has been cancelled, overbooked or delayed, and then assists them in producing the necessary documents to be compensated	Charges a 25% administrative fee	1, 3, 6

AltLegal https://www.altlegal.com	AltLegal Inc.	Start-ups and Businesses wanting legal help	Commercial, Corporate	This app allows “businesses and start-ups to describe their legal issue in plain English” on the web app and can be “immediately connected to a database of vetted lawyers who can help with that particular legal issue”. The app “sorts the issue and connects the user to expert layers”. “The business and lawyer can then work together through the app’s workflow tools and the business can choose to pay the lawyer” through the app’s platform. https://www.altlegal.com	✓	1, 2, 5
ArbiClaims http://arbiclaims.com	Developer not located	Disputing parties	All	Users are connected with qualified arbitrators online who produce a binding decision.	\$79-159/ party	6
Arrest SOS arrestsos.com	Developer not located	People being arrested	Criminal	The app leads users through the jail release process by connecting them with a designated attorney or bail bond agent based on their geolocation. The app determines the location of the user and the designated attorney or bail bond agent commences the user’s bail process before they are even booked.	✓	2
Ask a Lawyer : Legal Help https://play.google.com/store/apps/details?id=com.absmallbusinessmarketing.askalawyer&hl=en	AB Mobile Apps LLC	People with legal questions	All	This service provides advice and information to users’ legal questions. Users ask their question in-app and receive free legal advice via email.	✓	1, 5
Attorney Proz http://www.mobogenie.com/download-attorney-proz-lawyer-search-1036906.html	Pear Web ®	People looking for lawyers	All	This app lists lawyers working in the area of the user based on location, who have paid to be listed on the app.	✓	2
Avoo Advisor https://www.avoo.com/advisor	Avoo	People wanting legal advice/ counsel	All	This app connects customers with attorneys based on the legal problem and the attorney’s specialization for 15-minute legal consultations.	\$39.00	2, 5

BernieSez https://berniesez.com	Terence McNally & James Young	People charged with traffic violations	Criminal (traffic)	Users upload a photo of a traffic ticket and enter basic information (ie: offence code, city, state, ticket number), and lawyers connected to the app present competing offers to represent the user. Users compare offers and select their attorney of choice.	√	2
Bloomberg Law http://www.bna.com/bloomberglaw/app	Bloomberg BNA	Legal professionals conducting legal research	All	This app “delivers news and analysis [for lawyers] to stay on top of the developments impacting [their] work”. Personalized updates can be created. Also users can receive the latest Bloomberg Law alerts for legal and news searches and easily track dockets, opinions or bills in their interest area. http://www.bna.com/bloomberglaw/app	√	1
BlueLine https://blueline.blue	TJC Automation Inc	People conducting legal research	All	This app is a desktop-based program “designed for lawyers to check citations, quotations and pincites”. The app “provides lawyers with a mark up of their documents and connects them with a significant body of free caselaw”. https://blueline.blue	√ (60 day free trial)	1, 7
Bluetree Legal Connect http://www.bluetreelegal.com/	Developer not located	Vietnamese speaking users who want to file for bankruptcy	Bankruptcy	Vietnamese speaking users are connected to attorneys after filling out personal questionnaires. The app then aids the user and attorney in scheduling a meeting and grants the users a free 30 min consultation.	√	2
Bridge US http://www.bridge.us	Romish Badani and Forrest Blount	People seeking immigration to the US	Immigration	This app connects users with immigration attorneys who assist users in completing documents and compiling the necessary information.	Prices available upon request	1, 2, 3
Cake https://www.iointcake.com/welcome/	Cake Inc	Individuals	Health	This web app allows users to discover end of life preferences and store them securely. Users produce profiles of their end of life wishes with a coach who guides them through planning resources.	\$14.99 / mo or \$119.99 / session	1, 7

CameraV https://play.google.com/store/apps/details?id=org.witness.informacam.app&hl=en	The Guardian Project	People wanting to collect evidence on their mobile device	All	This app allows users “to capture and share verifiable photos and video proof on a smartphone or tablet while keeping this information secure and private”. https://play.google.com/store/apps/details?id=org.witness.informacam.app&hl=en	✓	4
Casetext https://casetext.com	Jake Heller (Founder and CEO) Laura Safdie (COO and General Counsel) Pablo Arredondo (VP Legal Research)	People conducting legal research	All	This app “consolidates user-generated annotations of caselaw, linking it to other sources and upvoting useful sources”. “Contributors are credited for their work and they receive reputation points based on how many upvotes or downvotes they receive. Additionally, the app hosts a feature that allows users to follow cases of interest in a simple format”. https://casetext.com	✓	1
Cicayda https://cicayda.com	Cicayda LLC	People looking to review and share legal documents online	All	This is a web-based app focused on eDiscovery. The platform allows clients to review documents with advanced text search, relationship analytics via natural language processing, early case assessment, discovery production analyzer, ediscovery budgeting module and a fast search engine.	Prices available upon request	1, 4, 6
CitizenshipWorks https://www.citizenshipworks.org https://itunes.apple.com/us/app/citizenshipworks/id666058919?mt=8	Immigration Advocates Network, Immigrant Legal Resource Centre, Pro Bono Net,	US citizenship applicants	Immigration	This app guides users through the steps of a citizenship application. If users face any problems they are connected with legal help for free. Also “includes useful and unique features, including tools to help people prepare for citizenship tests (like reading and writing quizzes and touch flashcards), calculators to track savings, multimedia functionality (using audio to dictate phrases to be written in English), [and] legal assistance located near the user”. https://itunes.apple.com/us/app/citizenshipworks/id666058919?mt=8	✓	2, 3, 5, 6

Clearpath http://www.myclearpath.com	Felice Gorordo (CEO) and Mitch Grimes (Chief Product Officer)	Potential immigrants	Immigration	This program allows immigrants to apply to fill and file naturalization forms and Deferred Action for Childhood Arrivals documents online. Users choose the form they would like to complete, can browse FAQ sections, and are instructed on how to print and file the documents for government review. The documents are reviewed for common mistakes.	\$100 – 200 / form	1, 3, 6
Clerky https://www.clerky.com	Chris Field (co-founder) Darby L. Wong (co-founder and CEO)	Start-ups needing to complete legal documents	Corporate, Patent, Copyright, Commercial, Contract, & Tech	This app is aimed at start-up businesses. The app helps them produce necessary legal documentation (e.g. incorporation, employee documents, NDAs, etc.) with a forms library, automatic document assembly, online signature capabilities, etc.	\$29-\$299 (depending on service)	1, 3
Collateral Consequences Calculator http://calculator.law.columbia.edu	Columbia Law School	Legal experts	Criminal	This app was developed for judges, legal academics and lawyers. "It can provide a preliminary overview of the collateral consequences associated with sections of the New York State Penal Law." http://calculator.law.columbia.edu	✓	1
Concord http://www.concordnow.com	Matt Lhoumeau and Florian Parain	Contracting parties	Contract	This platform features e-signature, online collaborative editing, deadline alerts, contract management and contract compliance tools.	\$24.99 – 49.99 / mo	3, 7
Contract Cloud http://www.contractcloud.com	Contract Cloud, Inc.	Contracting parties	Contract	This program allows contracting parties to use video to finalize contracts instead of physical or e-signatures. "Video is the most effective way to improve... witness contractual understanding". http://www.contractcloud.com	N/A	6, 7
ContractRoom http://contractroom.com	Emil Stefanutti and Peter Thomson	Contracting parties	Contract	This application allows users to produce and collaborate on multiparty contracts. Users can "define collaborative editing rules and deploy pre-approved legal content to expedite agreement-building and	\$9 / user / mo	3, 7

				approvals” and execute contracts online using a third party e-signature tool. http://contractroom.com/#features		
Corporize http://corporize.com	Developer not located	Business and individuals seeking corporate law advice	Corporate	This app is an international legal directory that connects clients with corporate lawyers.	√ (charges for premium version)	2
Counsl https://www.counsl.co	Counsl Co	Lawyers	Contract	This program integrates lawyer generated forms into e-documents and collects client information and populates legal documents automatically.	Prices available upon request (dependent on firm size)	3, 7
CourtListener https://www.courtlistener.com	Sponsored by Free Law Project (non-profit) Brian W Carver (Co Founder) Michael Lissner (Co Founder and Lead Developer)	People wanting to follow federal and state judgements	All	This app is a free database of federal and state court opinions. It also allows users to create case alerts to track developments on a given case.	√	1
CrowdLaw https://www.crowdlaw.net	CrowdLaw	People in need of financial assistance to obtain lawyers	All	This platform is a “digital fundraising solution that empower[s]” community members to support clients in need of financial support to secure legal help. https://www.crowdlaw.net	√	7

