THE
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Technology for Legal Empowerment
A Global Review

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This research report, commissioned by the Open Society Justice Initiative, was conducted by The Engine Room from August to December 2018.

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Key findings

- **Developing and implementing a technology-enabled legal empowerment project can have a profound effect on the way an organisation works.** Thorough user testing and research can help organisations to rethink how to support people dealing with legal problems, and encourage a new, more collaborative way of working - both within legal empowerment-focused organisations, and with people themselves.

- **Clearly defining the problem that needs to be solved and then assessing how technology could help was an important strategy for many initiatives**, In this way, organisations can use technology to supplement - rather than substitute - their existing in-person support.

- **Creating and presenting clear, easily comprehensible content is key** – the structure, style and tone of the legal information itself is as important as the technology used to deliver legal information. Many interviewees described repeatedly revising their content after learning more about the style and type of content that was needed.

- **The in-depth user research and continuous iteration needed to design and implement initiatives that respond to users' needs requires considerable time and resources.** Interviewees frequently found that development took longer than anticipated because of the need to adapt to user research findings, while we found significant numbers of initiatives that had become inactive since being launched. Open discussion among initiatives about these challenges may help to limit their impact.

- **Providing public-facing legal information through technologies is an ongoing process that requires consistent responsiveness to feedback from users - and sustained financial support from funders or other sources.** Projects described engaging consistently and at length with their users, and said this helped them adapt their content, increase engagement and gain ideas on how to improve their services. They were often only able to do so because of a supportive funder, or having received a sizeable grant to develop and revise a project.

- **Information on legal problems may not only be privileged but also highly sensitive**, particularly when the problem is experienced by a member of a marginalised group or a person in a vulnerable situation. Initiatives have a responsibility to ensure their privacy policies comply with local privacy regulations, and that all sensitive data collected, transmitted and shared by and with users are handled with care and respect.

- **All the above findings are in line with existing research and best practice on how technology can be used to support social change efforts.**[1] Initiatives should consult these principles, consider if they are relevant for legal empowerment work, and incorporate them into their work as appropriate.

- **Most initiatives are designing and implementing their projects without an awareness of comparable projects outside their country**, either as a source of ideas or to provide lessons on good practices. We found few examples of a technology tool being replicated in another jurisdiction, all of which were located in Europe, North America or Australia. Differences in context ranging from connectivity, existing infrastructure and legal restrictions have also hampered efforts to replicate technology tools.

- Interviewees were often unaware of networks led by organisations such as the Hague Institute for Innovation of Law (HiiL)[2] and Namati[3] that might allow them to find such information. **There is now an opportunity to highlight and share experiences of successful technology use in legal empowerment more widely.** This research aims to contribute to that effort.

Introduction

Legal empowerment is concerned with strengthening the capacity of all people to exercise their rights.[4] It's about grassroots justice — ensuring that law is not confined to books or courtrooms, but is available and meaningful to ordinary people.

People and organisations are working towards this goal worldwide, in ways ranging from expanding provision of free legal services to making public legal education and information more accessible. All these approaches focus on explaining to people how the law affects them on a day-to-day basis, improving their ability to access formal justice systems, and empowering people to change the law.

This report describes one way in which legal empowerment actors are attempting to do this: using technology to give people information about the law, connect them with legal advice, and provide them with legal services.

Based on a scan of 136 initiatives worldwide and interviews with more than 50 people, the report analyses how technology is being used for legal empowerment work in jurisdictions with widely varying justice systems, legal aid provision, connectivity and access to technology. While recognising the important recent work by governments to increase the efficiency and accessibility of the formal justice system, the report foregrounds the activities of non-profit organisations, companies and social enterprises that operate separately from — or seek to augment — state-provided legal services.

The report examines a broad range of types of technology targeted at ordinary citizens, from SMS-based information systems to sites that allow people to assemble legal documents, resolve disputes and find legal information tailored to their situation. Throughout, it focuses on what technology does — and does not — add to existing ways of building the trusted relationships that are essential to legal empowerment.

Drawing on the experiences of the people who design, build and manage these initiatives, the report aims to understand what makes public-facing technology-enabled projects more likely to be used and useful.

WHY ARE LEGAL EMPOWERMENT ACTORS INTERESTED IN USING TECHNOLOGY?

There are many gaps in our knowledge of how citizens engage with the law and legal services.[5] Recent research has broadened our understanding of how people resolve legal problems, focusing on their knowledge, skills and psychological readiness — in other words, their 'legal capability'.[6]

Research on legal capability suggests that although many people experience legal problems, they often don't know their problem is a legal one and are unaware of what legal support might be available to them. Often, they don't attempt to solve the problem at all.[7] Those who do try to resolve a problem are unlikely to involve lawyers or courts, instead seeking help from a family member, friend or other party.[8] In many countries, informal justice systems also provide an accessible alternative to formal mechanisms, with quick, relatively inexpensive and culturally relevant assistance.[9]

As part of calls to orient justice services more towards citizens,[10] the legal empowerment field is continuing to work to embed technology into legal services in a way that understands and prioritises people's justice needs.

To its proponents, technology offers a more efficient means of providing legal services to a wider range of people. Specifically, they argue, **technology offers the potential to expand legal advice providers' geographic reach; allow people to help themselves more effectively; and reduce costs related to hiring lawyers and specialist providers.** Legal information presented in a way that ordinary people can understand, and through readily accessible channels, also has the potential to level the playing field between legal professionals and others — and thus reduce inequities in access to justice.

This report demonstrates that, around the world, initiatives are already using technology to:

- help people diagnose legal problems themselves

- help people assess their entitlement to benefits or legal assistance

- provide people with legal information that is easier to understand and access

- give individuals legal information that is customised to their specific needs

- support people through processes such as representing themselves or resolving disputes

- generate legal documents

- connect people to organisations that can provide assistance.

Introducing technology can have far-reaching implications for the way that legal empowerment organisations do their work. For example, interviewees highlighted that using technology to increase access to justice often comes with new regulatory challenges and raises questions about the role of technology within the broader practice of law. In some countries, for example, there is a fine line between providing legal information or legal advice - the latter may be prohibited by rules against the 'unauthorised practice of law' - not to mention uncertainty about whether legal information found online is updated sufficiently regularly.[11]

Recognising that identifying a legal problem is an important step towards resolving it, many of the initiatives we found aimed to help users better understand the nature of their legal problem, and then guide them through the maze of decisions and legal processes that follow. Research suggests that tools explaining a process and helping users make choices can support them to exercise more agency, rather than 'thinking for the user.'[12] Such tools try to achieve this by guiding users through an online pathway that is adjusted dynamically according to their needs and was developed on a foundation of expert knowledge.[13]

However, **there is also evidence that using technology to bring laypeople closer to the law is a complex task and that simply publishing legal information online does not directly equate to users' improved knowledge of rights.**[14] As legal design scholar Margaret Hagan notes:

> *simply putting legal information and resources online will not by itself increase laypeople's access to it. The information must be presented in usable and user-friendly ways so that it will be of value to people beyond experts like lawyers and law librarians.*[15]

If not implemented carefully, technology can deepen existing inequities in access to information; distract from the need for accessible and in-person legal services; and provide unreliable information.

Research suggests that **people who are marginalised are less likely to recognise legal problems and obtain legal advice, and more likely to lack knowledge of their rights and suffer the negative consequences that result.**[16] Moreover, there is evidence they may be less proficient at finding relevant advice and accessing legal service — either online or offline — because of knowledge, skills and confidence gaps, and emotional distress.[17]

Access to the internet and mobile phones is also more limited among disadvantaged groups, and is consistently lower among women, older people and people based in rural areas. **Technology-enabled initiatives that ignore socio-economic, geographic and digital literacy-related barriers have the potential to deepen inequalities in access to justice.**[18] Any use of technology to genuinely broaden access to justice must be sensitive to these dynamics.[19]

Technology also has the potential to alter the relationship between a person and an organisation that is providing advice or support. Research suggests that people find technologies most valuable when they promote the sense they are having a face-to-face meeting or back-and-forth conversation about their problem.[20]

In many countries, there are insufficient resources to increase direct contact with legal advice through individualised one-on-one communication. In this context, carefully designed technology tools can bring organisations closer to larger numbers of people without the time required for one-on-one, in-person visits or phone calls.

However, technology is not a replacement for in-person legal advice and support. As many of the initiatives in this report show, technology can help determine when in-person support is most needed, and how best to guide a person to it. Interviewees consulted for this report repeatedly cautioned that technology should not be introduced primarily to cut the costs of providing legal information and advice, and that doing so could be counter-productive.[21]

Personalised legal advice provided by another person will remain a crucial part of legal empowerment efforts. If used well, technology could help target this in-person support to situations where it is most needed, by helping organisations communicate reliable, easily understandable advice through communication channels that people already use. This report aims to investigate if, and how, this can be done.

02

Technology in public-facing legal empowerment initiatives: trends

USES OF TECHNOLOGY

This section describes eight of the most common ways in which initiatives are using technology to provide legal information and services, drawn from a global scan of existing initiatives.[22] It describes these interactions in detail, and explains how they aim to help users meet their legal needs.

1 STATIC SITES

What are they?
Online information sources, targeted at non-lawyers, which display legal information in a 'static' form that is not tailored to the needs of a specific user.

How do they work?
Static sites present information in a variety of ways:

- The text of a law or laws on a particular topic, organised by issue area, as with *Fired Without Cause* in Canada.[23]

- Text produced by the initiative that explains a legal issue in terms that can be understood by non-lawyers, typically organised around problems a person might face, as with *Singapore Legal Advice*.[24]

- The text of questions submitted by users in combination with answers provided by lawyers, as with *HiGrit* in India.[25]

- Contact details of relevant groups or institutions, designed to help users find a relevant institution or legal service that can provide support — either pro bono advice, as with *Justika* in Indonesia,[26] or lawyers who charge at standard rates, as with *LexyOm* in Lebanon.[27] In some cases, sites include a form where users can submit a question and be contacted by lawyers with offers of support, as with *LawStrive* in Nigeria.[28] In countries such as India, a range of for-profit initiatives allow users to directly book an appointment with a lawyer chosen from a database, or allow lawyers to contact them directly with bids. In some cases, but not all, lawyers listed on these sites are validated through partnerships with lawyers' associations, such as *Canlaw Syriah* in Malaysia.[29]

- Static sites that provide content in video format, as with South African initiative *Baobab.law*'s videos of lawyers explaining how to perform legal procedures.[30]

What do they aim to do?

Depending on the combination of the types of information above, static sites aim to explain to users what laws exist in their country, give users information about their legal rights and the options available to them, and to help them connect with organisations that might be able to support them.

What are the potential advantages over existing solutions?

As with any resource published online, static sites offer initiatives the potential to present large amounts of legal information or links to support providers without the costs of printing, in a way that can be dynamically updated over time, and with associated functions such as search features and hyperlinks to content within the resource and other relevant content.

However, solely placing legal information online does not necessarily mean that users will be able to use it more easily. Our research found that static sites could do more to present information in easily digestible, attractive formats that are accessible on mobile devices as well as desktop computers.
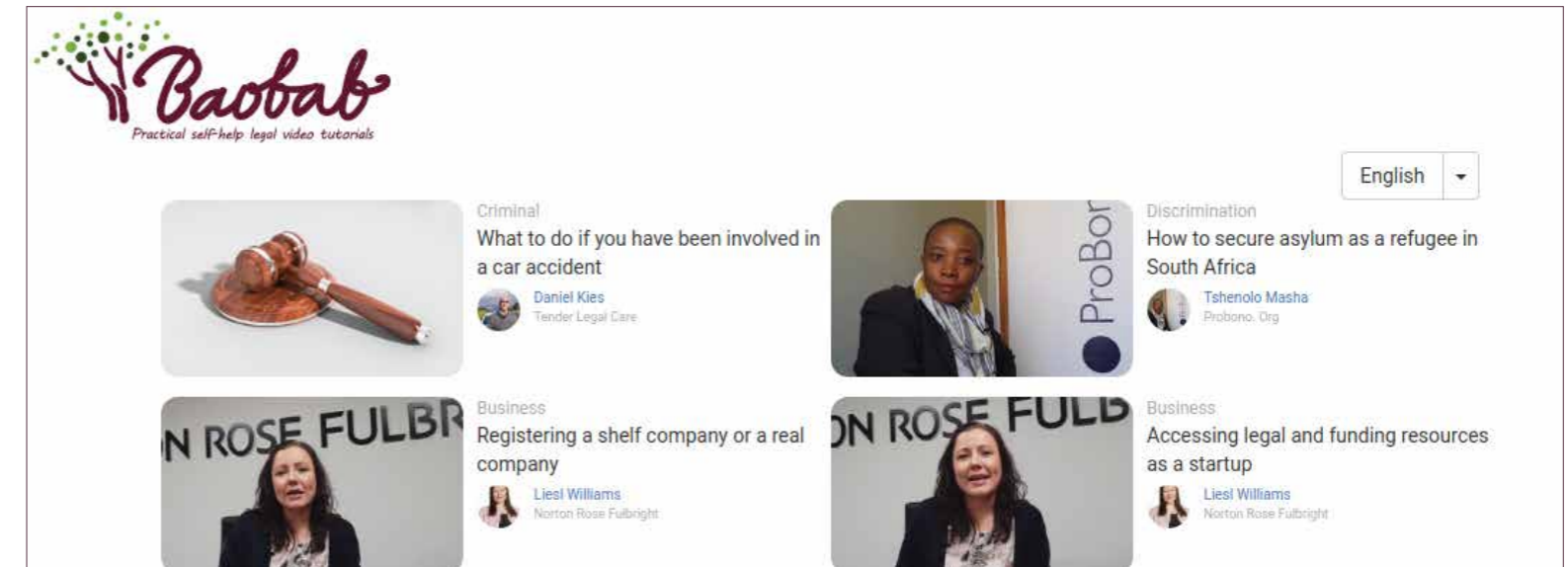

Image (left to right): screenshots of the websites of Baobab.law (South Africa), Singapore Legal Help (Singapore) and LawStrive (India)

2 GUIDED PATHWAYS TO LEGAL INFORMATION

What are they?
Guided pathways to legal information ask users a series of questions that help them refine, define or select the legal issue they are facing, and then provide them with information that is tailored to their needs.

How do they work?
Guided pathways typically provide users with a set of questions to answer, either asking them to enter text — often to identify their location — or to select from a list of options to identify the legal issue they are facing. Users are typically asked to start by selecting their problem, either through:

- Choosing an issue they would like help with from a populated list, and then answering a set of screening questions, as with *Confident Commuter* in Australia.[31]

- Choosing what issue they would like help with from a populated list, and any relevant demographic information that would affect their ability to receive support, as with *Illinois Legal Aid Online*.[32]

- They are then asked a series of follow-up questions that assess their eligibility for support and/or collect information that users can include in a request for support, complaint or application. In the case of US-based initiative *Represent*, information is presented in the form of an animated game focused on four US states.[33]

What do they aim to do?
Guided pathways aim to help users identify if their question is a legal one, what rights they may have, and resources and information that are available to help them. Typically, users will be able to download or print information relevant to them after completing the pathway, either in full or divided by topic. Pathways also often provide users with small amounts of information during the guided process, typically with accompanying questions.

What are the potential advantages over existing solutions?
Rather than static sites or paper documents with legal information, guided pathways aim to show users only the small amount of information that is relevant to their situation, limiting the number of questions that need to be asked using conditional logic. Responding to evidence that online readers find it difficult to read and assimilate large quantities of information,[34] guided pathways aim to provide advice in smaller chunks, in a format that users can walk away from and return to later. Guided pathway functions can also be combined with screening functionalities, to assess whether an individual may be entitled to specific benefits. *Immi*,[35] for example, helps immigrants understand their rights and the legal benefits they are eligible to.

3 GUIDED PATHWAYS TO SPECIALISED LEGAL ADVISERS

What are they?
These services ask users to define their problem before presenting them with information on organisations or individuals such as pro bono lawyers, non-profit organisations or lawyers who can provide further support. In some cases, this is combined with legal information in the way described in 'Guided pathways to legal information'.