DC Affordable Law Firm – Intake & Eligibility Advisor https://applications.neotalogic.com/a/alf-intake	Students at Georgetown University Law Centre, powered by NeotaLogic Inc	Low income individuals in DC	All	This program assesses whether individuals in DC qualify for free legal services (based on income) and then connects them with lawyers offering these services.	√	2, 7
Debt & Eviction Navigator (DEN) https://applications.neotalogic.com/a/jasa-den	Students at Georgetown University Law Centre, powered by NeotaLogic Inc	People with a landlord-tenant or consumer debt dispute	Landlord-tenant, Consumer Debt	This web app enables users to figure out if they have a landlord tenant issue or a consumer debt issue that should be addressed. It also provides users with resources so that they can learn more about the issue and steps they can take themselves, and finally, connects users with legal service providers who may be able to help them take action.	√	1, 2, 6
Disaster Assistance & Recovery (DART) https://applications.neotalogic.com/a/dart	Students at Georgetown University Law Centre, powered by NeotaLogic Inc	People who experience natural disaster	All	This application assists users in connecting with disaster assistance resources, assesses whether users are eligible for grants and loans and guides them on how to apply for financial assistance.	√	1, 2, 7
Dlaw https://play.google.com/store/apps/details?id=com.bigtwit.dlaw.main&hl=en	Appsoft Technologies	Legal experts	All	This app is a legal reference tool for lawyers, law students and professionals. It includes federal rules of civil procedure, evidence, appellate procedure, criminal procedure, bankruptcy procedure and the US constitution.	√	1
Docasaurus http://www.docasaurus.com	Developer not located	Corporate lawyers	Contract	This is a document automation software that allows users to upload their own form documents and turn them into templates.	Prices available upon request (dependent on project size)	3, 6, 7

Docket Alarm https://www.docketalarm.com	Michael Sander (Founder and CEO)	People involving in matters before a Court	All	This app is a "litigation activity alert service that notifies the user whenever a change happens to a court case that they are following". "The service brings all active cases to one place where the user will receive notices when filings happens, when deadlines are approaching or when court appearances have been moved". https://www.goclio.com/features/integrations/docket-alarm/	\$99/month (flat fee) or pay-as-you go.	2
DocketMinder https://loyolawtech.org/docketminder/about	Nicholas Zotti Michael Tassin Loyola Law Clinic	Criminal lawyers	Criminal	This app is designed for attorneys handling criminal cases in New Orleans. After the attorney inputs the client's case number, the app checks the Orleans Parish's Docket Master daily for updates to the case.	✓	2
Document It! https://itunes.apple.com/us/app/document-it/id669059716?mt=8	National Family Justice Center Alliance	Victims of strangulation	All	The application is "designed to help women document incidents of strangulation and references of an event". Users can "gather as much detail as possible using a mobile application and submit evidence to law enforcement officers or to an attorney with a click of a button". https://itunes.apple.com/us/app/document-it/id669059716?mt=8	\$1.99	4, 6
Document the Abuse https://itunes.apple.com/us/app/ieaa/id538084573?mt=8	Susan Murphy Milano (creator), Allen Corporation of America, Inc (seller)	Victims of domestic violence	Criminal	This app "empowers those who have experienced intimate partner violence". The app provides users "with a step-by-step method to create and record their Evidence Abuse Affidavit using an iPad or iPhone". The app "walks potential victims through the process of creating their own video testimony and then securely time stamps the video to prove its existence". https://itunes.apple.com/us/app/ieaa/id538084573?mt=8	\$9.99	4, 6

DOL Timesheet https://www.dol.gov/general/apps/timesheet	US Department of Labour	Employees	Labour & Employment	This app is “a timesheet to record the hours that you work and calculate the amount you may be owed by your employer. It also includes overtime pay calculations at a rate of 1.5 the regular rate of pay for all hours worked over 40 in a workweek”. (Does not include tips, commissions, bonuses, deductions, holiday pay, pay for weekends, shift differentials, or pay for regular days of rest). The app is available in English and Spanish. https://www.dol.gov/general/apps/timesheet	√	4, 6
Doxpop https://www.doxpop.com/prod/	Doxpop LLC	People conducting legal research in Indiana	All	This app provides access to “over 25,244,159 cases from 348 courts in 88 Indiana counties”. https://www.doxpop.com/prod/	√	1
DraftLaw https://www.draftlaw.com (appears to currently be in beta)	DraftLaw, LLC	Litigators	All	This app assists lawyers in drafting litigation papers. The app automatically formats briefs to be compliant with court rules and generates tables of contents and authorities.	√	3
Due Processr http://dueprocessr.org/courtcal/	David Zvenyach, William Li & David Colarusso	People wanting to determine their eligibility for indigent legal services People wanting to calculate state prison sentences for criminal offences	Criminal	This app allows users to determine their eligibility for indigent legal services in Massachusetts, and for criminal defendants to calculate their state prison sentences.	√	1, 6
EasyNDA https://www.easynda.com/#3rdPage	EasyNDA Inc.	Contracting Parties	Contract	This app allows users to draft, negotiate and sign non disclosure agreements online.	\$4 - \$79/month	3, 6

Equalyzer http://www.equalyzer.com	Sam Owens & Freeman LLC	People wanting to file a discrimination claim	Civil	This app allows users to build a discrimination report that is submitted to a Civil Rights attorney. Users input contact information and fill a questionnaire about their experience being discriminated against. They then record a video of their experience that is sent to an attorney and reviewed.	✓	1, 2, 3, 4, 6
eRegulations http://www.consumerfinance.gov/eregulations/	Consumer Financial Protection Bureau	People researching for federal laws	All	This app is a public domain project that seeks to make federal regulations easy to understand and navigate.	✓	1
Everplans https://www.everplans.com/#/?k=7skgls	Beyondly, Inc	Individuals	Wills and Estates, Family, Health	This web app allows users to produce and archive wills, trusts, insurance policies, health and medial information, Advance Directives and DNRs, final wishes and funeral preferences. Users receive guidance on how to complete each form, along with resources and checklists, and each document can be shared securely.	✓	3
Evidpredicates https://itunes.apple.com/us/app/evidpredicates/id390360684?mt=8	Anthony Shorter	Individuals engaged in litigation.	Litigation (Evidence)	This app is a reference guide for courtroom evidentiary foundations. Users can “review predicates commonly used in getting evidence admitted by laying the proper foundation”. https://itunes.apple.com/us/app/evidpredicates/id390360684?mt=8	\$1.99	1, 6
ExpertBids https://expertbids.com	Developer not located	People looking for legal representation	All	This site connects users with attorneys based on price, experience, practice area and location. The program is also a platform for communication between the lawyer and client. Clients can also rate their experience with the lawyer through the program, which is available to other potential clients.	✓	2

ExpungeMaryland.org http://www.expungemaryland.org/about	Advocates for Children and Youth Maryland Office of the Public Defender Cathy Deng (developer)	People with criminal records	Criminal	This is an app created for people with criminal records in Maryland. The app aims to clarify criminal expungement. It allows users to fill a simple questionnaire to determine whether their case is expungeable.	√	1, 6
Expungement-Generator https://www.expungementgenerator.org/	Community Legal Services, Inc (Philadelphia)	People with criminal records	Criminal	This app is a tool that allows non-legal users to automatically draft expungement petitions.	√	1, 3, 6
Expungement.io http://www.expunge.io	Cathy Deng (developer) Mikva Juvenile Justice Council (Chicago) Knight Foundation	People with juvenile records	Criminal	This app is a resource for people with juvenile records in Illinois. Users can determine whether they are eligible to have their juvenile records expunged, and apply for juvenile expungement in-app.	√	1, 3, 6
EzVsa http://ezvsa.com	ConsultAdd Inc	Potential immigrants to the US	Immigration	This app assists potential immigrants compile necessary documents and complete visa applications. Also services available for lawyers.	√ (fees associated with lawyer services)	2, 3
Fair Document http://www.fairdocument.com	Jason Brewster (Chief Executive)	Lawyers	All	This service “provides solutions for virtualizing legal teams, handling online intake and tracking client activity”. http://www.fairdocument.com	Prices available upon request (based on service required)	7
FindACase http://findacase.com	VersusLaw	People researching the law	All	This app provides free access to federal and state cases, specifically targeted at the general public to help lay users understand a legal issue before they consult an attorney.	√ (\$7.95 if want to access “complete	1, 6

					case", including docket number, footnotes, etc.	
Fixed https://techcrunch.com/2016/06/15/fixed-the-app-that-helps-you-fight-tickets-gets-acquired-by-a-law-firm/	DJ Burdick and David Hegarty	People charged with traffic violations	Traffic offenses	Gives users a free estimate of the legal costs associated with challenging a traffic offence and the likelihood of their insurance costs increasing and, if required, will match the ticket with an attorney. The user then decides whether to accept the matched attorney.	√	2, 6
Force For Good http://www.publiccounsel.org/pages/?id=0053	Public Counsel Law Center	Lawyers seeking pro bono files Clients seeking representation	All	This app connects Public Counsel representatives (pro bono lawyers) with clients. Users can request legal aid through the app, lawyers can volunteer through the app and pick up cases and can stay connected with cases they are already working on by building reports.	√	2
Foreclosure Guide http://www.empirejustice.org/issue-areas/consumer/mortgage-lending--foreclosure-prevention/foreclosure-guide.html	Empire Justice Centre College of Computing and Information (University of Albany) & Government Law Center at Albany Law School	People potentially facing foreclosure	Real Estate	This app is a guide designed to empower homeowners with knowledge of the mortgage foreclosure process so they can do their best to prevent the loss of their home through foreclosure. The tool provides information about the process and guides homeowners through the steps that they must take to defend themselves.	√	1, 6
Hands Up App http://www.handsuptheapp.com	Duncan Kirkwood (creator)	People stopped by the police	Criminal	This app permits video and audio recording of encounters with law enforcement. Once pulled over by a police officer, the app is to be turned on, engaging the front facing camera. The app records while the screen is black to protect users from police that make take or destroy the phone. The app then uses a GPS feature and will geotag the videos. The app will then save videos every	\$1.17	1, 4, 6, 7

				two minutes of recording to Youtube and Dropbox, and will send the users' emergency contact a notification that a video has been uploaded.		
Heat Seek http://heatseek.org	See, here, for list of core team members (http://heatseek.org/team/)	Tenants	Landlord/ Tenant	This app allows users to install a Heat Seek temperature sensor in their dwelling which sends information to the app. The app will notify users when heating code violations occur and if there are recurring patterns of abuse.	√	4
I-CAN! Legal (The Interactive Community Assistance Network) http://www.legalican.com	Legal Aid Society of Orange County funded by the federal Legal Services Corporation	People accessing the Courts in Orange County	All	This web-based app fills out court forms for clients by asking them simple questions and inputting this data into the forms in the correct place. It can also print instructions to advise clients on what to do with the forms and how the court process works. (In California the app can also provide e-filing of certain court forms).	√	1, 3
I'm Getting Arrested https://play.google.com/store/apps/details?id=us.quadrant2.arrested&hl=en	Quadrant 2, Inc.	People who have been stopped by the police	Criminal	This mobile app was inspired by an Occupy Wall Street incident between a protester and the police. The app enables users to broadcast a custom message to SMS numbers in the event that they are arrested, including a geotag for the message. The app currently supports: Arabic, Basque, Catalan, English, French, German, Hindi, Italian, Japanese, Portuguese, Romanian, Russian, Spanish and Turkish.	√	6, 7
ICE Blackbox https://itunes.apple.com/us/app/ice-blackbox/id629336149	ICE BlackBox, Inc in partnership with National Sheriffs Association and National Neighborhood Watch	Victims of violence	All	This app "sends a user's audio, video and GPS information to a secure server where it becomes a permanent record of threatening situations. Videos cannot be deleted from the device, preventing an attacker from forcing a user to delete an incident against their will." The app features include: one button streaming of audio, video and GPS, in-app 911 dialling with auto-notifications to emergency contacts, review and share videos function by text or email	√	2, 4

				and videos cannot be deleted within the app. https://itunes.apple.com/us/app/ice-blackbox/id629336149		
iDisclose http://idisclose.com	iDisclose LLC	Small business and individuals raising capital	Contract, Corporate	This app empowers individuals and small businesses raising capital to shield themselves from investor suits and SEC actions. The app hosts templates to legal forms for capital raising like general solicitation and crowd funding documents and allows users to complete these documents without accruing legal fees.	\$250-2500 / form	3, 6
IFJD http://www.courts.phila.gov/mobile/ and https://itunes.apple.com/app/ifjd/id423005525?mt=8	First Judicial District of Pennsylvania	People whose criminal matters are in the Philadelphia Courts	Criminal	This mobile app displays the hearing lists for the Trial Division-Criminal (from the Philadelphia Courts).	√	2
Illinois Legal Aid https://play.google.com/store/apps/details?id=org.ilao.LegalAidApp&hl=en	Illinois Legal Aid Online	People seeking information on Illinois law and connection to socio-legal organizations	All	This app was designed for non-lawyers. It is a field guide to Illinois law, with simplified legal tools for issues like divorce, custody, criminal records, small claims, eviction, foreclosure, unemployment, name change, guardianship, etc. This “plain language legal information includes FAQs, step-by-step instructions and referrals to helpful organizations”. https://play.google.com/store/apps/details?id=org.ilao.LegalAidApp&hl=en	√	1
Illinois Legal Aid Mobile App https://play.google.com/store/apps/details?id=org.ilao.pr.obono231&hl=en	Illinois Legal Aid Online	Residents of Illinois	Family, Criminal, Civil, Real Estate, Property	This app was made for non-lawyers to understand legal tools for issues like divorce, custody, criminal records, small claims, eviction, foreclosure, unemployment, name change, guardianship, etc. Using plain language legal information in “FAQs, step by step instructions, and referrals to helpful organizers”, this app is helpful for “families, consumers, workers, tenants, landlords,	√	2, 5

				homeowners”, etc., in Illinois. https://play.google.com/store/apps/details?id=org.ilao.probono231&hl=en		
Illinois Pro Bono https://itunes.apple.com/us/app/illinois-pro-bono-app/id470688999?mt=8	Illinois Legal Aid Online	Lawyers seeking information on Illinois law and available pro bono files	All	This app provides attorneys with a primer on Illinois law, a volunteer opportunity search function for lawyers seeking pro bono work, and a calendar of upcoming legal events. Additionally, it provides training and support for volunteer work through comprehensive guides on divorce, custody, mortgage foreclosure, landlord/tenant, civil procedure, consumer law, etc.	√	1, 2, 7
iProBono https://itunes.apple.com/us/app/iprobono/id495613533	Arkansas Access to Justice Foundation, Inc.	Lawyers seeking pro bono files	All	This app connects lawyers to low-income Arkansans. The app sorts the pro bono cases based on legal topic and county.	√	2
Ironclad https://www.ironcladapp.com	Ironclad Inc.	Contracting parties	Contract	Users can generate legal document templates and browse the app’s saved templates including NDA and sales contracts.	Free to \$199/mo	3, 6
JammedUp http://www.jammedup.com	Developer not located	People looking for legal representation	All	Users post facts about their case and attorneys can choose to pick up the case based on expertise, availability and pricing. Users review the offers and choose the best attorney for their matter.	√	2
Justia https://www.justia.com	Tim Stanley (CEO) Stacey Stern (President)	People conducting legal research	All	This app provides a database of free case law, codes and regulations.	√	1
Law Kick https://lawkick.com	Aaron George, Michael Chasin, and Stas Baydakov	People looking for legal representation	All	This app connects individuals with lawyers based on the legal problem/ question the individual has and the price they are willing to pay.	√	2
Law Mixer http://lawmixer.com	Developer not located	People who have legal questions	All	This web app produces legal answers and advice using artificial intelligence and machine learning analytics. Users write about their legal problem and the app immediately produces	√	1, 5, 6

				legal information about the problem.		
LawBox http://www.lawbox.com	Nicholas Zeltzer & Paul Kerschen	Legal professionals conducting research and producing legal texts	All	This app is a “document solutions webapp”, “specializing in e-publishing for the legal market”. The app “produces digital bench books”, “provides mobile research for legal organizations” and “develops utilities for iOS and Mac”. http://www.lawbox.com	√	1, 7
LawDeal https://lawdeal.com	LawDeal LLC	Individuals	Contract, Wills and Estates	This web app allows users to produce their own legal documents.	√	3, 6
LawDeeDa https://www.lawdeeda.com	LawDeeDa LLC	People looking for legal representation	All	This is a directory of attorneys that is listed by practice area and location.	√	2
Lawger http://lawger.com	Developer not located	People looking for legal representation	All	Users input their legal problem and lawyers registered with the program then bid on the case. Users can then elect which attorney they would like to have represent them.	√	2
LawGives https://www.lawgives.com	Legal.io	People looking for legal representation	Business, Immigration, Employment, Family and Intellectual Property	Users input their legal problem and the site generates free quotes and consultations from registered attorneys.	√	2
LAWLIBE https://itunes.apple.com/us/app/lawlibe/id403807492?mt=8	Fitz Collings	People conducting legal research	All	This app “comes preloaded with the US Constitution. Users can then download additional legal content directly into the app, including the US Code, Code of Federal Regulations, State Statutes, the Manual of Patent Examining Procedure, etc.” https://itunes.apple.com/us/app/lawlibe/id403807492?mt=8	√	1
LawNearMe.com https://lawnearme.com	Developer not located	People looking for legal representation	All	This is a directory of attorneys that is listed by practice area and location. Users can also video chat with their attorneys and post reviews about their experience.	√	2