How do they work?
In terms of functionality, guided pathways to specialised legal advisers work in the same way as those providing legal information (see above). However, these tools differ by presenting users with a list of legal aid organisations, legal services, lawyers or paralegals geographically near them who could help with their situation, sometimes structuring help by means of delivery (by phone, online or in person).

Referrals take three main forms: some provide a list of names that users can contact themselves as with **Pakistani Lawyer**;[36] others support referrals in which users' contact details and access to their online application are shared with the support provider, as with the US-based immigration advice initiative *CitizenshipWorks*.[37] Still others facilitate 'warm' referrals, in which information about a person is shared by another actor on the person's behalf, as with *Justice*

Connect[38] in Australia, which helps a person explain their problem and match them with a Justice Connect service or self-help tool. In the case of a service, it also helps the user make a guided online application for assistance. This way, the tool is an example of a combination of guided diagnostic, intake and triage.

What do they aim to do?
Guided pathways to legal support aim to help users move from a problem or legal question to identifying legal support that is most appropriate for their needs — either because the support provider has relevant specialist experience or offers a free or reduced rate. They typically also aim to provide users with a wider choice of support providers than they might otherwise be able to access through their own networks.

What are the potential advantages over existing solutions?
These initiatives are based on existing systems called 'referral systems', typically organised around a telephone hotline with a human who helps navigate a written list of content. In this case, technology aims to help users find information that is relevant to them in a more efficient way, replacing or complementing what humans can do.

4 'LIVE CHAT' FEATURES

What are they?
A small number of initiatives provide users with an online chat feature that allows individuals to ask questions directly to an adviser with legal training, who responds in real time.

How do they work?
Live-chat features are often built directly into projects' websites. Examples of these include the *Citizens Advice*[39] online chat service in the UK and the *LawHelpNY*[40] LiveHelp service, which includes a chat window on its website that is staffed during working hours.

What do they aim to do?
Live chat features involve a human adviser function in the same way as a telephone helpline, allowing users to chat directly to a person who can give them guidance or connect them with relevant support. They are the most labour-intensive of the interactions presented in this report.

What are the potential advantages over existing solutions?
The most important promise of this solution is its potential to offer support in places where specialised advice providers are unable to travel to a location in person. However, it is important to recognise that these locations may also have limited connectivity, hampering efforts to provide high-quality advice and support.
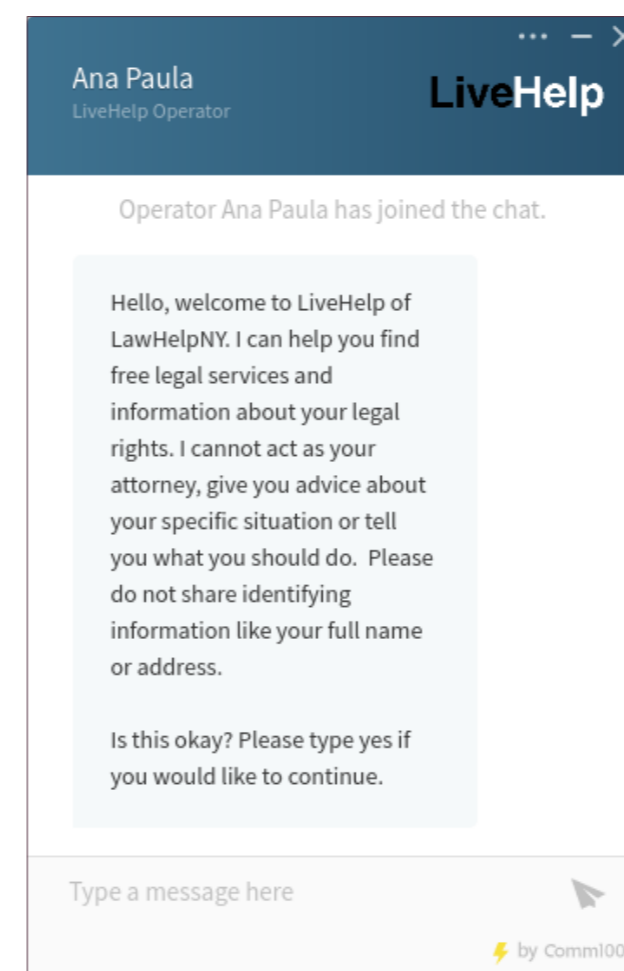
Image: screenshot of live chat support provided by LawHelpNY

Ana Paula
LiveHelp Operator

LiveHelp

Operator Ana Paula has joined the chat.

Hello, welcome to LiveHelp of LawHelpNY. I can help you find free legal services and information about your legal rights. I cannot act as your attorney, give you advice about your specific situation or tell you what you should do. Please do not share identifying information like your full name or address.

Is this okay? Please type yes if you would like to continue.

Type a message here

⚡ by Comm100

DOCUMENT ASSEMBLY

What are they?
Document assembly tools are designed to automate the creation of legal documents, such as wills or consumer complaints.

How do they work?
The feature asks users to answer a series of questions in a staged form-filling process, which then creates a legal document, usually provided in plaintext and in a downloadable form (either in Microsoft Word or PDF), which is often emailed to them as well. Examples of these processes include *Dear Landlord*[41] and *c-App*,[42] which ask users to fill out a form before generating the requested document for them. In one initiative, *DoNotPay*,[43] users interact with a chat interface that assembles the information it needs to fill in the documents. *A2J Author*[44] provides a template for an organisation to draft an interactive form through a short series of questions presented in a visual form, and has been used in four countries (including by many legal aid organisations in the US). Contrary to tools using guided processes, tools with document assembly features usually focus on this interaction alone.

What do they aim to do?
Document assembly tools are often presented as standalone solutions that help users complete a simple process. Document assembly is also used as a component of other interactions described in this list: for example, online dispute resolution platforms often allow users to automatically produce a document that sets out resolutions reached by the disputing parties. In other cases, such as *CitizenshipWorks*,[45] document assembly initiatives include expert systems that help users identify a legal issue and provide guidance to complete a form.

What are the potential advantages over existing solutions?
Document assembly-focused initiatives primarily aim to increase the efficiency of legal processes that require a document to be created, such as a will or application for legal assistance. In many jurisdictions, such documents are only otherwise available when prepared by a legal professional. Many services therefore emphasise their cost-saving potential, producing documents for free or at a lower cost than is otherwise available. Finally, some services aim to make starting a legal process easier by completing administrative procedures for the user: the French initiative *Litige.fr*, for example, asks users questions that allow them to send a letter by post for free, help them generate and validate a legal dossier, and then send a complete dossier to their adversary.[46]

5 ONLINE DISPUTE RESOLUTION

What are they?
Online dispute resolution (ODR) tools provide an online interface that facilitates the resolution of disputes, typically in consumer disputes or civil law matters such as divorce. They can support negotiation and mediation, or a combination of the two.

How do they work?
ODR tools generally take the form of a platform that parties to a dispute and mediators can use to share information about points of disagreement and consensus, identify proposals that all parties can agree to, and map out stages of a dispute resolution process that users can follow. At each step, platforms provide information, advice and suggested next steps. Some initiatives charge users for use of their services, such as the Netherlands-based *e-Court*;[47] while some, such as Indian initiative *PreSolv*, offer reduced rates for people from low-income groups;[48] and still others, such as the British Columbia-based *Dialogue Tool*, which is part of MyLawB do not charge.[49]

While this report does not look at solely government-run initiatives, it is important to note the continuing development of several online dispute resolution mechanisms that are integrated into court or tribunal processes. These include initiatives in Canada (British Columbia),[50] and pilots in the US (Utah,[51] Ohio,[52] California),[53] Australia (Victoria),[54] and England and Wales.[55] Of these, British Columbia's *Civil Resolution Tribunal*,[56] established in 2016, is the most mature. It helps individuals diagnose a problem, and provides them with legal information and a guided online dispute resolution process, followed by links to a formal tribunal process.

What do they aim to do?
Most initiatives involving ODR aim to avoid court disputes between users and other parties, thus sparing users the cost of official legal representation and reducing the burden on courts. They also have the potential to increase efficiency around managing and monitoring these processes, thereby making better use of mediators' time and expertise.

What are the potential advantages over existing solutions?
Initiatives primarily focus on resolving small civil claims using online methods of dispute resolution, with some allowing users to meet a mediator online without the need to attend court in person, and others guiding users through more sophisticated legal advice processes.
Aside from the potential efficiency benefits outlined above, ODR systems also set out a clear step-by-step process that users can add to and amend as the resolution process continues. They can also be combined with document assembly processes, providing users with documentation on agreements to create a permanent record of how a dispute has been resolved. ODR systems have primarily been used in Western Europe and North America — our research was unable to identify initiatives outside these regions.
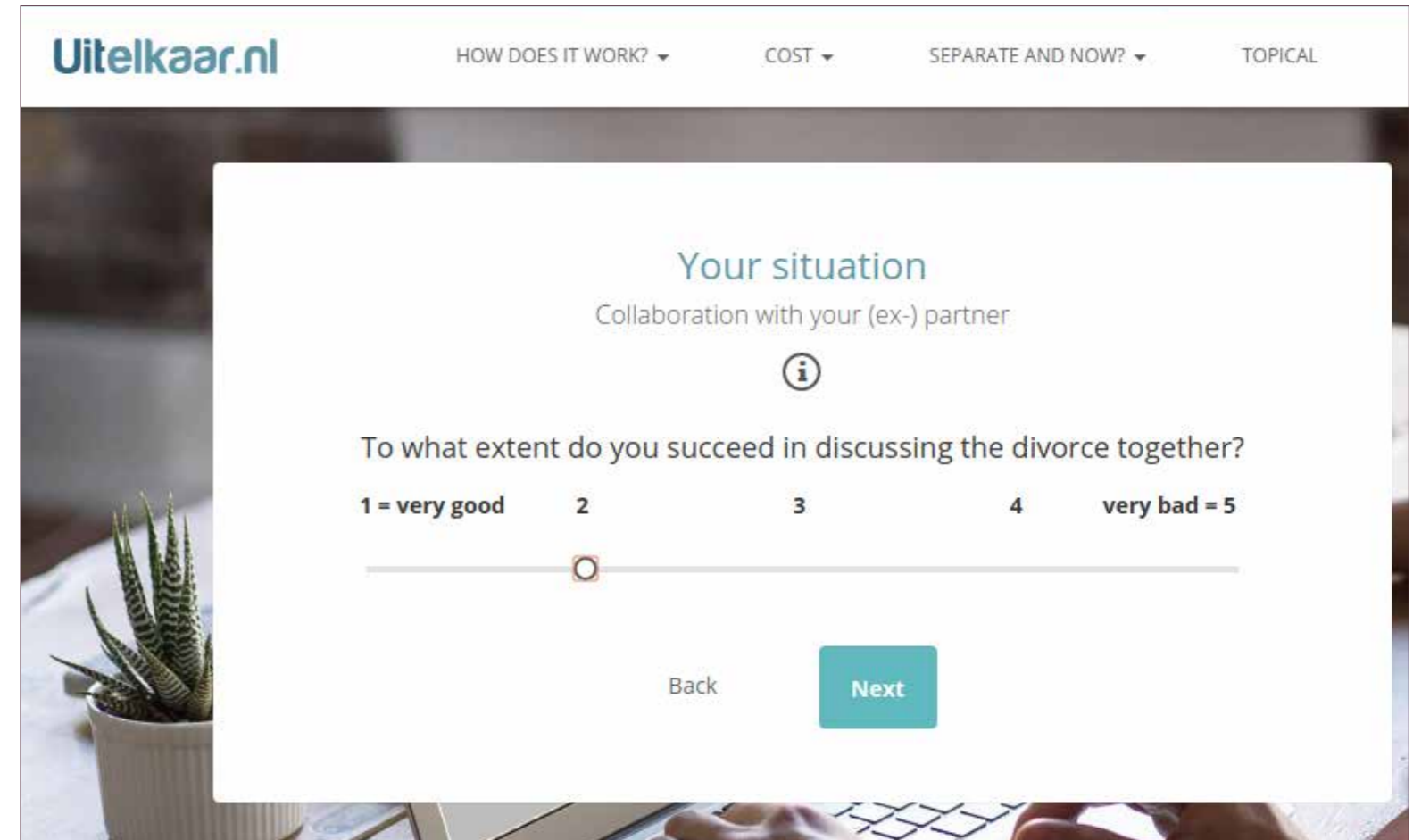

Image: A screenshot of the Uitelkaar.nl online dispute resolution platform.

6 STRUCTURED DATA COLLECTION FOR USE IN LEGAL CASES

What are they?
These initiatives help users collect data about a legal problem in a structured way, which they can use as evidence in the justice system.[57] This collection process typically requires users to follow a defined process when entering data into the tool. One exception to this, *HeatSeek*, uses an internet-connected temperature sensor to automatically collect readings for use as evidence of a New York-based landlord's failure to heat a building to legally required temperatures.[58]

How do they work?
Some initiatives support the collection of evidence for use in court, as with the US-based initiative *Callisto Campus*, which allows users to document evidence of sexual assault experienced on a US university campus, before connecting them with a community helper who will help build a legal case.[59] In other cases, initiatives are targeted at users who already have an open legal case, and who need additional evidence to strengthen the case, as with the Brazilian initiative PLP 2.0, which allows women to record audio evidence of violent situations as they happen, using their phone's microphone.

What do they aim to do?
By allowing users to build an evidence base for a legal case, initiatives of these kind aim to help users collect more evidence in a way that is admissible in court or document their case. They also seek to make it easier to verify the evidence collected in some instances: tools are often part of mobile apps, which allow users to take photos, video and audio, combined with additional metadata collected by a smartphone.

What are the potential advantages over existing solutions?
As access to technology increases, submission of evidence in digital formats – such as photos captured on smartphones – is likely to increase in many jurisdictions. Initiatives that allow data collected in this way to be more easily verified have the potential to help a larger group of people access justice. However, this research found only a small number of public-facing legal empowerment initiatives that used this functionality. In a separate but related area, documentation and evidence collection initiatives seek to document incidents such as police violence by collecting evidence in a way that preserves content metadata and a clear chain of custody.[60]

Many initiatives allow users to report instances of corruption or other criminal acts to tackle problems on a larger scale (such as by investigating officials). However, in most cases, these initiatives use the information for advocacy or investigations rather than providing direct legal advice or support to the person submitting the report.[61] Although combining legal assistance and advice with collective advocacy for changes in legal systems is an important part of legal empowerment work, technology initiatives solely focused on this goal are beyond the scope of this report.

Image (top): A temperature sensor provided by HeatSeek'
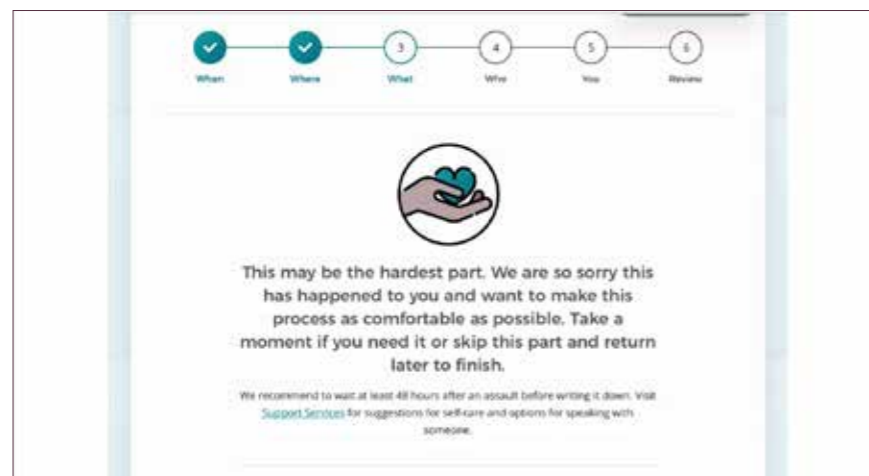
Images (top and bottom): Screenshot of Callisto's user interface and information on the way Callisto functions, from the initiative's website.
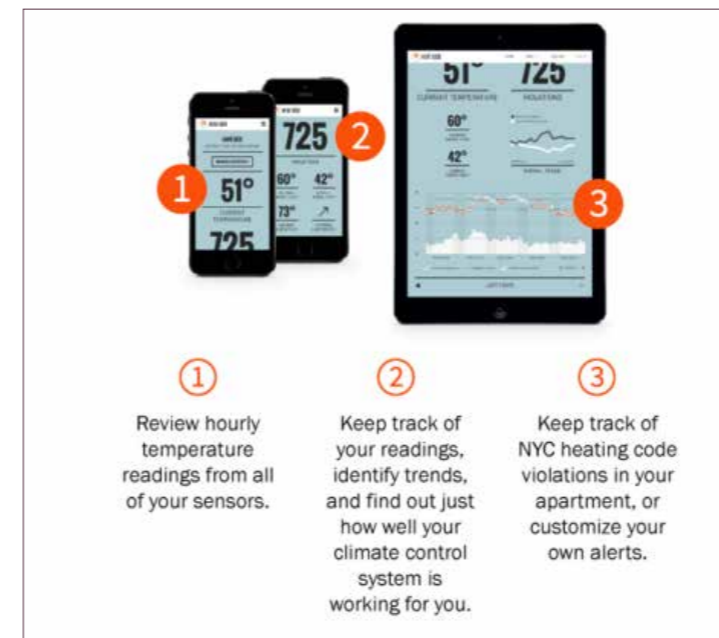
Images (center to bottom): Information describing HeatSeek's way of working.