LAWSAUCE https://play.google.com/store/apps/details?id=net.lawsauce.droid&hl=en	Natalie Wieland Ruth Bird	Lawyers	All	This app "is like a GPS for lawyers. It is an e-resource locator developed to quickly locate the right web resource for legal tasks. This way, lawyers can find the right legal tools quickly and can know what the best resource is for a given task." https://play.google.com/store/apps/details?id=net.lawsauce.droid&hl=en	\$3.08	1
LawTake http://www.lawtake.com	Suzanne Natbony and Michael Natbony	People looking to resolve their own legal issues	All	Users can browse through legal issues and watch free, informative videos to help them resolve their legal problem. They can then purchase more in depth videos to aid them with resolution.	√	1, 6
Lawtrades https://www.lawtrades.com	Law Trades Inc	People looking for legal representation	Business, Intellectual Property, Employment and Contract	Users input information about their legal project and receive price quotes and local attorneys. Users can communicate via the app and view their legal history with a timeline.	√	2, 7
LawyerUp https://lawyerupnow.com	Ubiquitous Legal Technology, LLC	People stopped and charged by the police	Criminal	This app connects users who have pre-downloaded the mobile app with local lawyers in 15 minutes or less. After opening the app the user inputs the offence they are charged with, and the operator will confirm the users identity, record geolocation, number and immediately dispatch a lawyer to tend to the matter. By example, the lawyer will immediately arrange for a bondsman. All services are not to exceed one billable hour.	\$4.95 / mo	2
LawZam https://www.lawzam.com	LawZam LLC	People looking to be connected with legal advice	All	This app creates a "platform for free legal consultations by videoconference". "This makes the process of finding a lawyer easy as the app has a selection of attorneys registered with the service. These attorneys do not charge fees for initial consultations and no obligations are tied to users who have a free consultation. LawZam does not deal with the financial transactions between	√	2

				users and registered attorneys. It is merely a platform for communication.” https://www.lawzam.com		
Legal Click https://www.legalclick.com	LegalClick LLC	People looking for legal representation	All	This platform allows users to find a local lawyer through its directory. Clients can also edit assemble and sign legal documents and pay their fees through the platform.	√	2, 7
Legal Crunch! http://www.legalcrunch.com	Legal Crunch, Inc	People with criminal records	Criminal	This site provides flat fee legal services that direct users through the expungement process online.	\$200	1, 3, 5, 6
Legal Edge https://itunes.apple.com/us/app/legal-edge/id3333365053?mt=8	JDSupra.com	People conducting legal research	All	This app allows users “to stay on top of the latest legal developments they might be interested in with updates, news alerts and case filings from the nation’s legal professionals”. https://itunes.apple.com/us/app/legal-edge/id3333365053?mt=8	√	1
Legal Lexicon https://play.google.com/store/apps/details?id=com.legallexicon&hl=en	DK	People conducting legal research	All	This app provides easy access to complex legal terminology. It features a large repository of legal terms, maxims and phrases and allows users to search for specific words and add words to a list of bookmarks.	√	1
Legal Proof http://legalproofapp.net and https://itunes.apple.com/us/app/legal-proof/id979010945?mt=8	Omega Ortega LLC & Tom Ortega II (Creator)	People involved in civil suits	Civil	This app allows users “to collect and share (via email) evidence that may be needed in a civil trial”. First, the app informs users about what kind of evidence they need to collect based on their legal problem. Second, the app tells users what type of proof they should collect, and finally, users can use their phone camera to capture the proof, file it on the app and share it with their lawyer or the other party by email. http://legalproofapp.net	√	4
Legal Reach http://www.legalreach.com	Legal Reach, LLC	People looking for legal representation	All	Users input keywords about their legal issue and are connected with lawyers in that practice area.	√	2

Legal Robot https://www.legalrobot.com and https://itunes.apple.com/ca/app/legal-robot/id1072408741?mt=8&ign-mpt=uo=4	Legal Robot, Inc	Contracting parties	Contract	This machine learning- powered tool enables users to review contracts before they execute them by pointing out errors and potential legal problems in the document. The algorithms test for fairness and risk allocation so all parties are aware of the terms.	Prices available upon request (dependent on service). Download of mobile app is free	6, 7
Legal Tap http://app.legaltap.co	LegalTap, LLC	People looking for legal advice	All	Users open the app to chat with a lawyer for 15 minutes and are provided with legal documents, if necessary. If the client requires the lawyer further, the app prompts the user to retain the lawyer.	\$39/visit	2, 3
Legal Zoom https://www.legalzoom.com/index_hero_v1.html	Brian Liu, Brian Lee, Eddie Hartman and Robert Shapiro (Founders)	People looking to create legal documents	Commercial/ Corporate; Wills and Estates	Allows users to create a last will, incorporate a business, trademark a name or take care of other common legal matters. This app provides step-by-step directions on how to produce legal documents.	Prices vary depending on service	3
LegalSifter https://www.legalsifter.com	Lars Mahler, Elliott Williams and Kevin Miller	People managing legal documents	All	This is an artificial intelligence platform that allows users to review legal documents. The program will extract terms, conditions, data and insights from contracts forms and documents for users to have a better understanding of their legal rights and obligations.	Prices available upon request	6, 7
LegalYou https://legalyou.com (appears to be in beta)	LegalYou LLC	People researching the law	All	This app offers free instruction on the law and access to legal forms, and sells unbundled legal services through monthly memberships.	Monthly plans available upon request (based on firm size)	1, 3, 5

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Maine HelpMELaw App http://helpmelaw.org/app_support	Pine Tree	People looking for legal aid	All	This app provides contact information and website links for major statewide legal aid programs in Maine. It also features a news feed from all of Maine's statewide legal services programs and online self-help content for Mainers seeking legal information. By example, content includes: "tips before you rent, overview of MaineCare eligibility, legal services for the elderly on preparing powers of attorney and voting rights information". http://helpmelaw.org/app_support	√	1, 2
Maryland Law Help App https://itunes.apple.com/us/app/maryland-law-help/id1023213394?ls=1&mt=8	Maryland Judiciary (Administrative Office of the Courts)	People looking for legal resources, advice and information in Maryland	All	This app "brings together tools and resources developed by the Maryland Judiciary and others to help Marylanders use the courts or find legal help. Learn about Maryland law, find a lawyer or mediator, watch videos on how to use the courts, and even call or chat with an attorney at the Self-Help Center" https://itunes.apple.com/us/app/maryland-law-help/id1023213394?ls=1&mt=8	√	1, 2, 5, 6
Massachusetts Subpoena Services http://www.ip-s-notary.com/subpoena.html#request	Korey Humphreys	People looking to subpoena or summon other parties	All	This app can issue summons and subpoenas for users based on the information input into their online form.	√	3

Mighty Group https://mighty.com	Mighty Group, Inc	Individuals and corporations	All	This web app encourages individuals and corporations to assist litigants with their legal fees (like crowdsourcing).	√	7
Mobile Incident Reporting App https://www.justicecenter.ny.gov/slideshow/mira-quick-tour	NYS Justice Center for the protection of People with Special Needs	People wanting to submit reports to the Vulnerable Persons Central Register	Criminal/ Tort	This app allows “custodians and other mandated reporters to easily submit reportable incidents to the Vulnerable Persons Central Register (VPCR). The app enables users to access FAQs, securely save information so that it can be submitted quickly for future reports and view the confirmation numbers of previously submitted reports for quick reference. (Employees of covered facilities and programs are encouraged to use the app to fulfil their legal duty to report all ‘significant incidents’ which have the potential to harm the health, safety or welfare of service recipients).” https://www.justicecenter.ny.gov/slideshow/mira-quick-tour	√	3, 4
Mobile Justice AZ https://itunes.apple.com/app/id1031663730	Quadrant 2, Inc. & American Civil Liberties Union of Arizona	People who have been stopped by the police	Criminal	Same as above, except for Arizona	√	1, 2, 4, 6
Mobile Justice California https://itunes.apple.com/us/app/mobile-justice-california/id979642692?mt=8	Quadrant 2, Inc. & American Civil Liberties Union of South California	People who have been stopped by the police	Criminal	Same as above, except for California	√	1, 2, 4, 6
Mobile Justice Colorado https://itunes.apple.com/us/app/mobile-justice-colorado/id1031612987?mt=8	Quadrant 2, Inc. & American Civil Liberties Union of Colorado	People who have been stopped by the police	Criminal	Same as above, except for Colorado.	√	1, 2, 4, 6
Mobile Justice DC	Quadrant 2, Inc.	People who have been	Criminal	Same as above, except for Washington D.C.	√	1, 2, 4, 6

https://itunes.apple.com/us/app/mobile-justice-washington/id1031582479?mt=8	and American Civil Liberties Union District of Columbia	stopped by the police				
Mobile Justice https://itunes.apple.com/us/app/mobile-justice-georgia/id1031623444?mt=8	Quadrant 2, Inc. and American Civil Liberties Union District of Georgia	People who have been stopped by the police	Criminal	Same as above, except for Georgia	√	1, 2, 4, 6
Mobile Justice Maryland https://itunes.apple.com/us/app/mobile-justice-maryland/id1031609886?mt=8	Quadrant 2, Inc. and American Civil Liberties Union of Maryland	People who have been stopped by the police	Criminal	Same as above, except for Maryland	√	1, 2, 4, 6
Mobile Justice Michigan https://itunes.apple.com/us/app/mobile-justice-michigan/id984955837?mt=8	Quadrant 2, Inc. and American Civil Liberties Union of Michigan	People who have been stopped by the police	Criminal	Same as above, except for Michigan	√	1, 2, 4, 6
Mobile Justice Minnesota https://itunes.apple.com/us/app/mobile-justice-minnesota/id1031606995?mt=8	Quadrant 2, Inc. and American Civil Liberties Union of Minnesota	People who have been stopped by the police	Criminal	Same as above, except for Minnesota	√	1, 2, 4, 6
Mobile Justice – Missouri https://itunes.apple.com/us/app/mobile-justice-missouri/id960695671?mt=8	Quadrant 2, Inc. and American Civil Liberties Union of Missouri	People who have been stopped by the police	Criminal	Same as above, except for Missouri	√	1, 2, 4, 6

Mobile Justice Mississippi https://itunes.apple.com/us/app/mobile-justice-mississippi/id962204203?mt=8	Quadrant 2, Inc. and American Civil Liberties Union of Mississippi	People who have been stopped by the police	Criminal	Same as above, except for Mississippi	√	1, 2, 4, 6
Mobile Justice MN https://itunes.apple.com/us/app/mobile-justice-minnesota/id1031606995?mt=8	Quadrant 2, Inc. and American Civil Liberties Union of Minnesota	People who have been stopped by the police	Criminal	Same as above, except for Minnesota	√	1, 2, 4, 6
Mobile Justice Nebraska https://itunes.apple.com/us/app/mobile-justice-nebraska/id962204214?mt=8	Quadrant 2, Inc. and American Civil Liberties Union of Nebraska	People who have been stopped by the police	Criminal	Same as above, except for Nebraska	√	1, 2, 4, 6
Mobile Justice New Jersey https://itunes.apple.com/us/app/mobile-justice-new-jersey/id1031595805?mt=8	Quadrant 2, Inc. and American Civil Liberties Union of New Jersey	People who have been stopped by the police	Criminal	Same as above, except for New Jersey	√	1, 2, 4, 6
Mobile Justice New Mexico https://itunes.apple.com/us/app/mobile-justice-new-mexico/id1031620644?mt=8	Quadrant 2, Inc. and American Civil Liberties Union of New Mexico	People who have been stopped by the police	Criminal	Same as above, except for New Mexico	√	1, 2, 4, 6
Mobile Justice North Carolina https://itunes.apple.com/us/app/mobile-justice-north-carolina/id984955879?mt=8/	Quadrant 2, Inc. and American Civil Liberties Union of North Carolina	People who have been stopped by the police	Criminal	Same as above, except for North Carolina	√	1, 2, 4, 6
Mobile Justice	Quadrant 2,	People who	Criminal	Same as above, except for	√	1, 2, 4, 6

Oklahoma https://itunes.apple.com/us/app/mobile-justice-oklahoma/id1031625145?mt=8	Inc. and American Civil Liberties Union of Oklahoma	have been stopped by the police		Oklahoma		
Mobile Justice Oregon https://itunes.apple.com/us/app/mobile-justice-oregon/id962203720?mt=8	Quadrant 2, Inc. and American Civil Liberties Union of Oregon	People who have been stopped by the police	Criminal	Same as above, except for Oregon	√	1, 2, 4, 6
Mobile Justice Pennsylvania https://itunes.apple.com/us/app/mobile-justice-pennsylvania/id1031334029?mt=8	Quadrant 2, Inc. and American Civil Liberties Union of Pennsylvania	People who have been stopped by the police	Criminal	Same as above, except for Pennsylvania	√	1, 2, 4, 6
Mobile Justice Virginia https://itunes.apple.com/us/app/mobile-justice-virginia/id1031621926?mt=8	Quadrant 2, Inc. and American Civil Liberties Union of Virginia	People who have been stopped by the police	Criminal	Same as above, except for Pennsylvania	√	1, 2, 4, 6
Modria http://modria.com	Modria.com, Inc	Disputing parties	Commercial	This is an online dispute resolution forum for eCommerce disputes. The platform includes resolution flows for common issues like “item not received” or “item not as described”, etc and updates the customer about the resolution process so they are aware of what is necessary to resolve the issue.	\$550-\$3,600 / mo	6
Multiple Bill Calculator https://loyolalawtech.org/calculator/	Loyola Litigation and Technology Clinic	People researching criminal sentences in Louisiana	Criminal	This web app allows users to estimate the minimum and maximum sentencing ranges for multiple offenders in Louisiana (under the State’s Habitual Offender Law).	√	1

My Attorney Apps http://www.myattorneyapps.com/	Jason Turchin	Lawyers looking to connect with new clients/ current clients online Clients who want to keep up to date on their files online	All	This is a customizable law firm app for both lawyers and their clients. Lawyers can produce checklists and FAQs for their services, can create interactive business cards and contacts, can build an existing client feature into the app, customized for any specific practice area (by example, for personal injury lawyers, the clients can send pictures of their injuries to be stored in the app), can produce a customized flash intro with their logo and contact information, can integrate their website into the app, can include location lists with map integration and navigation integration, and can produce a section for verdicts and settlements to show clients and potential clients some examples of the lawyer's experience. Lawyers can also create screens with information about the firm, for social networking, for custom contact and custom practice area kits. Last, Lawyers can enable multilingual services if their client base speaks Spanish, French, Creole, etc.. Clients can have an instant professional relationship with the attorney and their firm. Moreover, they can get case settlement updates, free legal tips and advice and free consultations.	√	2, 4
My Health Care Wishes Pro http://www.americanbar.org/groups/law_aging/MyHealthCareWishesApp.html (removed from iTunes and Google Play Store in September	American Bar Associatio	People wanting to document their healthcare and end-of-life wishes	Health	This is an app that allows clients to keep all healthcare wishes and demands on their smartphone. "Health care wishes become documented, imported and stored on the user's smartphone so medical decision-making can happen instantaneously anywhere". Key family and medical contacts, insurance information and any other health realities information can also be stored. http://www.americanbar.org/groups/law_aging/MyHealthCareWishesApp.html	√	1, 2, 3, 4

2016 “due to reasons of financial sustainability”)				shesApp.html		
MyLawsuit.com https://www.mylawsuit.com/about	Michele Colucci (Founder)	Victims of torts seeking lawyers	Tort	This app provides “a competitive marketplace for contingency fee tort lawsuits”. “Lawyers subscribed list their fees and users select the most desirable bid”.	√	2
National Legal Aid Finder http://ptla.org/pine-trees-legal-aid-apps	Pine Tree	People looking for legal aid	All	This app provides contact information and website links for legal aid programs around the country. Information is provided on a state-by-state basis.	√	1, 2
National Legal Aid News http://ptla.org/pine-trees-legal-aid-apps	Pine Tree	People seeking legal aid	All	This app “provides news about legal aid and related programs around the states.” http://ptla.org/pine-trees-legal-aid-apps	√	1, 2, 7
NextChapter http://nextchapterbk.com	Janine Sickmeyer (CEO and Founder)	Lawyers	Bankruptcy	This app assists lawyers in preparing bankruptcy documents for their clients. Lawyers can manage new client intake, document upload and storage, and filing documents with the court, from the app.	\$149/mo	3, 7
New York City Earned Sick Time Advisor https://applications.neotalogic.com/a/nyc-sicktime	Students at Georgetown University Law Centre, powered by Neota Logic	People employed in NYC	Labour	This app assists users in determining whether they qualify for sick time off work, and calculates the amount earned according to the NYC Sick Time Act.	√	1, 7
Notarize http://notarize.com	Pat Kinsel and Adam Pase	Individuals and corporations	All	This app allows users to notarize documents online with e-signatures and video profiles. Users upload their documents which are then notarized with a notary public who has a video profile with the app.	√	3, 6
‘Oh Crap!’ App http://oh-crap-app.com	Robert Rehkemper (creator) & Oh Crap App LLC	Drivers involved in accidents or traffic infractions	Criminal (traffic), Civil (tort)	This app equips users with tools like informational blood alcohol calculator, taxi quick contacts and audio recording functions to promote legal rights education. “Crap Chat allows users to post and receive notifications about	√	1, 2, 4, 6

				events of interest taking place in their community. They can post and receive alerts regarding law enforcement activities in their community like speed traps, roadblocks or other events of interest". The Oh Crap! button "provides users with crash courses on their legal rights when confronted by law enforcement and also gives them access to a recording function to assist in documenting the encounter". If wifi or data service is unavailable, "the recording uploads to the Oh Crap App remote server for safe storage and may later be used in court proceedings if necessary". (Additional data charges may be incurred at users sole expense). The Educate Me section "provides helpful information about legal rights with state specific information regarding drunk driving rights that vary from state to state. The Emergency Help section puts users in direct contact with lawyers and bondsmen in their area with the click of a button". http://oh-crap-app.com		
Ohio Sixth District Court of Appeals app https://itunes.apple.com/us/app/ohio-sixth-district-court/id1001442174?mt=8	Web & IT Group, LLC	People using the Courts in Ohio	All	This app allows users to follow court decisions and view the court's oral argument calendar. They can also receive notifications when new decisions are released or the calendar is updated. All cases posted on the court website are searchable in the app.	√	1, 2
OpenAdvocate https://itunes.apple.com/ca/app/open-advocate/id492494837?mt=8	Urban Insight, Inc	People looking for legal aid	All	This mobile app is a directory "used to access legal aid websites and information across the United States." https://itunes.apple.com/ca/app/open-advocate/id492494837?mt=8	√	1, 2
OPENREGS https://itunes.apple.com/ap	Peter Snyder	People conducting legal	All	This app hosts a federal regulations database. Users can "find recently issued notices of	√	1

p/openregs/id331752432?mt=8		research		final and proposed rulemaking. Users can browse by agency or comment periods closing soon or recently opened. They can also mark individual regulations with a star and then easily view a list of all starred regs. Regulations can also be emailed for later reference." https://itunes.apple.com/app/openregs/id331752432?mt=8		
Order of Protection HOTDOCS http://www.illinoislegalaid.org/index.cfm?fuseaction=home.dsp_content&contentID=5177&zipcode=61602&criteria=domestic%20violence&print=yes	Illinois Legal Aid Online	Victims of harassment	Criminal/ Tort	This web app helps users complete the forms to ask the court to order someone to stop harming or threatening harm to the user and/or other household members. (This is not for use in Cook County, Illinois)	√	1, 3, 6
OyezTodayHD https://itunes.apple.com/us/app/oyeztoday/id416613058?mt=8	Oyez	People interested in the politics of and law expounded by the US Supreme Court	All	This app provides "bios of Supreme Court Judges, an archive of cases and oral arguments with transcripts that follow along with playback". https://itunes.apple.com/us/app/oyeztoday/id416613058?mt=8	√	1
PacerPro https://www.pacerpro.com	Gavin McGrane (CEO and Founder)	People conducting legal research	All	This app is a legal research tool. Users can search legal documents for free with a Boolean search, batch download, and automatically name files. "This service connects with the district and bankruptcy courts in real time meaning that when users run a search, the results are more complete and up-to-the-second accurate". https://www.pacerpro.com	√	1
Page Vault https://www.page-vault.com	Page Vault Inc	Lawyers	All	This software allows lawyers to capture and print images of webpages and formats them so that they are authenticated and thus admissible evidence.	\$195-495 / mo	4