7 CHATBOTS

What are they?
Chatbots provide information in the style of a direct-messaging chat interface, with an automated flow of questions and answers determined by conditional logic. (For more information on the technology underlying chatbots, see 'Types of technology', below.)

How do they work?
Most access to justice-focused chatbots we found did not structure information in the form of a conversation in which users type questions and receive answers. Instead, they asked users to select from a set of buttons that lead them through a process based on conditional logic. This makes them similar to the guided pathways above, although the language used by some chatbots adopts a more personal and conversational tone. The US- and UK-focused initiative DoNotPay (available only as an iPhone application), also generates documents and allows users to submit forms or compensation requests automatically on issues ranging from claiming free fast food to making a claim in a US small claims court.[62]

What do they aim to do?
Chatbots aim to provide information to users in a way that simulates a conversation, taking advantage of the increasingly widespread use worldwide of messaging apps to present information in a format that users are already using widely. Their aims are otherwise broadly similar to those of guided pathways. The implications of using chatbots to communicate information remain unclear. While some suggest that users are more likely to talk more openly than in an in-person conversation, there is also evidence that human–chatbot communication uses a significantly more limited vocabulary, and thus might be unsuitable for discussing sensitive issues.[63]

What are the potential advantages over existing solutions?

In the commercial 'legal tech' field, chatbots are often cited as having the potential to provide information and services to significantly larger numbers of people.[64] However, most interviewees cautioned against what they saw as hype about the use of chatbots in legal empowerment work. Many existing chatbots are focused on helping users tackle legal problems that are more likely to affect higher-income, literate users[65] rather than lower-income users (the DoNotPay chatbot, for example, was only available on iPhones at the time of writing).[66] Other concerns included incorrect claims that artificial intelligence (AI) is being used in chatbots,[67] the risks of sharing individuals' legal information with Facebook when using platforms such as Facebook Messenger, and the danger that users will believe there is a real person behind the chatbot itself. It is likely that general commercial development will lead to a rapid increase in the use of chatbots and, accordingly, they may be technically improved.[68] However, more research and testing is needed to assess if and how chatbots might be used for legal empowerment work in the future.
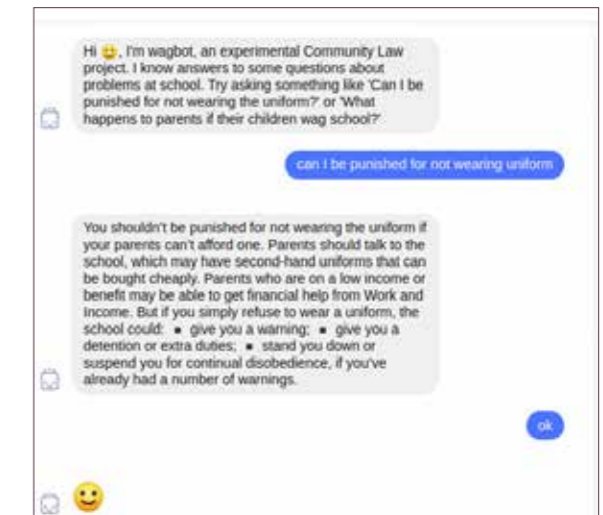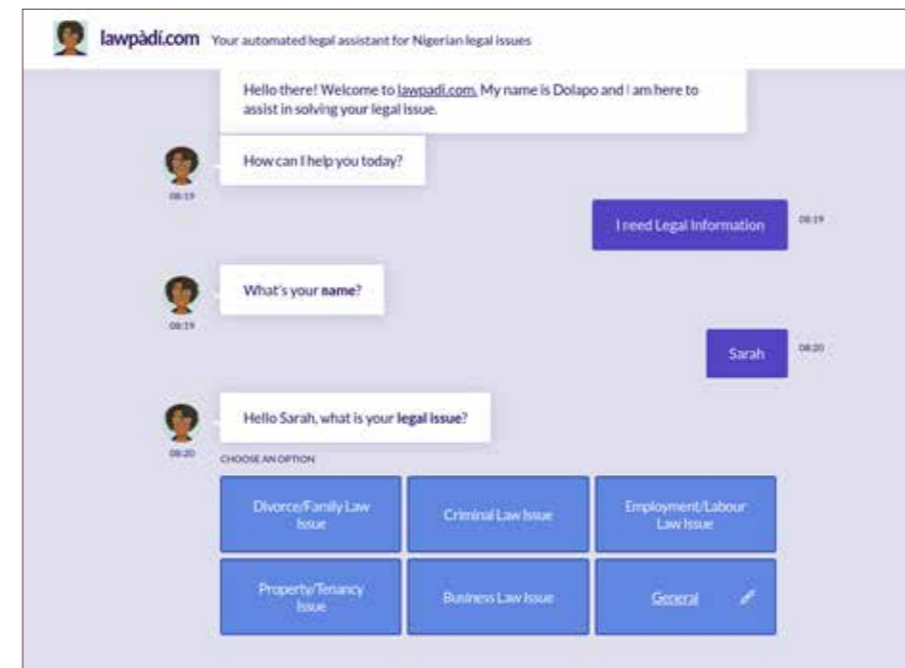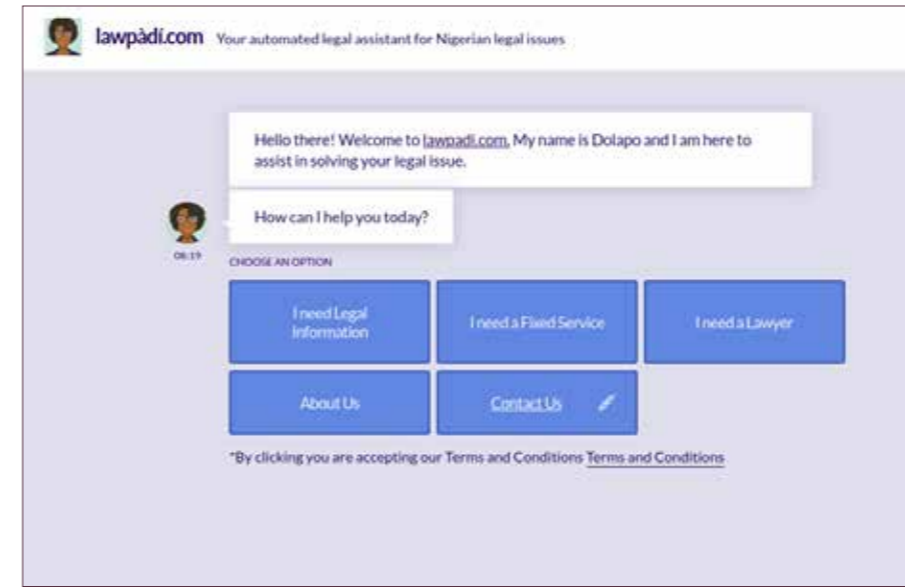
Images: Screenshots of chat interfaces used by HeLawyer (Benin), Wagbot (New Zealand), which both use Facebook Messenger, and LawPadi (Nigeria), which uses a commercially available platform.

TYPES OF TECHNOLOGY

Initiatives used five main applications to allow people to complete these interactions:

- websites (including document assembly and guided pathways)

- SMS and USSD messaging

- mobile phone applications (apps)

- live chat services (hosted on websites)

- chatbots (provided through messaging apps).

Most initiatives under review for this research used websites as the primary means of providing information. Mobile apps were the next most common, though they remained relatively rare, while a comparatively limited number of initiatives provided information using SMS, chatbots and live chat services.

1 WEBSITES

Most initiatives were using websites to present legal information in a static format. This took two main forms:

- Requiring users to identify the area of law that is relevant to them, and then providing them with the text of that law.

- Presenting users with a set of questions, and then providing them with tailored legal information that has been written to be comprehensible for non-lawyers. Examples include *Housing Law Answers* in New York (US) and *Nyaaya* in India (see picture, opposite).

Initiatives typically also use websites to present guided pathways to legal information, and guided pathways to specialised legal advisers. There was significant variation in the way content focused on pathways was designed: in some cases, they were integrated into other content (Illinois Legal Aid Online in the US),[69] whereas in others, the website was structured around a guided process (Justice Connect in Australia – see picture, opposite).[70]

Common Questions

How do I know my husband is subjecting me to domestic abuse/violence?

If your husband is physically beating you, or denying you access to food or money, or is forcing you to engage in sexual activities that you do not want to perform (including sex and something like forcing you to watch pornography) or mentally and emotionally harasses you about not being able to have a male child or any such other behaviour, it is domestic violence. Please look at the definitions section here for further understanding. Further, please look at this Form IV.

Image: Example of legal information on domestic violence provided to users of the Indian initiative, Nyaaya

Do any of the following apply? *

Providing this information will help us understand how to provide you with the most suitable assistance.

Why are we asking for this information?

You may select multiple options

- I am homeless or at risk of homelessness
- ✓ I live in public housing
- I identify as Aboriginal or Torres Strait Islander
- I identify as LGBTIQ
- I am over 65

Image: Example of screening questions for users of the Australia-based website Justice Connect

2 SMS AND USSD

We found a relatively small number of initiatives providing information through SMS and USSD formats, which can be accessed by people who own lower-cost feature phones as well as smartphone owners. When SMS and USSD were used, it was primarily to share logistical information such as court dates and updates on the progression of a case (*Famalia*).[71] The Indian legal empowerment organisation Nazdeek set up the ***SMS for Justice***[72] project in 2016, with the goal to build and train a Dalit women-led network of paralegals to document rights violations and use existing grievance mechanisms to demand accountability for the delivery of basic services. SMS-based solutions providing legal information were most common in sub-Saharan Africa and were typically used in two ways: to broadcast answers to common legal questions (*Sauti*),[73] or to provide personalised answers to specific legal questions (*BarefootLaw*).[74]

Image: screenshot of text shared with Famalia users on the status of their case.

3 MOBILE PHONE APPLICATIONS

Most mobile phone apps in our research were developed by initiatives based in North America. Interviewees from a range of countries frequently stated that providing information on responsive websites that could also be readily accessed on smartphones was preferable to providing it through an app, for two reasons:

- Apps can only be accessed by smartphone users who can afford to pay for the data required to download and use them.

- Even among people who use apps, there are well-documented challenges to encouraging people to download apps, and then to use them regularly (estimates indicate that the average smartphone owner uses only nine apps on a daily basis).[75]

Where initiatives had decided to use apps, it was typically because they included specific functions that would otherwise be unavailable through a website. For example, this included apps that created a forum allowing users to interact with other people sharing the same profile, as with *Laudelina*,[76] an app connecting domestic workers across Brazil; or those that include a 'panic button' function allowing users to notify lawyers or others about a legal emergency, as with *Legal Alarm*[77] in Ukraine, or *Notifica*,[78] an app designed for undocumented immigrants in the US. While a small number of
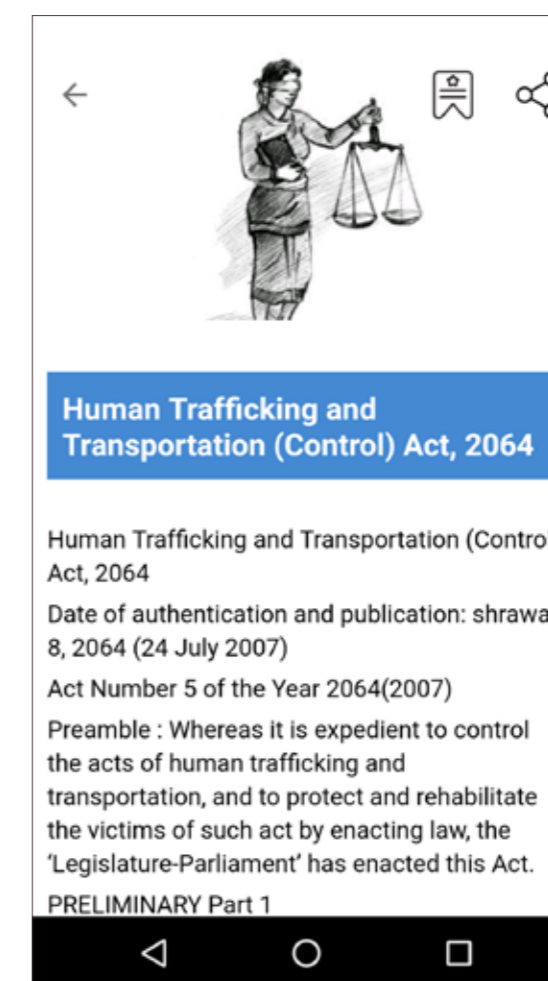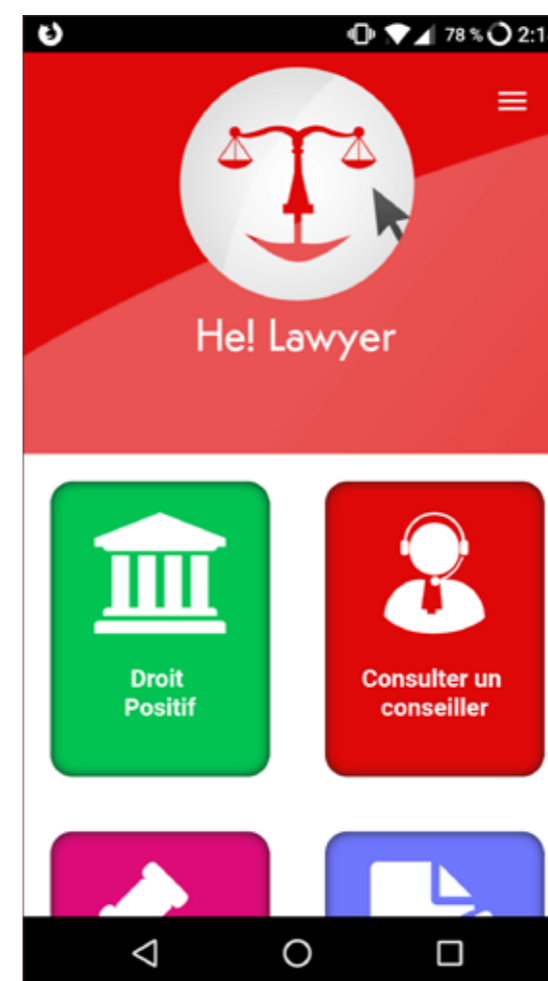
Image (on the left): A screenshot from the Benin-based He! Lawyer app.

Image (on the right): A screenshot from the Nepal-based Mero Adhikar app.

initiatives used apps to present the full text of laws in that country, such as *Pakistani Qanoon*[79] and *Mero Adhikar*[80] in Nepal (see picture, above right), they were relatively rare. Notably, *He!Lawyer*[81] in Benin (see picture, opposite) combines this information with options to contact lawyers through Facebook Messenger, SMS and WhatsApp numbers.

4 LIVE CHAT

A small number of initiatives provided users with an online chat feature that allowed individuals to ask questions directly to a human adviser, who responds in real time.

Most live-chat features we found were built directly into projects' websites. Examples of these include Citizens Advice's online chat service in the UK and LawHelpNY's LiveHelp service, which include chat windows on their websites that are staffed during working hours.[82]

Live chat features that involve a human adviser function in the same way as a telephone helpline, by allowing users to speak directly to a person who can give them guidance or connect them with relevant support. User research suggests that people may find live chat particularly appealing as a way of interacting with the law.[83] However, the time required to staff live chat services in a way that allows rapid response times makes them the most labour-intensive of the interactions presented here, and many interviewees suggested that their initiatives would be unable to use live chat for this reason.

Image:
A screenshot of Citizens Advice's online chat service.

28

5 CHATBOTS

Most chatbots were using existing messaging apps, most commonly Facebook Messenger, to communicate with their users. For example, *LawGuide Singapore*,[84] He!Lawyer in Benin and *Wagbot* in New Zealand used Facebook Messenger to deliver information.[85] Elsewhere, initiatives have been built using other commercial chatbot interfaces, such as *LawPadi* in Nigeria, in which a character asks users a set of questions that direct them to information or a service.[86]

Image: screenshot of Facebook Messenger chatbot managed by LawGuide Singapore.
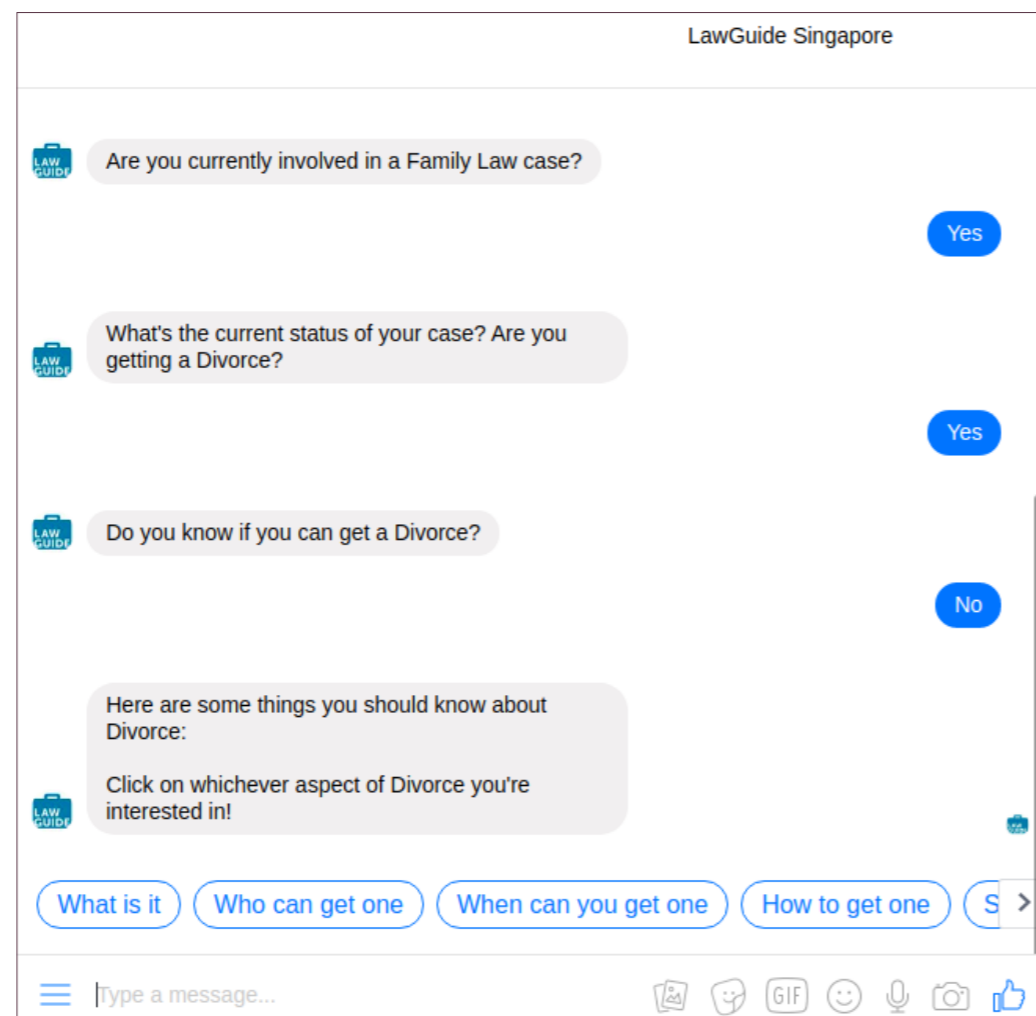
FUNDING

Our global scan of initiatives suggested that the vast majority of efforts that use technology to streamline and explain legal processes were concentrating on business-related functions, rather than addressing unmet legal needs by connecting individuals to free or low cost legal information and legal services.[87]

In most regions, technology-enabled legal empowerment-focused projects were typically made possible by significant amounts of one-off funding, such as through prizes or accelerators, or sustained support from a foundation or government funder over at least two years. A large number of initiatives appeared to be inactive, following a public launch. Although the reasons for this were rarely publicly available, the availability of funding is likely to have been a factor.

Initiatives had widely varying ways of gaining funds to support their activities.

Government funding – A small number of initiatives received funding directly from governments. More frequently, however, funding from private foundations was a key component of their funding, typically providing funding for specific projects to support the costs of setting up and building the tool. For example, UK organisation SEAP's *c-App* service was supported by funding from Comic Relief and the UK-based Legal Education Foundation, with technical support on development provided by an external web development agency. In some countries, initiatives were supported by foundations with an international focus, such as HiiL or the Open Society Justice Initiative, but these cases were rarer.

Support from international NGOs – In sub-Saharan Africa, initiatives that we interviewed had typically either funded themselves through their own resources, or had received funds through an international organisation such as HiiL (typically as part of the Justice Accelerator programme). In addition to small amounts of funding provided directly to initiatives, participants in these accelerators were typically given a relatively limited amount of money to cover their initial costs.

Prizes and challenge funds – Google's Impact Challenge awards provided seed funding to initiatives focused on access to justice in a variety of countries: support was given to Themis' Laudelina in Brazil and *Justice Connect*'s diagnostic, intake, triage and pro bono matching work in Australia[88]; in Canada, non-profit PeaceGeeks was working on *Arrival Adviser*, a service to connect newly arrived migrants to Canada with services designed to support them).[89] In a small number of cases, organisations received prize funding from other organisations, such as Ugandan organisation BarefootLaw, which was supported by the Belgium-based King Baudouin Foundation African Development Prize.[90]

For-profit entities – Finally, a range of for-profit entities, including social enterprises, operated with an explicit focus on increasing access to justice. These initiatives generated revenue in three main ways:

- Providing a paid-for service to higher-income users or specialist users to subsidise free provision to low-income users or a broader base of users, as with *Lawyers4Farmers*[91] in Uganda, which provides a paid WhatsApp-based advice service to some farmers and a free SMS service to others.

- Providing a paid technology-based service to paralegals or advice providers, who in tun charge their users a small fee for support, as with *Haqdarshak*[92] in India.

- A 'freemium' model, in which users are given initial services for free with more intensive support subject to a charge, as with *Litige.fr* in France.

- Charging all users a fee to access the service that is nonetheless lower than the cost of existing in-person services, as with *Uitelkaar*, an online dispute resolution platform based in the Netherlands.

INFRASTRUCTURE

Effective new services often depend on the strength of the technical foundations on which organisations build their work, ranging from robust, regularly updated case management systems[93] to the integration of constituent relationship management and other productivity tools into legal empowerment organisations' basic services.[94] Several interviewees emphasised the importance of information repositories providing up-to-date information on laws themselves, as well as pro bono and non-profit legal service providers on which initiatives can build new systems. For example, Nyaaya's initial primary aim was to make the text of laws in India publicly available in digital format because of the central government's failure to do so. It subsequently refocused on presenting information about those laws in a way that helped people solve legal problems.

In some jurisdictions, there are ongoing efforts to improve data and technology infrastructure to support legal empowerment efforts. The *Open Law Library*, for example, runs software that allows US governments to publish and update their legal codes online in formats that are easier for legal empowerment initiatives and software developers to use.[95] In most cases assessed for this report, these resources were compiled and maintained by a non-profit organisation (or group of organisations), such as those provided by British Columbia's BC211 system.[96] There are also efforts to create a common data standard and tools to share information on community services through the *OpenReferral* initiative, which predominantly contains information on US-based services.[97] Also in the US, statewide legal aid websites funded by the Legal Services Corporation (LSC) are required to tag material using the National Subject Matter Index (NSMI), a centralised, comprehensive taxonomy of topics for the legal aid community that allows organisations to index documents.[98] **In sub-Saharan Africa, Latin America and Asia, however, initiatives often lacked the foundations of well-maintained information infrastructure, and said they needed to compile and update information on support providers and relevant laws themselves.** Nyaaya, for example, noted the difficulty in collecting information on the large number of regulations and laws at federal and state levels in India.

CASE STUDY – PLP 2.0: BUILDING TRUST WITH STAKEHOLDERS

PLP 2.0 is a mobile app designed to help women in situations of domestic, sexual or family violence. Designed in a partnership between Brazilian legal empowerment organisations Themis and Geledés, the project won the 2014 Google Social Impact Challenge Award. It was piloted in 2016 in the state of Porto Alegre and is currently being replicated in São Paulo and Piauí.

PLP 2.0's name comes from Promotoras Legais Populares (PLPs), a community paralegal programme that Themis developed more than 20 years ago. Themis provides community paralegals in the programme with workshops on women's rights, and trains them to support victims of gender-based and domestic violence.

Location	Porto Alegre, Brazil
Organisations involved	Themis, Geledés, with support from the 2014 Google Social Impact Challenge Award
Type of interaction	Automated data collection for use in legal cases
Time to develop	6 months in 2014
Impact	Between 2012 and 2015, 164,236 women were assaulted in the state of Rio Grande do Sul, and almost 300 of these resulted in death.[94] In the state capital Porto Alegre, the Domestic Violence Court signs around 100 protective orders per month. One or two women receive an authorisation order to use PLP 2.0 every month. Individual judges select these cases based on the level of vulnerability and urgency of the case. In an average month, 15-18 users are judicially authorised to use the application. Despite the high level of users' vulnerability, no one using PLP 2.0 has died in a domestic violence incident.
Key learning	Denise Dora: "A big challenge when thinking about use of technology is understanding the people you are working with and customising development for their needs. Some women [we work with] don't have full access to the internet on phones. What works for some people in one place, won't work for others in another place."

Como funciona?

O Juizado/Vara de Violência doméstica e familia concedem a medida, com isso, em uma situação de urgência, a mulher poderá acionar a Segurança Pública e as PLPs

MULHERES COM MEDIDAS PROTETIVAS: Em caso de urgência, o aplicativo poderá ser usado para acionar a Segurança Pública/Patrulhas Maria da Penha e as PLPs.

PLP 2.0 RS

Qual a sua situação?

POSSUO MEDIDA PROTETIVA E CÓDIGO DE ATIVAÇÃO

SOU UMA PROMOTORA LEGAL POPULAR (PLP)

NÃO SOU PLP E NÃO POSSUO CÓDIGO DE ATIVAÇÃO

The app aims to protect particularly vulnerable women who find themselves in a situation of violence by connecting them to local authorities and a network of community paralegals. The users of PLP 2.0 are women who have received an authorisation order from a judge at the Domestic Violence Court, who the judge selects to use the app. **A user's court case and authorisation order are linked to the PLP 2.0 app. When necessary, both the police commissioner's office and local community paralegals are automatically made aware of the high degree of vulnerability of the alert. When the app is triggered, police commissionaires and PLPs in the local neighbourhood are alerted and can help bring the woman to safety.**
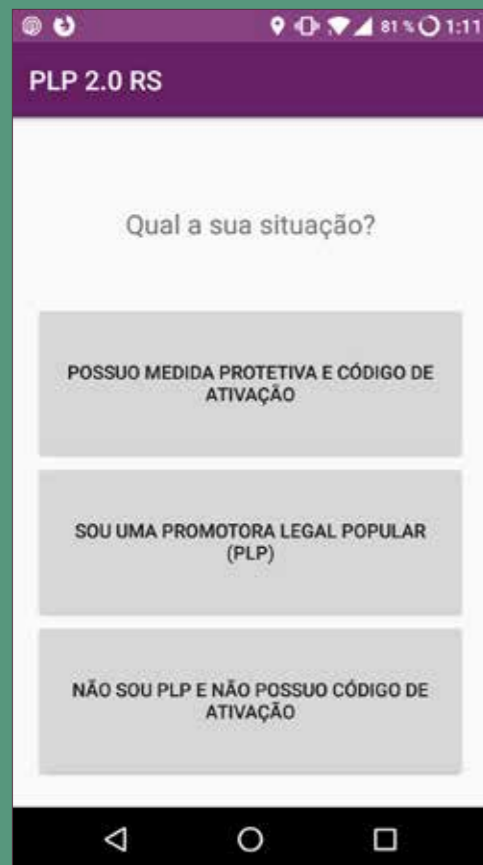
Image: Screenshots and information about the way that PLP 2.0 works.

Setting up an agreement with the stakeholders

To implement the app in Porto Alegre, Themis set up an agreement with the state association of judges, the prosecutor's office and the police commissionary, specifying the responsibilities of each of these institutions. The binding written agreement was the key element in creating access to these different institutions, and according to an interviewee, "gives a legal platform where we could demand and claim their commitment for the implementation."

The first step to setting up the agreement was made when Themis met with the head of the state association of judges. Once there was buy-in from the leadership, Themis and Geledés set up a task force, with representatives from all of the institutions. Participants included members from the police, public defenders, the state associations of judges, Themis and the independent app developer. The group kept an open line of communication through which they followed test cases and gave feedback. Every two months, the task force met in person to evaluate progress.

Themis' Denise Dora highlighted that this first taskforce was important, not only to reach an agreement, but because it helped Themis learn how the stakeholders worked: "We saw the changes within the governmental bodies. At the police, for example, the staff changes every three months." In total, the process for signing a binding agreement took six months. Building trust with the prosecutor's office and the police commissionary proved to be particularly challenging. An interviewee mentioned they found it helpful to proactively invite female police officers into the taskforce.

The outcome

The process of setting up the stakeholder agreement went hand in hand with trainings for the community paralegals and the development of the PLP 2.0 app, for which Themis hired an external contractor. **Rather than centring the technology in the development process, Themis and Geledés focused on developing strong relationships with all stakeholders.** In an interview, Dora said this was the aim, and helped them "use technology to build better public policy in the justice system."

It has now been four years since the task force signed the agreement and the app was implemented. With lots of changes in the state government, political changes could affect the workings of PLP 2.0. However, Dora is hopeful, and explained that since there is already a precedent, "the programme has been incorporated into political and judicial practices."

Implementation

This section provides detailed descriptions of the ways in which the 17 initiatives we interviewed conceived, designed, managed and evaluated their work. It discusses the ideas behind the initiatives and the stages they have gone through to come to fruition.

03

BACKGROUNDS OF PROJECT IMPLEMENTERS

There is a lot of diversity in the backgrounds of legal empowerment project founders. This section describes the makeup of project teams during the startup phase of their respective initiatives.

Of the projects interviewed for this report, a little under half were set up by an independent individual or a small and independent group of founders. Within this group, the background of the (co-)founders varies greatly, and there was no one 'typical' founder. While only a couple of the projects surveyed – such as Lawyers4Farmers and LawPadi – were founded by a lawyer or group of lawyers, and another by someone with a background in the development sector (Sauti), a few project founders had a background in business, technology or a combination of both. This is the case of initiatives such as Litige.fr, Haqdarshak, and *JustFix.nyc*.

The rest of projects started out as either being housed within an existing non-profit organisation (PLP 2.0, *Housing Court Answers*, Justice Connect, Arrival Adviser), or as a project with committed support from one or more external stakeholders (*Nyaaya, MyLawBC*, Illinois Legal Aid Online, *Gavel*). The teams on these projects were often small, but consisted of more than one person from the start.