Paper Software https://papersoftware.com/turner.html	Benjamin Whetsell & Nathan Whetsell	People looking to review contracts	All	This app “makes it easy to navigate through, search, edit, add cross-references to, review and negotiate contracts”. https://papersoftware.com/turner.html	\$20/mo	6, 7
PaperHealth https://itunes.apple.com/us/app/paperhealth/id908392954?mt=8	William Palin	People who want to document their healthcare desires	Health	The app allows users to assign a healthcare proxy and produce living wills.	✓	3, 6
PaperWork http://cambridgelaw.org	Cambridge Law Office of William Palin	People/Lawyers involved in matters before Massachusetts Family or Probate Courts	Family and Probate	This app is “designed exclusively for applications to the Massachusetts Family and Probate Court”. It allows for users “to fill in, edit and save every document in Family Court”. In addition, there is the ability “to sign all of these documents and collaborate with colleagues”. “An unfinished form can be transferred to anyone with the app and every document is saved and stored for edit or changes later”. It also “has built in Reminders app with local notifications, a Massachusetts Child Support Calculator and Alimony Calculator using the most recent formulas”. http://cambridgelaw.org	✓	1, 3
Pennsylvania Children’s Medicaid Appeals Advisor https://applications.neotalogic.com/a/phlp-appeals-advisor ; http://www.phlp.org	Students at Georgetown University Law Centre, powered by Neota Logic	Parents with children in Pennsylvania	Health	This app guides parents with children through the Medicaid appeals process if their coverage provider “has denied, reduced or terminated their services”. https://www.law.georgetown.edu/news/press-releases/iron-tech-lawyer-spring-2014.cfm	✓	1, 7
PeopleClaim.com http://www.peopleclaim.com/	Mark Deutch	People looking to resolve disputes without lawyers	Commercial	This app is an online dispute resolution service that uses peer-to-peer and crowd sourced mechanisms to resolve commercial claims.	✓ (low-cost services also available)	6

PlainSite http://www.plainsite.org	Think Computer Corporation & Think Computer Foundation	People doing legal research	All	This app provides “non-lawyers easy to navigate access to the entire American legal system with access to public records from agencies, patent applications, corporate profiles and public federal and state case dockets. Non-public analytic data is also available.” Features include “the ability to search for cases by case title, an enhanced view of each cases’ docket, statistics on law firms’ and lawyer’s historical activity, an attorney finder based on past caseloads, and a Motion Sensor (which allows the user to see how a given judge or lawyer has behaved with regard to certain kinds of motions in the past).” http://www.plainsite.org	√ (charges for advanced features)	1
Pocket DACA http://www.lahelpmn.org/resource/pocket-daca	Immigration Advocates Network / Pro Bono Net	People seeking immigration to the US as a Deferred Action Childhood Arrival candidate	Immigration	This app provides a self-screening tool for Deferred Action for Childhood Arrivals (DACA) applicants to understand their eligibility for the status, and a searchable directory of listings for immigration legal services providers, including non-profit groups, throughout the States. It also includes links to news about the deferred action process and FAQs.	√	1, 2, 5
Priori Legal https://www.priorilegal.com	Founders: Basha Rubin, Mirra Leveitt and Dan Fischer	Start-ups and Businesses wanting legal help	All	This web app is a platform that connects small businesses in the NYC area with expert, fixed-fee lawyers (based on location and area of practice).	√	2
Pushlegal https://itunes.apple.com/us/app/statutes-case-law-library/id659329698?mt=8	Texas Legal Apps LLC	People doing legal research	All	This mobile app allows users to access rules or statutes simply with point and click navigation. The app will show the user the leading case law associated with a specific rule or statute.	√	1
QuickLegal https://play.google.com/store/apps/details?id=com.quicklegal.app&hl=en	Quicklegal Practice Management	People looking for legal advice	All	This app provides on-demand legal services. It provides contact information for nearest lawyer to users, hosts legal questionnaires to help users determine whether their problem is definitively legal and connects users to lawyers	√	2, 5

				through a video chat. (Additionally, the app provides case management features for attorneys like case briefs, time management tools, a calendar, contacts, continued legal education resources and information about malpractice insurance).		
Ravel Law https://www.ravellaw.com	Daniel Lewis (Co Founder and CEO)	People conducting legal research	All	This app produces “graphics of legal data related to legal research documents (court, date, precedent)”. “This makes it easy to zero in on influential and outlier cases”. https://www.ravellaw.com	√	1
Rocket Lawyer https://www.rocketlawyer.com/find-a-lawyer.rl	Charley Moore, Esq., Founder & CEO	People looking for quick legal advice, to produce legal documents online	Family; Health; Labour & Employment; Property & Finance; Corporate	This app allows users to produce legal documents, get legal advice from an On Call attorney and become connected with a lawyer to enforce documents produced through the service.	\$39.95/ mo (premium); \$49.95/ mo (accelerate)	3, 5
Rocket Matter https://www.rocketmatter.com	Rocket Matter, LLC	Lawyers wanting to track clients’ funds	All	This app is a “legal billing application that allows firms to instantly see the status of a client’s funds and what is available for withdrawal”. The app also hosts a task manager function that allows users to create, track, update and assign tasks to other users”. Finally the app allows users to “produce reports about client profitability, and to determine which associates bill the most time. At any time, the firm is able to see the work billed, the amount pending invoicing, etc.” https://www.rocketmatter.com	√ (Need to have Rocket Matter subscription)	7
Rulebook https://itunes.apple.com/ca/app/rulebook/id454619081?mt=8	Ready Reference Apps, LLC	People conducting legal research	All	This app is a legal reference tool that enables users “to consult with free books of Federal Rules of Evidence, the US Constitution, etc”. https://itunes.apple.com/ca/app/rulebook/id454619081?mt=8	√	1

Sanza http://sanza.co	Peter Shin	Potential immigrants	Immigration	This app connects potential immigrants with immigration experts for one-hour free consultations in California.	✓	1, 5
SCOTUS Mapper http://law.ubalt.edu/faculty/scotus-mapping/SCOTUS_Mapper_2_point0.cfm	Colin Starger (University of Baltimore School of Law)	People looking to find out about US Supreme Court decisions	All	This app helps visualize Supreme Court precedent. Based on the citations of a given case, it creates networks to help users automatically understand the connectivity around a particular legal issue. The end result is an easy-to-read visualization of precedent. Mapper will look at any area of the law.	✓	1
SCOTUS Servo https://github.com/vzvenyach/scotus-servo	David Zvenyach	People looking to find out about US Supreme Court decisions	All	This app tracks changes made to US Supreme Court decisions after the decisions are published.	✓	1
SealX https://bitproof.io	Bitproof, Inc	Contracting parties	Contract	This app allows users to seal their contract in the Bitcoin blockchain so it becomes impossible to tamper with its content.	\$20	3, 7
Shake https://www.shakelaw.com and https://itunes.apple.com/us/app/shake-create-contracts-legal/id601561998?mt=8&ign-mpt=uo%3D4	Pre-Paid Legal Services, Inc	Contracting parties	Contract	This app enables users to produce legal agreements online. The app guides users with questionnaires to produce the specific terms of their legal documents, and allows them to send, share and sign in-app.	✓	3, 6
SmartLeges Law Reader http://smartleges.com	SmartLeges	People conducting legal research	All	This app is a law reader that allows users to search for laws in the USA, Mexico, India, UK, Columbia, Brazil, Argentina, Chile, France, Italy, and Spain. Users can receive notifications when a law is updated, underline, make notations and bookmark their searches.	✓	1