It is common for teams to house diverse sets of skills, and to see, for example, a lawyer working with a product designer and an editor. **Intentionally building multidisciplinary teams, either by hiring staff members or independent contractors with experience in user experience (UX) design and content design, proved to be beneficial to the course of the projects surveyed.** As one India-based initiative put it it: "We knew we needed a mixed team, because this was a first attempt at [building technology] for this type of organisation. Usually, legal and research organisations are mostly lawyers and policy folks. We knew we needed a good designer."

Initiatives that were founded with a stronger focus on using technology were more likely to include people responsible for design, UX design or user research, and writing or editing online content. Existing organisations trying to introduce technology into an existing or new project were more likely to bring in external consultants to support with technical development and content and graphic design, while using existing staff (typically lawyers) to create or repurpose the content.

IDEA GENERATION AND DEFINITION

To understand the reasons for the introduction of technology-focused initiatives into justice provision efforts, researchers asked the founders of initiatives about the source of their idea to create an initiative. This took the following forms:

- **A founder's personal experience of justice issues**

  » For example, the founder of Kenyan SMS-based initiative Famalia experienced having to travel 18 hours to court during a family succession process, only to find that the judge was not sitting on that day. In a similar vein, the co-founder of Haqdarshak gained an understanding of how low-income individuals approached legal problems while working in slums in New Delhi: "I saw rickshaw drivers paying thousands of rupees for a form which costs 10 rupees in government offices, just because they didn't know."[100]

- **A founder's professional experience of justice issues**, typically gained while working in the private legal sector.

  » For example, a co-founder of Nigerian legal support initiative Gavel said that his experience working in the private legal sector had shown him the challenges that young people faced when trying to find a pro bono lawyer, which encouraged him to find a way to support them.

- **An existing legal empowerment-focused organisation's perception that there is potential to make its activities more effective.**

  » The New York-based site Housing Court Answers[101] had been providing information on tenancy rights in hard copy through 'information tables' since 1981, but felt the information was 'too dense'. The organisation decided to redevelop its website in 2015 to make it possible to share more legal information, while breaking it down into bite-size pieces. The organisation identified priority areas for new content by analysing the main questions that people calling the telephone hotline asked.

- **A founder's knowledge of activities taking place in other sectors**

  » One of the founders of Nyaaya,[102] a site that provides legal information in India, said that while working as a lawyer she had seen efforts to improve awareness in other aspects of service delivery, but felt that those efforts "seemed to be moving at a faster rate than the legal arena," and that she could not find "satisfying" answers as to why this was the case. Like several other interviewees, she mentioned medical advice provision online as a key source of inspiration.

- **A founder gaining ideas as a result of participation in a fellowship programme or being 'incubated' in an existing organisation.**

  » Gavel[103] was initially supported by BudgIT, a Nigerian 'civic tech'-focused organisation that provided support for the first nine months of its operation through a stipend to one of the founders. Elsewhere, a co-founder of the New York housing law-focused initiative JustFix.nyc described participating in a fellowship with Blue Ridge Labs, a project of the Robin Hood Foundation, which allowed him to meet his co-founders, enhance his focus on user research and gain follow-on funding to start an initiative.

This demonstrates that ideas for a public-facing legal empowerment technology tool can be generated in a wide variety of ways. It suggests that **ideas may be likely to help create effective projects when they are grounded in in-depth knowledge of problems in justice provision and the people who face them**.

"Even when you think you know people very well, things only bubble up in user testing."

USER RESEARCH

User research was described as a process that involves several stages: defining users, assessing their use of technology, creating content, testing prototypes, and conducting continued testing and interaction on the results. This section describes these stages in more detail.

Notably, the problem that project founders initially identified was not always the main problem that their initiative now focused on. **In several cases, interviewees said that the user research they conducted led them to fundamentally challenge assumptions from the start of the project**. As one interviewee put it: "Even when you think you know people very well, things only bubble up in user testing."

For example, Haqdarshak initially created a mobile phone app that would allow rural users in India to download it and get information on their eligibility for government benefits, but found that "people wouldn't download [the app because] their phones don't have enough storage." As a result, Haqdarshak fundamentally changed its plans so that advice was provided by community-based advisers, rather than the app. Meanwhile, Sauti found that currency exchange rates were so important to cross-border traders in East Africa, its target audience, that it decided to include them prominently in its initiative to attract users and create opportunities to provide legal

information to them. As one organisation put it: "We found out that you can't make assumptions about the people that you're serving. You have to remember that you are not your 'user' – they are." For Lawyers4Farmers, the literacy of its target audience is a big challenge that was mitigated by writing legal content in simple language, and designing infographics to use on its website and in training sessions.

User research and testing required a significant time investment: projects frequently spent significant periods of time creating and validating concepts, as well as testing prototypes with actual users in-person. For example, two user-testing processes identified in this research took nine months and two years, respectively:

"We found out that you can't make assumptions about the people that you're serving. You have to remember that you are not your 'user' – they are."

Single guided pathway project (9 months)	*Multiple guided pathway project* (2 years)
1. Initial paper prototyping (Feb-March 2015)	1. Outlining project concept, finalising contracts with partners (April-Sept 2014)
2. Site usability testing (April-May 2015)	2. Development of content for eight guided pathways (Oct 2014-July 2015)
3. Private beta live testing by associates (Aug 2015)	3. Preparing content for coding, front-end and back-end (Aug 2015-Dec 2015)
4. Private beta usability testing (Oct 2015)	4. User testing (Jan-April 2016)
5. Launch (Oct 2015)	5. Launch (May 2016)

CASE STUDY: LAWYERS4FARMERS – ADAPTING TO CONTEXT
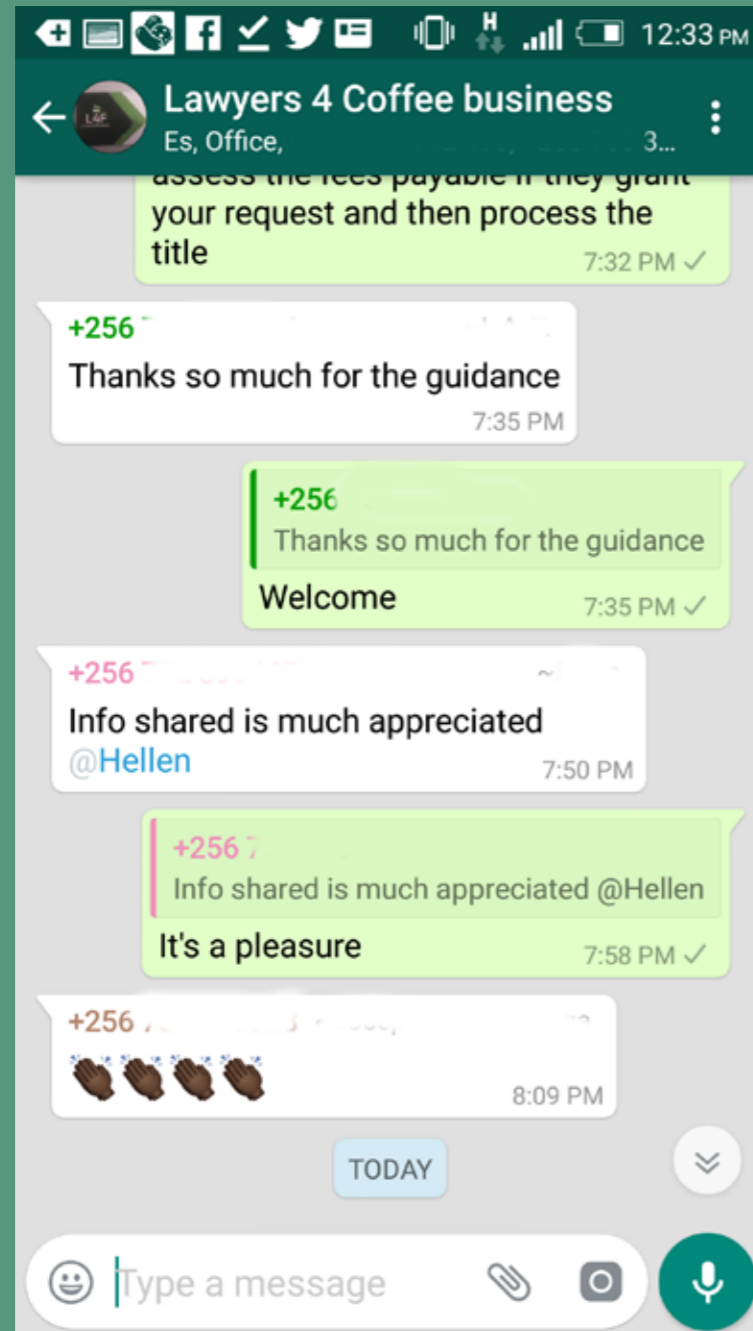
Location	Uganda
Organisations involved	Lawyers4Farmers
Type of interaction	Legal information and advice provided by SMS and WhatsApp
Time to develop	1 year (SMS solution launched in June 2017, WhatsApp launched July 2018)
Impact	According to Lawyers4Farmers, 1,460 indigent farmers received a total of 9,031 messages through the organisation's SMS platform in 5 districts of central and northern Uganda: Dokolo, Lira, Kampala, Kiboga and Rakai. Another 505 commercial farmers are members of WhatsApp groups, which are clustered according to the type of crop they farm (see the coffee-focused group below). According to Lawyers4Farmers, around 70% of problems submitted on its WhatsApp groups platform were successfully resolved.
User feedback	*Although researchers were unable to speak directly with users, Lawyers4Farmers shared the following examples of feedback that they received for one of their WhatsApp advice groups, which focused on coffee farmers (see screenshots, left.)*
Key learning	Co-founder Hellen Mukasa: "Start by being clear on who you are designing for. It must be designed for the people you are working with. Don't think for them!"

Lawyers4Farmers is a Uganda-based initiative, originally created by Kampala Legal Aid and subsequently a separate organisation, that provides farmers with basic legal information through an SMS platform.[104] The project sends legal information on frequently asked questions directly to farmers, as well as allowing farmers to ask questions by SMS and receive a reply from a lawyer. The project also runs a micro legal insurance scheme, in which groups of up to 30 farmers pay a fee that allows them to receive legal advice at a later date without having to pay (following recommended rates set by Ugandan regulators).

User testing led Lawyers4Farmers to significantly change its business model and ways of working. The initiative initially aimed to directly provide information to indigent farmers in rural areas for a fee, but found that many were unable to pay, and had limited experience with using mobile phones to access information. As Esther Mary Nalumansi, another co-founder, put it:

"When we introduced the platform to farmers during training sessions, our team found that they first need to understand the features on a phone, and how to send a message to us."

Co-founder Hellen Mukasa, a lawyer involved in pro bono work, was involved in her family farm when she noticed that many of her family were asking simple legal questions. These related to the protection of their land and negotiating production contracts when farming as a group. The initiative also provides advice on family law and other issues. Around 73% of the farmers Lawyers4Farmers works with are female, and, as one interviewee pointed out, experience legal issues that are specifically linked to their gender.[105] The initiative has a team of seven, including two lawyers, two people focused on increasing sales of legal advice to commercial farmers, two people who maintain the SMS systems, and an accountant.

Lawyers4Farmers therefore introduced WhatsApp groups in mid-2018 that provide advice to higher-income commercial farmers who are able to pay for legal advice, and use the revenue to subsidise the costs of providing the SMS service.

9031	VISION	1965
Over 9031 messages exchanged on SMS Platform	15000	Active Users
1460	farmers by 2022	505
1460 indigent farmers in 5 districts		Commercial farmers reached using Whatsapp
		200
		Cases covered

Interviewees highlighted the need for Lawyers4Farmers to revise its initial assumptions about users:

"The biggest challenges were farmers' literacy levels and their understanding of what a legal problem was. We found that we had to break down the law for them to understand. We needed to take off our lawyer hat and put on our social worker hat."

Before starting the project, Lawyers4Farmers built on the experience of other organisations that had worked on related projects. UK international non-profit Self-Help Africa helped them understand if a mobile-phone based system for delivering information would work "so that we didn't have to reinvent the wheel," while HiiL, a social enterprise based in the Netherlands, provided initial funding of 5,000 USD and advice on the user-centred design processes. "HiiL has a great mentorship programme: it helped us to bounce ideas," Mukasa said.

The initiative's team conducted user research in the districts where they were implementing the tool: in Dokolo, they conducted testing sessions with around 250 farmers, facilitated by leaders of groups that the farmers already belonged to. **Interviewees said that links with existing structures, such as local justice centres and farm group leaders, were critically important:** "The impact we have right now is primarily related to the group leaders." This is because leaders could use their strong existing relationships with farmers to identify common issues among those who did not own phones, and share this with Lawyers4Farmers to allow it to continually improve its advice.

Lawyers4Farmers uses an SMS service provider called Africa's Talking, which provides a software platform and a 'shortcode' phone number that allows users to send a message without paying a fee. It also allows Lawyers4Farmers to monitor the status of questions and categorise the SMS messages that users receive. **While interviewees noted that interacting with farmers using WhatsApp was easier because it allowed them to respond to questions more easily and share documents, they also felt that using SMS allowed them to reach a much wider section of the population.**

DEFINING USERS

Image: User personas from the Navocado project, which aims to help pro bono attorneys representing unaccompanied immigrant minors in the US. http://legaltechdesign.com/legalnavigators/

Around half of the initiatives we interviewed said they created 'personas' for their users – fictional characters representing types of users, which are based on common user characteristics identified through research. For example, Arrival Adviser personas include those designed to represent skilled immigrants and single mothers.[106]

These personas were used to shape testing and responses to input from users throughout the development period. Creating personas usually involved a review of existing research and institutional knowledge about people's needs in a particular legal area, combined with focus groups or workshops with affected members of the community.

For several initiatives, defining these groups and recruiting them to take part in in-person workshops was the most time-consuming part of their entire process.

This user research was sometimes conducted in tandem with additional research into how existing legal systems or institutions addressed a particular issue. For example, Themis had more than 20 meetings with judges, lawyers and policy officers in different departments to understand how they defined priorities when they received information about alleged domestic violence.

RESEARCHING USERS' TECHNOLOGY USE

Initiatives' contacts with their users, gained through existing legal empowerment work or other connections, often allowed them to build a strong understanding of their legal needs. **However, even initiatives with in-depth knowledge of their users' legal needs said they did not fully understood their users' ability to access technology until they had conducted in-depth user research.** As an interviewee at Themis put it, based on their experience testing the app: "What works for some people in one place, won't work for others in another place."

This mainly involved reviewing existing research on internet and technology access in the relevant context. In Brazil, for example, Themis found that most women it worked with lacked full access to the internet on their phones. Interviewees from Sauti and Famalia began by reviewing research on connectivity in East Africa to establish that simple feature phones were commonly used by cross-border traders and farmers, their respective target audiences (even among people with limited literacy), and that providing information accessible only on smartphones was not an option: "We did a survey with 300 people, and three of those people had a smartphone. Only one had ever used an app." It was not until the pilot that Sauti established that using USSD to provide information might be more appropriate.

Gavel, on the other hand, deliberately decided to target young urban users in Nigeria. Research suggested that many of these users were underserved by existing organisations that focused on access to justice, and had access to smartphones. As a result, much of the organisation's interaction with users takes place on Twitter, where its 17,000 followers ask questions and are given more detail and links to advisers through the Twitter's direct messaging system.[107]

The implications of failing to conduct research on your users are illustrated by *Below the Belt*,[108] an Australian mobile phone app that gave young people targeted legal advice, which was discontinued in 2015 after statistics showed that few were installing it and, of those, many uninstalled it soon afterwards. As a case study reviewing the project put it, the team behind the app "had experience with print publications and not with products for smart-phones."[109] In this context, key assumptions were not adequately challenged or tested. Inherent was the assumption that young people would be motivated to independently download an app to pre-emptively address legal issues to do with sex, sexting and bullying.

Research, including some released after the app was launched, indicates that many young people lack capability to independently solve their legal problems and would prefer to turn to a friend or trusted adult or simply search for information online. As a result, Community Legal Education changed its approach to "a process of enquiry that doesn't begin with a project in mind," but starts by identifying the problem the client is facing and scoping the viability of options, then testing those options and assumptions.[110]

Choosing one or two types of communication channel may be appropriate for initiatives that aim to reach a tightly defined subset of users, where it is possible to gain a detailed understanding of those users' communications preferences and habits. However, in many cases, initiatives were attempting to provide information to a range of different people, often defined broadly as 'the public' or as people who need legal information about a common issue. Research in this area indicates that, **for more broadly defined groups, it is essential to use multiple channels to provide information in ways that suit different users.**[111]

Providing information in only one way may increase existing inequalities in accessing legal information and support. For example, even in contexts where overall smartphone ownership is relatively common, women and older people are significantly less likely to own or have access to smartphones. *BarefootLaw* meets this challenge by providing information through SMS, Facebook, Twitter, WhatsApp, Skype calls and in-person meetings, as well as information published directly on its website. In 2018, it launched an interactive voice response system that gives legal information and support to people who cannot read, or lack smartphones or internet access. It has also broadened its reach by working with initiatives with established user-bases – for example, one question distributed through UNICEF's U-Report, which has more than 370,000 members, received more than 20,000 responses.[112]

CONTENT

A small number of initiatives, responding to the fact that laws were not published in a publicly accessible format in their jurisdiction, published the full text of laws, with the aim of allowing users to read what the law says. These initiatives often organised laws in terms of particular issues, and published them in the form of an app, as with He!Lawyer in Benin, Pakistan Qanoon, and Mero Adhikar in Nepal. However, **the majority of interviewees said that their target audiences found the text of laws difficult to understand, and that it was crucial to rewrite content in more accessible language.**

The importance of using plain language for online content is now widely understood.[113] However, initiatives frequently said that writing legal information in an easily comprehensible way was not straightforward. Several interviewees noted that **it was often difficult for staff with legal expertise to write legal information in a format that is easy for their target audience to read.** As one US-based initiative put it:

> *"When content is created by attorneys, it tends to be at a higher reading level. We are less inclined to hire people with law degrees than we are to hire someone with the ability to synthesise information into a digestible concept. It's a real challenge and a special skill."*

Interviewees highlighted several key practices that helped them make their writing more accessible:

- Starting with the conclusion – giving the user the most important information first.

- Writing in short sentences and paragraphs, allowing them to skim content.

- Using simple words and phrases whenever possible. The **OpenAdvocate Project** provides tools that analyse the reading grade level of a web page and suggest improvements, as well as identifying complex legal terms and displaying a plain language explanation.[114]

Staff at Nyaaya noted that some users said they were more likely to understand information when it was rewritten in simple language, but "would not depend on it if they were talking to a police officer or in court [because they thought that] the law means legal text." **Detailed legal language is crucial to resolving legal issues effectively, but as a public entry point for non-lawyers trying to understand the law, it can obscure more than it illuminates.**

Many interviewees cited this focus on – as an interviewee from MyLawBC put it – "what is going to be useful to a user, rather than what's most legally accurate" as a key factor in producing legal information that empowered users. This highlights the importance of understanding the point at which legal information becomes relevant for individual users, and what outcomes providing it is designed to achieve.

Before designing a platform for 20,000 advisers in England and Wales, Citizens Advice conducted extensive research[115] to learn how to write content for its target audience. The research taught the team what the advisers wanted, and helped them shape the platform according to the needs of the user.[116] In Uganda, BarefootLaw tailors its language according to the questions it receives over social media, such as through its highly popular Facebook page:

"If someone writes a message in a certain way, we will respond in the same way. We even make grammatical errors on purpose, and use slang and colloquialisms in our posts if it helps us interact with some people."

Barefoot Lawyers- Uganda
14 November at 06:01 · 🌐

WHAT TO DO IF YOU ARE ABUSED ON SOCIAL MEDIA

Social media is increasingly becoming a space for 'internet trolls' (those mu-annoying people on the internet who start quarrels, want to disrupt, attack, offend other people) and people who think that because you are not physically in front of a person, you can abuse the life out of them on social media pages without facing any consequences.

Sometimes, some ki-guy will send you his one pack to "prove" how he looks like Cristiano or keep asking you for a date or telling you he 'loves' those 'assets' of yours. Others are even more serious; they will even threaten to kill you. Some stalkers will even call you at 3 a.m. every day.

FIRST! under "The Computer Misuse Act 2011", these can be examples of offence.

Image: An example of a post from BarefootLaw's Facebook page.

CONTENT STRUCTURE AND DISPLAY

Defining a clear structure for content plays a critical part in helping readers to understand legal information.[117] Design principles for displaying information online aim to guide users through a set of clearly linked steps, making it clear where they are in the process at all times.

Many initiatives spent considerable time thinking about how their user personas would use the information they had created. As one interviewee described it: "We sat on the floor with cue cards and menus and rearranged them into a user flow that made sense." This process of journey mapping – sketching out the path users would be likely to take – was a helpful activity for several organisations considering how to structure their content.
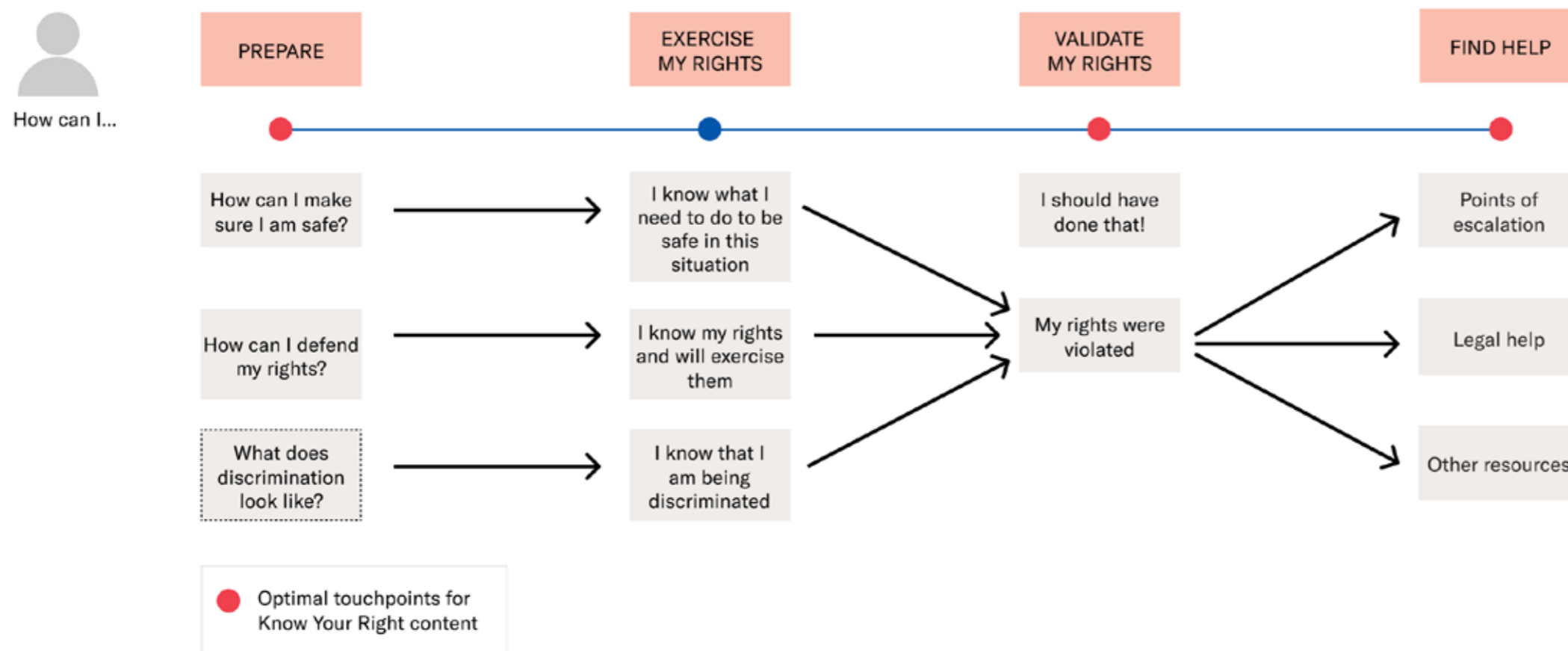
Diagram: User flow diagram used by the ACLU for their 'Know Your Rights' content.

In many cases, organisations focusing on legal empowerment sourced their content from existing legal information that was available in paper format or on older websites. For example, Housing Court Answers' work was based on information tables, which it had developed over several decades in response to continuous engagement with its users, while Nyaaya often worked with content provided by partner civil society organisations.

These interviewees typically said that content needed to be rewritten and restructured for publication on mobile phones and online: rather than providing one page with comprehensive information on an issue, Housing Court Answers aimed to create a series of short pages that contained information that explained responses to a particular legal problem, described in plain English.

Initiatives highlighted that although rewriting content in this way required investing effort "to be more disciplined and more diligent," it was essential to their work. In some cases, it had changed the way the organisation as a whole published information. As one interviewee said:

"We have a way of delivering content that's friendly to people on mobile – now we have standards in place, where if a partner says: 'We created this awesome resource and here's the PDF,' we'll say: 'We don't want it'."

Before research and testing

After research and testing
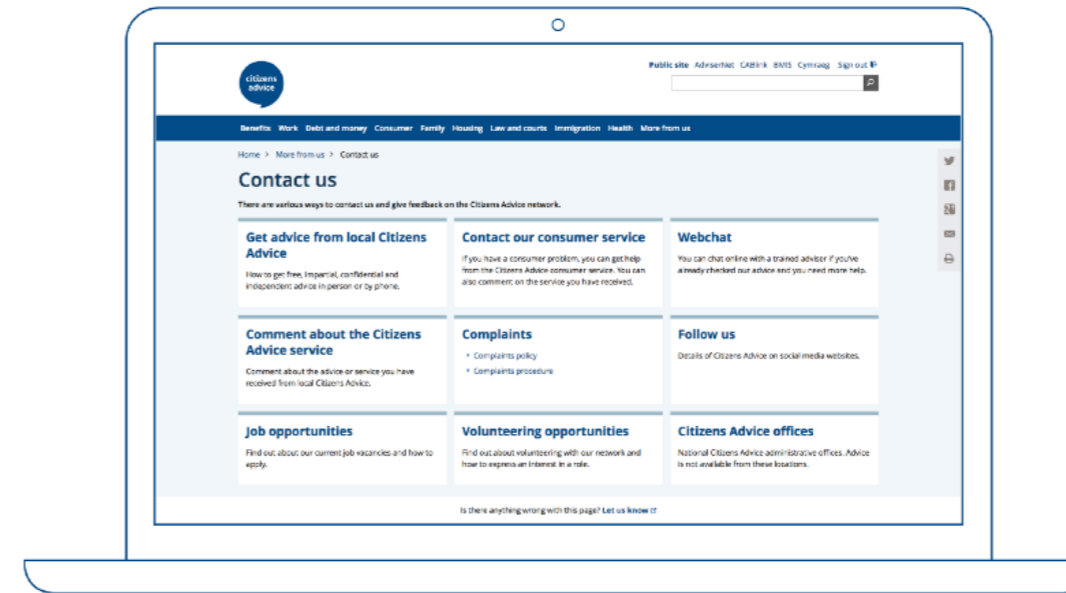
Images: The UK-based organisation Citizens Advice put together a team of writers, designers and researchers to identify problems with the way their 'Contact Us' page was structured. They created a prototype of a new page focused on the information that users wanted, tested it in person in train stations, markets and Citizens Advice waiting rooms, and monitored how the page performed using online analytics.
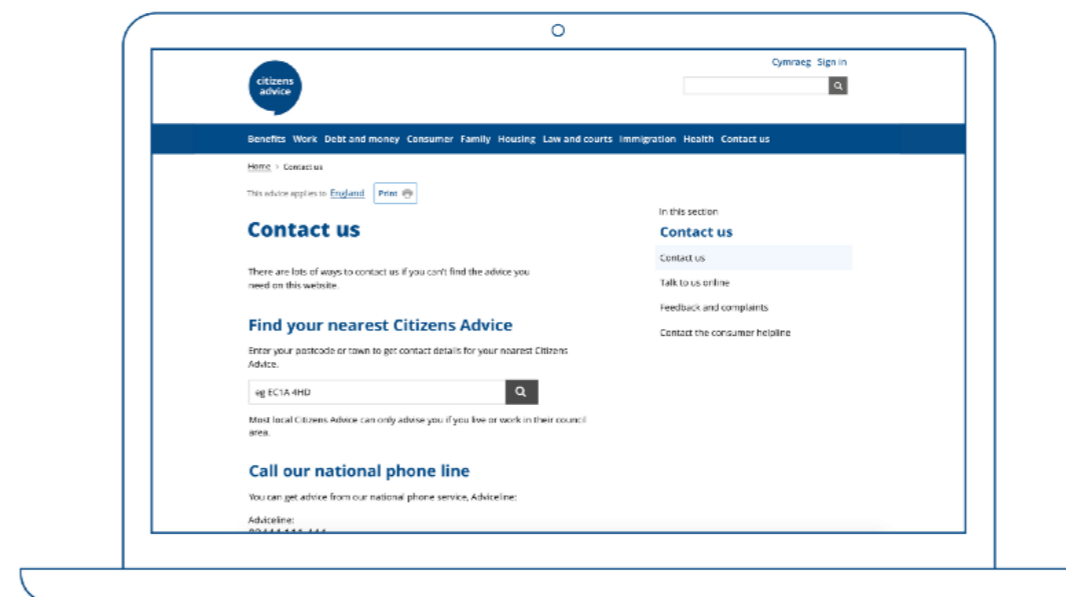
Examples of ways in which interface design can be adapted to meet users' needs

① *Justice Connect*[118] encourages users to alert appropriate services in case of an emergency, before guiding them to legal information.

② *HateCrimeHelp*[119] provides all the information users needed to fill in on the homepage, in the form of a sentence where users filled in the blanks.

③ *Immi*[120] provides a drop-down box under every question explaining why the initiative needed to ask the question to help users.

④ *Citizens Advice* include a button stating which parts of the UK the advice applied to, to avoid confusion in users' minds.

⑤ *Veterans Legal Checkup*[121] provided a clear explanation on the homepage of the tool, explaining how long it would take to complete the tool, how much it cost, that the information provided was not legal advice, and assurance that users' personal information would not be saved.
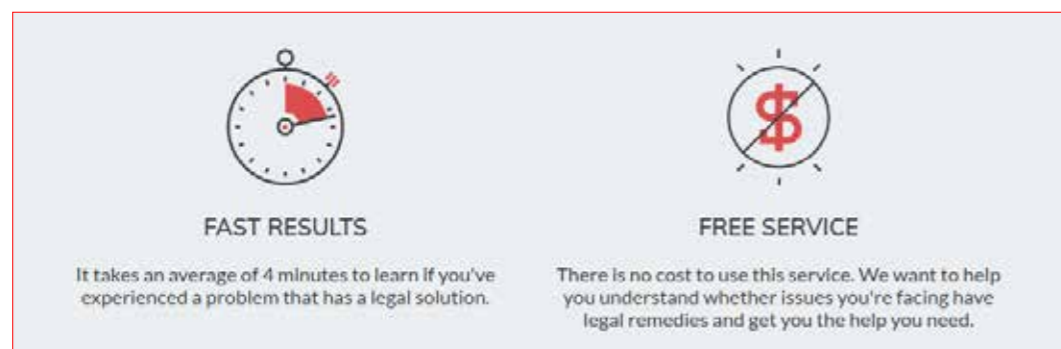
TESTING CONCEPTS AND PROTOTYPES

Once they had defined users, written content and created a concept of what they wanted to create, most initiatives did in-person testing with a low-fidelity version of their final product, or the final product itself. For example, in 2017 the Legal Design Lab at Stanford created four prototypes that aimed to tackle problems with traffic courts. It asked users to interact with all four in a one-hour period, and then rate each prototype on a scale of 1 to 5 and rank it against the others, with each participant 'spending' 100 fictional dollars among the four. This helped designers learn more about users' perceptions of individual tools, as well as important broader findings such as that users were most interested in tools that promised to help them save money.[122]

These sessions usually needed to be conducted in person, and initiatives described various methods to contact users, ranging from partnering with organisations that regularly interacted with people from that community, to finding people who were directly engaging with the justice system at that point. **Initiatives often found users to participate in testing by going to places where they already were.** Illinois Legal Aid Online described going to courthouses while people were standing in line and giving them a piece of paper with a wireframe (an illustration of a page designed to show how content and website functionalities are displayed, without including colours or graphics). They then asked users to imagine that the page was a website and what they would be most likely to click on.