SmartRules http://www.smartrules.com	RPCD Holdings LLC	People conducting legal research	All	This app “unites all relevant rules from all sources and distils them into a simple task and jurisdiction specific guide based on the lawyer’s task (i.e. filing a motion to compel in Los Angeles Superior Court)”. The app also provides expert commentary and is updated daily.	✓	1
Snapterms http://snapterms.com	Snapterms LLC	Entrepreneurs with websites	Contract, Privacy	This online solution assists website designers in generating effective and complete terms of service. The program guarantees a 2-hour consultation with an attorney.	Prices available upon request (dependent on project size)	1, 3
Startup Documents https://www.startupdocuments.com	Startup Documents	Entrepreneurs and small businesses	Corporate, Contract	This app allows small businesses and entrepreneurs to produce and store legal documents. The web app also gives document creation advice (e.g. common contractual terms).	\$99-300 / service	1, 3
State Decoded http://www.statedecoded.com	Funded by: the John S. and James L. Knight Foundation	People conducting legal research	All	This web-app is “an online platform that displays and interprets codes, laws, legislation and court decisions by state to make them more understandable”. “The State Decoded API allows developers to access and integrate the data and functionality of the app with others and to create new applications”. http://www.statedecoded.com	✓	1, 7
Stellute Law App https://itunes.apple.com/us/app/stellute-law-app/id714231831?ls=1&mt=8	Stellute Law Firm	Drivers involved in accidents or traffic infractions	Criminal (traffic)	Available in Virginia, this app provides information for drivers on gas prices at various gas stations, road alerts, live feed traffic cameras, legal help and allows users to easily collect evidence at the scene of an accident by being directed by step by step directions. Users can record testimony from witnesses and take photos at the scene. Moreover, the app provides a	✓	2, 4

				directory for medics, roadside assistance, taxis and towing companies.		
Stop & Frisk Watch https://itunes.apple.com/us/app/stop-frisk-watch/id583006596?ls=1&mt=8	Quadrant 2, Inc. & New York Civil Liberties Union	People stopped in a street search by the NYPD	Criminal	This app, available both in English and Spanish, provides users with the ability for bystanders and accused persons to fully document stop and frisk encounters. The app allows users to film, record, and report police misconduct with a survey, that is then immediately sent the NYCLU to oversee the NYPD conduct. The app also includes a "know your rights" section "that instructs people about their rights when confronted by police and their right to film police activity in public". http://www.nyclu.org/app	✓	1, 4, 6
StopaStalker https://itunes.apple.com/us/app/stopastalker/id645238415?mt=8	Nathan Carey	Victims of harassment and/or criminal stalking behaviour	Criminal	This app allows users "to empower themselves to stop being victims and take action against stalkers". "Users can collect information, collate it and report to authorities in a simple app made for victims of stalking. Made in conjunction with leading criminologists and victims support forums, the app allows users to document time, location and number of incidents, etc." https://itunes.apple.com/us/app/stopastalker/id645238415?mt=8	\$0.99	6, 7
Sunlight http://sunlightfoundation.com/criminaljustice/	Sunlight Foundation	People interested in the criminal justice system	Criminal	This web-app collects criminal justice data in all 50 states, DC and on the federal level. The app seeks to unveil how criminal justice can be better standardized across jurisdictions. Users can navigate the data set in question with a search tool.	✓	1, 7
Supreme Court of Nevada Mobile App http://nvcourts.gov/SupremeCourt/Information/SupremeCourt_of_Ne	Supreme Court of Nevada	People looking for court documents and recordings from the Supreme Court of	All	This app provides users with access to the latest case information, decision and news from the Supreme Court of Nevada. Users can also access past oral argument recordings and watch live streaming of oral arguments from the courtroom. http://nvcourts.gov/Supreme/Co	✓	1

vada Mobile App/ and https://itunes.apple.com/us/app/nv-supreme-court/id620025479?ls=1&mt=8		Nevada		urt Information/Supreme Court of Nevada Mobile App/		
Tapdox http://tapdox.com	Tapdox Inc	Contracting parties	Contract	Users can execute contracts online using e-signatures.	Prices available upon request	3, 7
TMC CourtWatch https://play.google.com/store/apps/details?id=com.avatarsyndicate.clerkapp	AVATAR Syndicate	People looking to access information from the Toledo Municipal Court system	All	This app features a search engine for cases from the Toledo Municipal Court system for both civil and criminal/traffic division. Results include full journal entries, status of case, suit amounts, plaintiff/defendant information, attorney information, links to scanned documents, links to priors, and the ability to make payments on payable items. Users can also view the court schedule for the Toledo Municipal Court for both the civil and criminal/traffic divisions.	v	1, 2
Touch Tax Codes and Regs https://play.google.com/store/apps/details?id=com.blackcatworks.touchtax&hl=en	Com-Lab Mobile	People conducting legal research	Tax	This app provides “offline access to 7,700+ sections of the latest edition of the Internal Revenue Code of 1986, as amended (the Code), the Treasury Regulations in Title 26 of the Code of Federal Regulations (the Regulations), the Internal Revenue Bulletins since 2003, Circular 230, Revenue Procedures, Revenue Rulings, Notices and Announcements since 2003”. “The goal is to supplement physical copies of the Code, Regulations and IRBs (Rev. Rul., Rev. Proc., T.D., Temporary Regulations, etc.) and Circular 230 with electronic versions that are up-to-date, while giving users some frequently requested advanced features making it easy to read and manage the law”.	\$5.52	1

				https://play.google.com/store/apps/details?id=com.blackcatworks.touchtax&hl=en		
TrademarkNow https://www.trademarknow.com	Mikael Kolehmainen, Keikki Vesalainen and Matti Kokkola	Brands	Trademark	Users can check whether their desired brand name has been trademarked and then allows users to trademark their brand name online. Users can also oversee use of their trademark in similar product categories to protect their brand.	Annual subscription fees available upon request	1, 7
UniCourt https://unicourt.com	James Hatcher, Prashanth Shenoy, Josh Blandi, Yongxin Tan and Charles Hemming	Litigants	All	This app organizes case and docket information, allowing users to search for cases by party, attorney, judge, docket or case number. Users can also set up notifications to track schedules, and upload documents and forms for court review.	\$99-\$199 / mo	2
UpCounsel https://www.upcounsel.com	Matthew Faustman (co-founder and CEO) Mason Blake (Co-founder and CTO)	Small businesses looking for legal help	Commercial and Corporate	This app provides customers with small business legal needs the ability to post jobs on the web app for lawyers to bid on. Customers can also track their matters and pay for services on the site.	√	2
VentureDocs https://venturedocs.com	VentureDocs, Inc	Small businesses and start ups	All	This app provides templates for legal documents catered to the legal demands of small companies and start-ups. These include common stock financing documents, stock agreements, non disclosure agreements, service provider agreements, company formation agreements, etc.	√	3, 7
Viditure https://go.viditure.com/beta/	Kebron Dejene	Contracting parties	All	This app allows contracting parties to bind themselves to legal documents using video signatures. Users send electronic copies of legal documents to the other contracting parties who then record themselves agreeing to the terms outlined in the document.	Prices available upon request	3, 7

VLAS Eligibility System https://applications.neotalogic.com/a/vlas-eligibility	Students at Georgetown University Law Centre and the Virginia Legal Aid Society	Low income individuals in Virginia	All	This program assesses whether individuals in Virginia qualify for free legal services (based on income) and then connects them with lawyers offering these services.	√	2, 7
WestLaw Next https://itunes.apple.com/ca/app/westlaw/id380675076?mt=8	Thomson Reuters	People conducting legal research	All	This app provides “mobile access to Westlaw next legal research system”. Users can access Westlaw features like “WestSearch, Keycite, Folders, History, Document Notes and Highlighting and search the database for content”. Users can also “view alerts and track and follow Companies of Interest”. https://itunes.apple.com/ca/app/westlaw/id380675076?mt=8	√ (need West Law subscription)	1
Wevorce https://www.wevorce.com	Michelle Crosby (Co-founder and CEO)	People getting divorced	Family	This app uses “mediation and technology to make divorce less adversarial and costly”. The app automates the more common steps of the divorce process to that the “Wevorce lawyers can focus on the unique aspects of the divorce”. https://www.wevorce.com	\$749 (per couple)	1, 2, 3, 6
Wild About Trial https://itunes.apple.com/ca/app/wild-about-trial/id530043712?mt=8	Wild About Trial LLC	People conducting legal research	Criminal	This app provides “insider legal perspectives on criminal trials”. Users can “access the facts of each case, biographies of the major players from judges to defendants, documents directly from the court file, live feeds of court proceedings when available and in-depth analysis from a team of legal experts”. https://itunes.apple.com/ca/app/wild-about-trial/id530043712?mt=8	√	1
Witnex https://www.witnex.com/#/home	Witnex, Inc.	Lawyers	All	This is a directory of expert witnesses categorized by field.	√	2
Wolfram Lawyer’s Professional Assistant http://products.wolframalph	Wolfram Group LLC	People conducting legal research	All	This is a legal reference tool that allows users “to access detailed reference information and data in major contemporary legal fields as well as bonus research information such as	Prices available upon request	1

a.com/professionalapps/lawyer.html				demographics and financial computations". http://products.wolframalpha.com/professionalapps/lawyer.html	(dependent on service needs)	
xRef http://www.xrefonline.com	xRef Software Solutions Ltd	People looking to review legal documents	All	This app "plugs into Microsoft Word and automatically checks for drafting errors, such as capitalized terms that have not been set up as defined terms, words that have been set up as defined terms but never used, duplicate definitions, etc". http://www.xrefonline.com	Prices available upon request (dependent on service needs)	6, 7
ZeekBeek https://www.zeekbeek.com	Developer not located	People looking for legal representation	All	This is a directory of registered attorneys organized by practice area, location and availability.	√	2