This method of finding users can also help initiatives to gain ongoing feedback on the utility of a particular tool. In British Columbia, Arrival Adviser attended workshops for new mothers who were immigrants and set up a table with a sign saying: 'Look at this app.' Themis attended judicial hearings to get feedback:

> *"One woman said she couldn't read, so I showed her that there were drawings, and that it was very simple. It worked well with her. I realised that it needs to be able to work on a very simple cell phone."*

Several initiatives described setting up a working group involving a small number of users and organisations that worked with their target audience to test ideas and get feedback on work completed to date.

Testing frequently highlighted unexpected results. One interviewee described setting up kiosks that displayed a legal information website in courthouses, with temporary staff standing by kiosks. They found things went well if a staff member was there to help people, but that people ignored the kiosks and website when no in-person help was available. In response, they decided to stop using kiosks, but kept the in-person help. In Uganda, BarefootLaw used testing to identify which communications channels were suitable for its project:

We knew SMS was an important way of engaging our audience because the government will use SMS to communicate about issues of national importance, such as power shortages. We wanted to know if the same media could be used to ask people questions. There was no data on that: we just had to experiment.

Interviewees highlighted that **the language they used made a significant difference to the way that people engaged with content**. For example, Nyaaya found that users from outside major Indian cities used an initial version of its website in Hindi significantly more often: "The language thing really makes a difference: information is far less accessible when it's in English." In the US, Illinois Legal Aid Online conducted research and engaged with trusted organisations to understand issues that the Spanish-speaking community in the state faced, and to establish whether the majority spoke Mexican Spanish or Puerto Rican Spanish. Gavel project staff, meanwhile, offered advice in English, Yoruba and Igbo, and had access to a Hausa speaker who provided support on specific issues.

BUILDING THE TOOL

Initiatives took a wide range of approaches to building technology tools. Some initiatives began by using freely available online tools to disseminate information, ranging from the newsletter platform Mailchimp to the blogging platform Wordpress, and then built their own tool later in the process. Others began by hiring a technology or design specialist agency to help them complete the work: for example, companies with a stated focus on access to justice include Modria (part of Tyler Technologies), Theory and Principle and Josef.[123] In most cases in Asia and sub-Saharan Africa, initiatives recruited one-to-three technical specialists to develop a tool, often on a part-time basis.

Several initiatives emphasised the importance continuing to involve users while building the tool. As one interviewee put it, drawing on the work of Laurenellen McCann, 'building with, not for.'[124] For example, a user researcher who was redesigning the 'Know Your Rights' content at the *American Civil Liberties Union (ACLU)*[125] described creating a set of content on individuals' rights if stopped by the police, and finding that a person of colour testing the content "assumed that the subject of the content would be a Caucasian person." They said the organisation was trying to be conscious of the spectrum of visitors to its site and the need to create content that was inclusive for a variety of people, whether they were in an at-risk situation or were a proactive bystander who could help someone.

The majority of initiatives found in this research did not take an open source approach, publishing the underlying code for the technology publicly so that others could re-use or adapt it.[126] There were a small number of initiatives where open source tools were re-used in other contexts, including the Legal Aid Checker tool in Australia, a diagnostic tool that aims to identify individuals' eligibility for legal aid that was built using open source code from the UK government's equivalent tool.[127]

ONGOING TESTING

Many initiatives said that it was crucial to build in space in the project design for flexibility and iteration. For example, one interviewee described frustration that every time they tested their tool with users, they received feedback "that it didn't look good." They described a process that took more than one year, noting that although it was frustrating: "It was definitely worth the time. I wish we'd known that patience would pay off." They ensured that their website, which was built on the Wordpress content management system, allowed them to continually change the language of the questions and the order in which they are presented. Project budgets that include funds to make alterations as the project progresses are likely to be better equipped to manage this need for iteration.

Building structures and processes to allow people to submit feedback regularly was cited as an effective strategy. *Nyaaya* runs in-person meetups with users in three different cities to discuss what users wish to see on the website, while *Haqdarshak* maintains a system of coordinators, each of whom is responsible for working with and supporting between 50 and 70 community-based advice providers (known as *haqdarshaks*). Because the coordinators interact with haqdarshaks at least once a week, and sometimes on a daily basis, they regularly collect information on the day-to-day usage, including technical glitches and potential functionality updates. In one case, feedback from *haqdarshaks* in a particular state led them to cut the total number of questions that needed to be asked from 30 to 10, which received a positive response from users.

CASE STUDY – MYLAWBC: THE VALUE OF ITERATION

MyLawBC is a guided pathway to legal information and specialised legal advice developed by the Legal Services Society (LSS), a non-profit organisation that provides legal advice, information and representation to people on low incomes in British Columbia (Canada). It provides eight guided pathways on four topic areas, and a Dialogue Tool designed to help people with family problems draw up a separation agreement.

MyLawBC began in 2014, after its chief executive came across *Rechtwijzer*, an online dispute resolution platform for divorce cases in the Netherlands, and was officially launched in 2016. LSS worked with HiiL, and Modria,[128] a tech company based in the US, to develop MyLawBC.

Lost in the legal maze? Find your way with MY LAW – BC –

Location	British Columbia, Canada
Organisations involved	Legal Services Society, with support from HiiL and Modria
Type of interaction	Guided pathways, document assembly, online dispute resolution
Time to develop	2 years (2014-16)
Impact	In 2016-18, MyLawBC had 28,500 users, 64% of whom completed a pathway (completion rates for different pathways varied from 91% to 50%). Users were 65% female. 49% of users were aged 24-44, with 9.5% aged 45-54 and 25% aged 55 and above.[129] Their communications kit [130] indicates that 122 couples have worked together on a separation agreement with the help of the Dialogue Tool.
User feedback	Describing the Family Separation Pathway, a user said: "It's interesting how that other page gave me lots of feelings and then this page, kind of, brought me back to centre on 'It's OK.'. .It made me feel better. It made me, kinda, come back to centre, and kinda go 'OK. This isn't a counselling session. I'm not. . [laughs] I am going to find some answers.'" "I was impressed by the PDF generation. It was just cool. You don't go to a lawyer's office, meet with a lawyer, and get such a straightforward [plan]. They'll probably help you, and make you feel better, and whatever, and give you some very good advice. But it might not be as easy."
Key learning	Mark Benton: "MyLaw took us to a completely different place, and we think that's what people need. If we could do this again, I would have paid a lot more attention to helping our team adjust to the changes in working style. The process involved working with new tools, with people in different timezones, and things like bringing in legal aid clients who had been turned down as part of research."

Lost in the legal maze?
Find your way with MY LAW - BC -

I want to make sure my family is taken care of **once I'm gone.**

What happens if I can **no longer make decisions** on my own?

I've missed a couple of **mortgage payments.**

I don't always feel **safe** around my partner.

My partner and I are **separating.** How do we do what's best for **our kids?** Who gets the **house?**

Answer questions about your situation. Learn about the law as you go.

Get help specific to your situation

I made a **safety plan** for me and my children.

I made a **will.**

I made a **personal plan.**

I made a **foreclosure action plan.**

I got a **court order** for child support.

Find **your** solution

MYLAWBC.com
#MyProblemMySolution

Legal Services Society
British Columbia
www.legalaid.bc.ca

We negotiated a **separation agreement.**

May 2016

LSS spent six months working to build consensus with lawyers, mediators and legal information organisations, service providers and other experts. Despite initially experiencing resistance from justice systems stakeholders in British Columbia, some of whom felt threatened by the proposed introduction of a tool with new, unfamiliar functions, they became much more positive towards it over time. As Sherry MacLennan of LSS put it: "Our objective was not to sweep the field, but to maintain multiple providers — and MyLawBC is much the richer for it."

After a two-month literature review, conducted by a consultant with expertise on public legal education and information, the project was developed using Agile methodology, which involved regular 'Scrum' sessions in which teams from the three organisations involved discussed progress on a daily basis, regularly revising the project's specifications in response to ongoing user research. After the initial launch, the team continued to study and respond to users' experience. This included online user testing,

as well as in-person sessions in which a consultant spent 45 minutes with one user in a room, giving them a task to work through on the web pathway while talking aloud about challenges they had and sharing things that excited them.

In another room, the LSS content lead, programme manager and senior management would watch the interactions on live video, with a third party silently taking notes. Interviewees said this allowed them to "learn a lot more about the user, their emotional state and the impact MyLawBC had on them as they worked through the task."
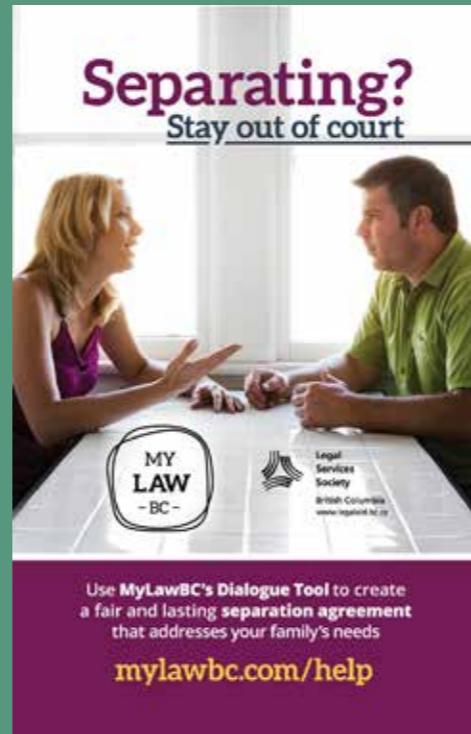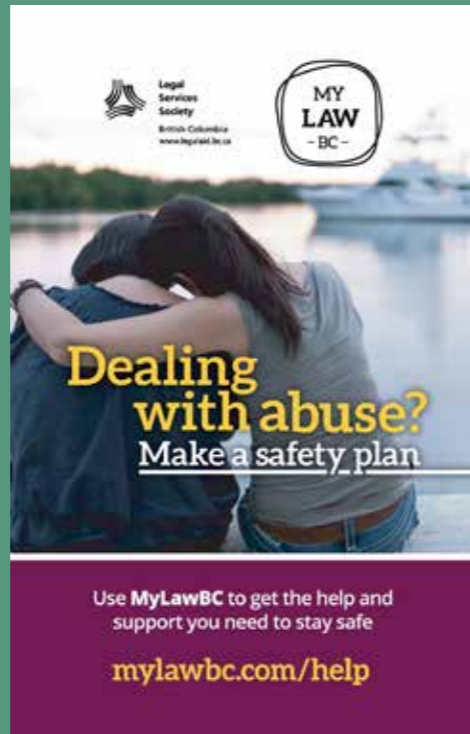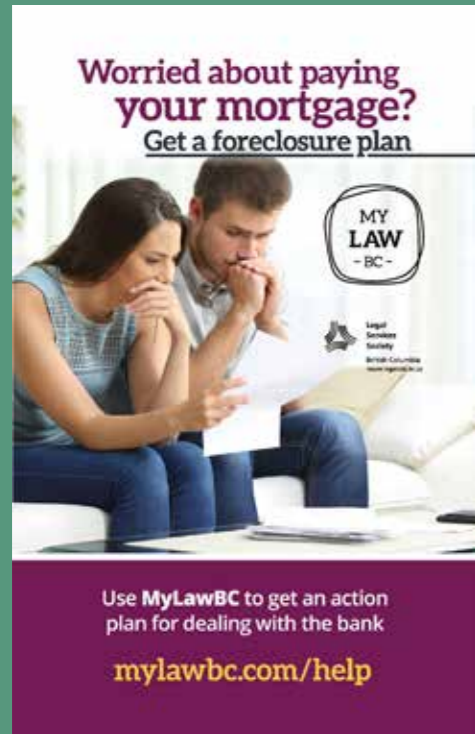
This was a new process for LSS, and all interviewees noted that it had been a significant shift in ways of working for the organisation: "It takes a lot of work to encourage legal experts to be quiet and listen to what the user wants." Although interviewees noted this change in approach had been a shock to some staff, they also felt that the process had been very valuable:

"It's been a transformative process for us. We are doing things very differently across the organisation now, and we are ascribing different value to voices than we did before."

Interviewees highlighted two key points from this process relating to challenges involved in adopting technical tools developed in other countries. First, they noted that **differences between jurisdictions can have a significant impact on the development of tools to explain the law**: although there were some similarities between the Netherlands and Canada, individuals in the former are never required to represent themselves, and there are two distinct court systems in Canada (rather than one in the Netherlands). This meant that adapting the Rechtwijzer platform to the Canadian context took much more time than had been anticipated. One interviewee said, "having a better understanding of jurisdictional problems would have been valuable earlier in the process" because it would have encouraged LSS to limit ambitions for content development (MyLawBC started by creating eight guided pathways in four topic areas).
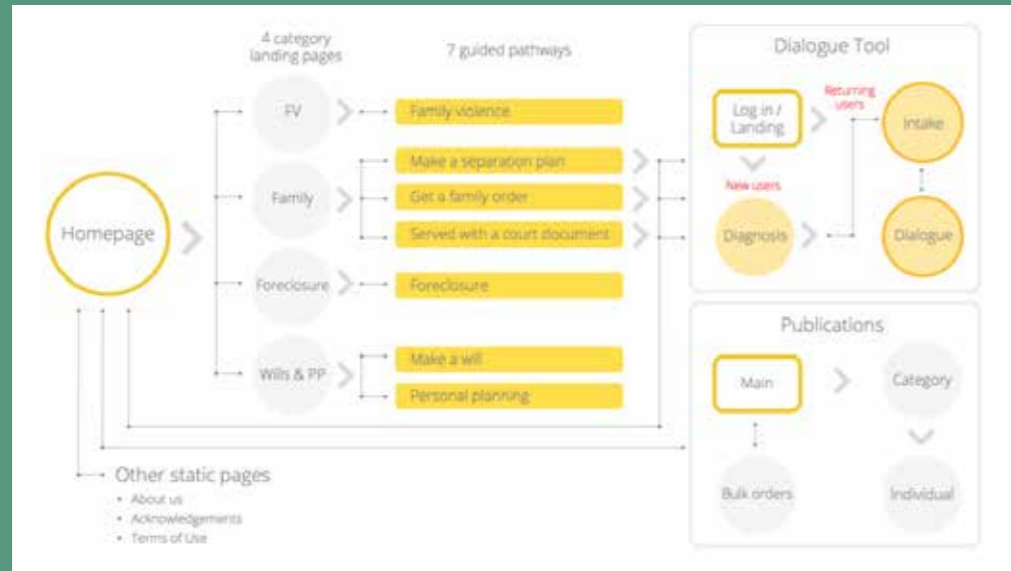
Secondly, **interviewees highlighted the importance of building in flexibility and scope for iteration into project design.** The original technical architecture of the site required LSS staff to manually send requests for updates to their technical provider for every place where the same piece of content occurred. In 2017 and 2018, LSS rebuilt the system behind MyLawBC to allow staff to update content instantly and amend question flows accordingly.

LSS invests considerable effort in tracking usage of MyLawBC. In March 2017, it ran a user testing and used the feedback it received to improve the website. A recent re-development of the technology that underlies guided pathways has allowed them to undertake more granular analysis of which steps in guided pathways users take longest to complete.

Finally, LSS was clear that **developing guided pathways requires considerable time and investment.** As noted above, the development of the tool took around two years, with adjustments continuing on an ongoing basis. One interviewee suggested that he would start with one pathway rather than eight if he were to implement the initiative again.