Appendix E: Law School Courses

CANADA

Institution	Course Name	Brief Description & Link
Thompson Rivers University, Faculty of Law	<i>L21C: 21st Century Lawyers</i>	Invites students to “engage in a sustained reflection about their professional and personal aspirations and on engagement with the changes, pressures and new opportunities facing lawyers of the future.” Students explore how to generate opportunities in a changing legal services market; how technology, globalization and economic transformation change the practice of law; whether the legal profession will meet the challenge of providing meaningful access to justice for ordinary and disadvantaged Canadians. Students also pitch a “Legal Hack” to a panel of experts with the goal of providing legal services and doing “law better.” Course syllabus: http://l21c.trubox.ca/syllabus
York University, Osgoode Hall Law School	<i>Legal Information Technology</i>	Introduces students to the legal marketplace, emphasizing “the value of information technology from a design (rather than from a technical) standpoint.” Students are instructed on how to build and deliver new forms of client-centered legal practice which “improve accessibility, enhance productivity and democratize the practice of law.” They also engage with technologies in an experiential way: online dispute resolution, automated document assembly, for instance. The final project provides students the opportunity to develop their own legal app. Course description: http://www.osgoode.yorku.ca/courses-and-seminars/legal-information-technology/

UNITED STATES

Institution	Course Name	Brief Description & Link
Brigham Young University Law School	<i>Law 689 Computer-Based Practice Systems</i>	On-line course that teaches students to design practice systems and to explore the role of these systems in legal service-delivery. Students learn to “develop automated documents with practice systems authoring programs” (e.g., HotDocs, Ghost Draft, FormTool). Students also develop skills to “(a) build practice systems to support their individual practice needs, (b) analyze the underlying logic and structure of legal documents, (c) oversee firm practice system develop activities and (d) be effective consumers of practice system technologies.” Course description: http://www.law.byu.edu/Curriculum2/Course_Descriptions.pdf
Chicago-Kent College of Law: Center for Justice and Technology	<i>Justice and Technology Practicum</i>	Students have the opportunity to develop skills in document assembly and gain experience with automation tools considered fundamental to “providing quality, economical legal services in this environment, while building document assembly tools for use by self-represented litigants nationally.” Course description: http://www.kentlaw.iit.edu/institutes-centers/center-for-access-to-justice-and-technology/justice-and-technology-practicum
Chicago-Kent College of Law	<i>A2J Author Course Project (3 separate courses)</i>	1. Traditional Clinic Students develop projects useful in academic clinics with the view of sharing them with other legal aid organizations. 2. Professionalism Course Students learn basic principles to ethical lawyering; a component is dedicated to developing technological competencies in programs like A2J Author. 3. Hybrid Legal Skills Seminar/ Practicum

Students learn technology skills at the same time as they learn legal practice skills.

About the Clinic: <http://a2jclinic.classcaster.net>;
<http://www.a2jauthor.org/content/a2j-clinic-project>

Sample syllabi: <http://a2jclinic.classcaster.net/course-information/sample-syllabi/>

Columbia Law School	<i>Lawyering in the Digital Age Clinic</i>	Students learn about contemporary lawyering through digital technologies; they learn to implement technology in more traditional realms of practice and thereby “acquire the new skills that are transforming law practice—knowledge management, electronic fact-gathering, and presentation.”
		Course description: http://web.law.columbia.edu/clinics/lawyering-in-the-digital-age-clinic
Cornell Law School	<i>LLM: Law, Technology and Entrepreneurship</i> (first enrolment: Fall 2016; full year program)	This program targets practicing attorneys and recent graduates, “with the specialized skills needed to support and lead technology companies in the increasingly complex and dynamic digital economy.” The one year program brings together legal principles, business management apps, and established technology sector businesses.
		Program information: http://www.lawschool.cornell.edu/news-center/Cornell-Tech-and-Cornell-Law-Launch-Innovative-Master-of-Laws-LLM-Degree.cfm
Florida Costal School of Law, Center for Law Practice Technology	<i>Access to Justice and Legal Technology</i>	Examines which kinds of technology provide legal information, advice or other services and the methods by which they do so. The course emphasizes technologies geared toward the legal needs of low and mid-income people.
		Course description: https://fcsf.edu/clpt/course-descriptions
Georgetown Law	<i>Technology, Innovation, and Law Practice: An Experiential Seminar</i>	Exposes students to various ways that computer technologies shape and impact legal practice, such as enhancing access to justice, capturing legal expertise, engaging with clients, and increasing quality of service. The course includes a design competition (<i>The Georgetown Iron Tech Lawyer Contest</i>), judged by experts in the field.
		Course description: https://apps.law.georgetown.edu/curriculum/tab_courses.cfm?Status=Course&Detail=2315
Harvard Law School Law, Science, and Technology Program	<i>Counselling and Legal Strategy in the Digital Age</i>	Examines the challenges faced by entrepreneurs, lawyers, business, technology advocates, and non-profit organizations in navigating law and technology. Students assess the legality of transactional documents (such as contracts and website terms of use).
		Course description: http://hls.harvard.edu/academics/curriculum/catalog/default.aspx?o=68060
Hofstra University, Maurice A. Deane School of Law	<i>Law, Logic & Technology Research Laboratory</i>	Clinical (Lab) environment with a focus on getting students to produce “tools that make legal practice and legal education more effective and more efficient.” Participants create such tools combining “logic investigations” and technology; they develop training tools for lawyers and law-makers, academics, and other; finally, they develop “management structures for coordinating teams of researchers, and for ensuring the quality of their research products.”

Lab description: <http://www.lltlab.org/about/mission-and-vision/>

Michigan State Law	<i>Reinvent Law Laboratory</i>	Clinical (Lab) environment geared toward solving access to justice concerns and other inefficiencies in the legal system. The Lab is an interdisciplinary collaboration (law faculty, other disciplines, private and public sector) to propose new service-delivery models Lab description: http://reinventlaw.com/Lab/ReInvent.html
New York Law School Innovation Center for Law and Technology	<i>Certificate Program in Entrepreneurship Law</i>	Students graduate having completed specialized courses in innovation, entrepreneurship, and how the legal profession has evolved with computer technology. Certificate details: http://www.nyls.edu/innovation-center-for-law-and-technology/students/certificate-program/
New York University Law School	<i>Technology Law and Policy Clinic</i>	The Technology Law and Policy Clinic focuses on the representation of individuals, nonprofits, and consumer groups who are engaged on questions related to technological advances from a public interest point-of-view. "It involves a mixture of fieldwork and seminar discussion ranging from technology law and policy to the ethical challenges of representing public interest organizations." Course description: http://www.law.nyu.edu/academics/clinics/semester/technologylawandpolicy
Northern Kentucky University College of Law W. Bruce Lunsford Academy for Law, Business & Technology	<i>Technology of the Modern Legal Practice/ Law Practice Technology</i>	Students critically engage with technologies that "compete with the services that lawyers provide" in order to gain a more meaningful understanding of "how lawyers can distinguish their services from these products to provide value for their clients." Course description: http://chaselaw.nku.edu/students/registrar/course-catalog/law-practice-tech.html
Northern Kentucky University College of Law W. Bruce Lunsford Academy for Law, Business & Technology	<i>Legal App Development</i>	Working collaboratively with computer science students, law students develop a legal app. Course description: http://chaselaw.nku.edu/students/registrar/course-catalog/legal-app-dev.html
Northwestern Pritzker School of Law	<i>Law, Business, and Technology Program</i>	This program is geared toward preparing students to lawyer in the digital age. Program description: http://www.law.northwestern.edu/academics/curricular-offerings/law-business/
Stanford Law School	<i>Legal Technology and Informatics</i>	Participants explore trends in legal technology . Course description: https://law.stanford.edu/courses/legal-technology-and-informatics/

Suffolk University Law School, Institute on Law Practice Technology & Innovation	<i>New Market: Legal Services</i>	Participants explore the range of technologically-based service provision options, particular case studies (Legal Zoom and Rocket Lawyer), consumer rights, and the impact of technologically driven legal services on various stakeholders. Course Description: http://www.suffolk.edu/law/academics/degrees/jd/23600.php?CourseID=613)
University of Chicago Law School	<i>Innovative Solutions for Business, Law, and Society</i>	Students develop technological solutions to legal and social problems. Course description: http://www.law.uchicago.edu/courses
University of Pittsburgh School of Law	<i>Artificial Intelligence and Legal Reasoning Seminar</i>	Participants explore whether computer programs that can help solve legal problems. Course description: http://law.pitt.edu/academics/courses/catalog/5895
Vanderbilt Law School	<i>Technology in Legal Practice</i>	Introduction to principles of technological innovation, trends in legal practice (consumer law revolution, crisis in access to justice, unauthorized practice of law) and legal system design. The students are evaluated on a “pitch” project, whereby they present a legal innovation tool to a panel of experts. Course description: http://law.vanderbilt.edu/courses/340