ONGOING MANAGEMENT

MARKETING AND OUTREACH

Several interviewees felt that initiatives that aimed to produce technology tools aimed at the public did not invest enough funds in marketing the tool - with one US-based interviewee even suggesting that marketing should make up as much as 50% of the budget for an initial version of a tool. As the evaluation of the Below the Belt Android app put it:

> *"Marketing requires clearly defined research of the marketplace, and planning while the product is in development, not when it is released. At this stage, it's almost too late."*

The same evaluation also noted that failing to consider marketing in advance had consequences:

> *"The marketing approach to Below the Belt only focused on the product and its contents. There could have been deeper attention paid to distribution and...the pitfalls of providing an app on one platform only."*[131]

Initiatives with consistent user engagement typically spent significant effort on interacting with users throughout the project. While few initiatives surveyed for this research set up a marketing plan at the start of the project, all founders recognised the importance of planning for user engagement. For example, JustFix.nyc started engaging with users early on, combining collecting website analytics data with information from in-person user testing sessions and outreach to users via SMS. Gavel explained that it had an open-door policy at the project's offices in Abuja and Lagos, as well as being available telephone, email and Twitter (where it has 17,000 followers).

Meanwhile, a team member at Illinois Legal Aid Online emphasised the importance of optimising content for search engines to allow people to find it through searching online – an activity mentioned by few of the other initiatives we came across. Notably, the Legal Design Lab at Stanford Law School has created a tool that automatically generates code for organisations to include in their website's metadata, so that it will be more likely to appear higher on search engine results.[132]

DATA PROTECTION AND PRIVACY CHALLENGES

Technology-based initiatives that collect data to provide a legal service face a duty to manage the data in a responsible way. This is a challenge, not just because of the need to comply with regulatory privacy frameworks, but because users describe privacy as an important issue for them.[133]

Initiatives that go beyond simply publishing legal information will typically be required to collect information from users about a legal problem they are facing, often combined with information about their location or demographic characteristics. This may be the case even when initiatives do not directly aim to collect these data: for example, systems may automatically log an individual's IP address, thus allowing the potential identification of their home address.

Information on legal problems may not only be privileged but also highly sensitive, particularly when the problem is experienced by a member of a marginalised group or a person in a vulnerable situation. When a developer announced the creation of a Facebook Messenger-based chatbot designed to help refugees claim asylum in the UK in 2017,[134] critics voiced concerns about the bot's handling of asylum seekers' highly sensitive personal data and suggested that it could harm the users' chances of being approved for asylum because it failed to account for the complexity of asylum law.[135]

Initiatives reviewed for this research often specifically targeted groups such as transgendered people or undocumented immigrants, who could be placed at particularly high levels of risk if adversaries gained access to data the groups submitted to technology-enabled initiatives. Protecting individuals' data is particularly important because of the increasing use of technology by governments around the world to identify and target particular groups. To take one example, the Indonesian Android app Smart Pakem, created by the Jakarta Prosecutor's office, allows users to report people that they believe to be practicing faiths that are unorthodox - which could lead to discrimination against religious minorities.[136] **Initiatives have a responsibility to ensure their privacy policies comply with local privacy regulations, and that all sensitive data collected, transmitted and shared by and with users are handled with care and respect.**[137]

It is impossible to eliminate all risks associated with data collection. Approaches to ensuring data security therefore involve tradeoffs between benefits to users of certain types of data collection and the extent to which risks are minimised.[138] The Responsible Data community[139] has identified guiding principles and several good data security practices that are emerging within digital technology initiatives in a range of sectors. These include:

- Carrying out regular data audits, mapping what data are held, where and why.

- Collecting and storing only the minimum data necessary to avoid leakage or subpoena of data by third parties.

- Limiting data retention – only holding data collected for as long as needed, including user IP addresses and other identifying data.

- Storing data securely and informing users about what data are stored locally on users' devices and in places they cannot directly access.

- Setting appropriate permissions and access mechanisms – only people who need to see sensitive data should have access to them and these permissions should be reviewed regularly.

- Carrying out regular risk assessments, privacy impact assessments or threat modelling to assess potential risks and harms – this should also involve mechanisms that alert the platform host to unintended consequences.

- Designing a well-considered consent process that transparently identifies risks to individuals, clearly states the purpose for which data will be used, and ensures that not giving consent for a particular use of digital data does not prevent access to support.[140]

Regulatory frameworks are evolving rapidly across the globe and – depending of their level of complexity – can be challenging for technology-enabled initiatives to comply with. For example, as of May 2018, EU member states have to comply with the General Data Protection Regulation, which was designed to establish users' right to privacy.[141] Outside of the EU, privacy legislation can also bring challenges: MyLawBC's work was delayed because of the need to spend additional time reviewing contracts with its Netherlands-based partner and US-based technical provider to ensure compliance with privacy legislation in British Columbia. **One initiative noted that binding data-handling and -sharing agreements were an essential, if time-consuming, part of the process.**

IMPACT ASSESSMENT

Initiatives took a range of approaches to monitoring activities throughout the project lifecycle and assessing the impact. Some initiatives collected quantitative analytics data on the number of visitors to their sites, while others tracked anecdotal feedback: Nyaaya recorded users' experiences at in-person meetups and through social media, while Lawyers4Farmers collected positive comments made on its WhatsApp group to share with funders.

A smaller number of initiatives also monitored the next steps in the process after the legal information, advice or service was provided.
For example, Gavel designed an internal evaluation matrix that tracks the number, progress and outcome of cases on a monthly basis. In addition to collecting analytical data, Gavel asks each lawyer with an assigned case to report back on the number and type of interactions they have with clients. Haqdarshak's evaluation framework tracks every application made for government benefits, as well as every application's progress and outcome. Haqdarshak's founder mentioned that tracking these data helps when talking with funders and potential investors. The organisation has a support centre with a dedicated three-person team who randomly call people who have had their cases logged in the system, to get data on their experience and the progress of cases.

We found a small number of initiatives that went beyond tracking outcomes for a particular initiative to assessing the overall impact of the initiative on the organisation behind it, and legal services provision more broadly across a country. For example, an evaluation by SEAP suggested that, for its service helping users claim a particular government benefit:

> *"The number of sessions involving engagement with the guide is equivalent to 5% of the total number of registrations in England and Scotland during this eight-month period."*

SEAP also estimated the cost of the initiative and compared it with the cost of face-to-face provision:

> *"c-App has enabled it to multiply its client reach by 1000 times in the first eight months, for just 10 times the level of investment in the face-to-face service."*[142]

Such evaluation methods were, however, relatively rare. More generally, key informants interviewed for this project noted that many initiatives they had encoutered conducted only limited evaluations of their work and potential impact. They suggested that introducing more rigorous assessments of progress would be an important step forward for the field.

CASE STUDY – HAQDARSHAK

Location	India
Organisations involved	Haqdarshak and partners including NGOs, local and regional governments and companies such as Tata Trusts, Save the Children, and the governments of Uttar Pradesh, Rajasthan and Tamil Nadu states.
Type of interaction	A smartphone app designed to help community-level advisers assess individuals' eligibility for benefits and support those individuals to apply; and a website designed for urban English-speaking users.
Time to develop	1 year (2016)
Impact	According to Haqdarshak, the initiative made 110,000 people aware of schemes for which they were eligible; 57,000 applications for benefits were submitted through its platform, and benefits received estimated at USD 5 million.[143]
User feedback	Haqdarshak collected examples of users' feedback on its website. For example, its stated that: "In Tamil Nadu, Peer Mohammed got his disability pension after eight failed attempts. This time our Haqdarshak took him to the district collector's office to check the status, and his pension was granted. Even when people know about schemes and apply for them, they often don't know who to follow up with and how."
Key learning	Founder Aniket Doegar: "We could have engaged more effectively with the government. Don't go in with a solution saying that it's the only solution – approach them in partnership with an institution that they know."

Haqdarshak enabled citizens in 21 states across India to access welfare schemes they had a legal right to receive. The organisation trained village level entrepreneurs (VLEs) to use an Android mobile phone app, available in 15 languages, that guided them through a question-and-answer process. These VLEs, in turn, helped members of their community access benefits applicable to them under welfare schemes.[144] The platform also hosted a database of government and private sector welfare schemes, and a public website designed for English-speaking urban users.[145]

The founder of Haqdarshak, Aniket Doegar, worked as a teacher in the Teach For India programme, and then took part in a fellowship in a rural part of Maharashtra state, training rural women on issues related to livelihoods. Finding a lack of awareness about welfare schemes among people who were eligible for them, he developed a model that first trained the VLEs, who could then use the app to help citizens. Haqdarshak charges each *haqdarshak* a nominal fee of around USD 2 per month to use its services. One told us:

"I've been working as a haqdarshak for the last three months, helping people apply for disability benefits and cards that allow them to buy food at subsidised rates. The app is simple to use, and it helps that all of the content is in Tamil [the local language]. People find it useful, and the response is good."
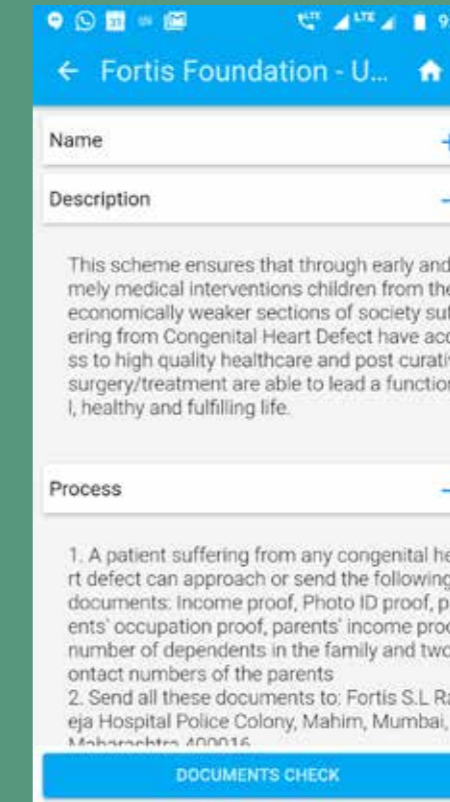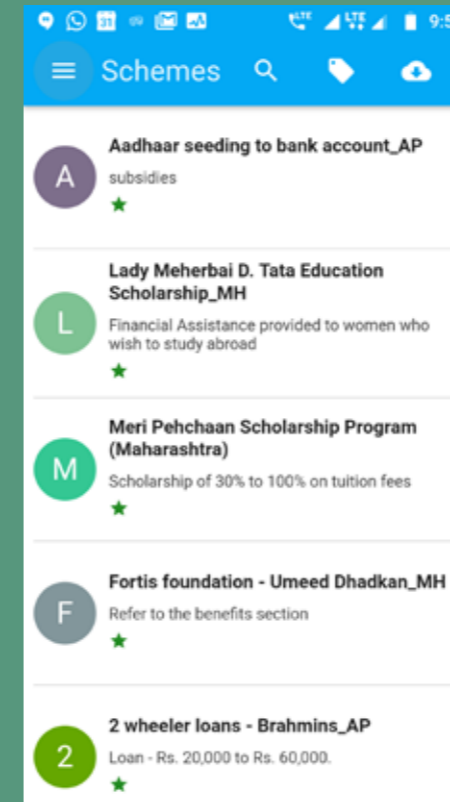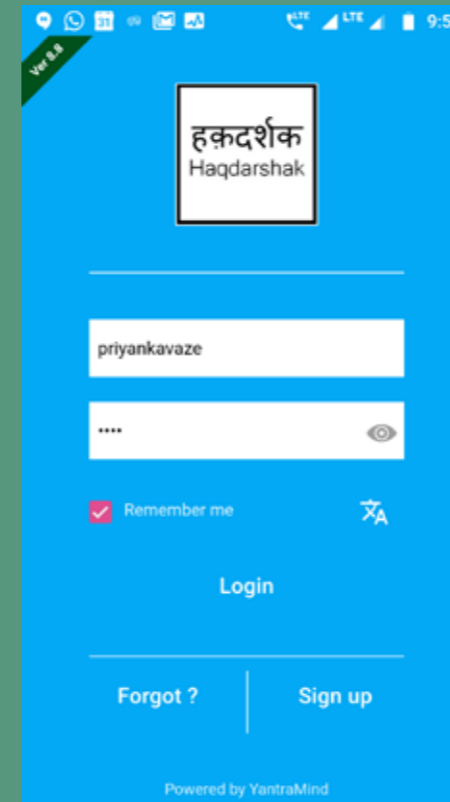
Image: Screenshots of the English version of the Android smartphone app used by haqdarshaks.
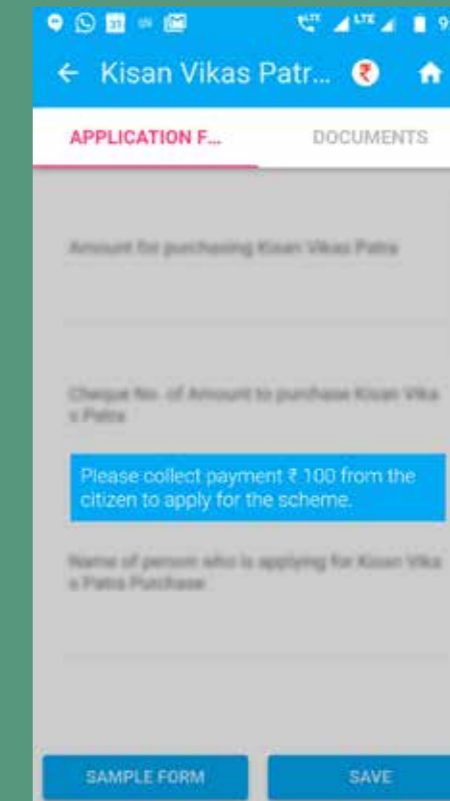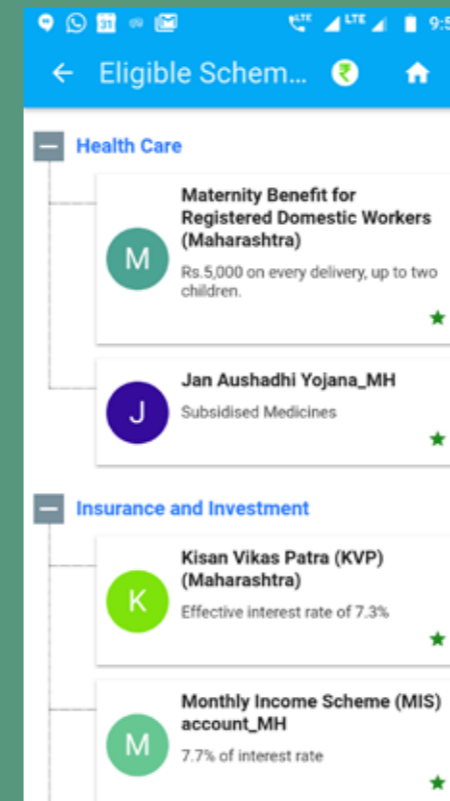
Understanding users' data usage patterns helped Haqdarshak make the decision to make the its app available offline. The project team conducted initial in-person research with five people from a slum community. The team:

> *"realised that people use data only within a specific time in the day, because they have plans with specific time limit when they can access data. That's where the offline component came in."*

Offline functionality was not initially available, but the updated app would automatically sync data when it reached an area with internet connectivity.

Initial funding came from Doegar, his friends and family, after which point Haqdarshak started receiving support from partner organisations. Doegar said he was "very lucky" because the ecosystem had been "an enabling environment for startups, and initially there were lot of grants available." In March 2017, Haqdarshak received seed funding of USD 191,000.[146] In addition, three social impact investors made an in-principle commitment to raise approximately USD 2 million for Haqdarshak. The organisation also secured grants worth USD 0.7 million.

Partnerships were key to Haqdarshak's business model and its success. It partnered with organisations for a number of reasons: to help companies provide their workers with benefits; to help governments ensure eligible citizens access benefits they are entitled to; and to support non-profit organisations that were already providing people in rural areas with phones or mobile apps by adding Haqdarshak's functionality to what they were offering.

Promising initiatives

This section discusses areas where developments in ways of using technology have the potential to improve legal empowerment work more broadly.

04

Initiatives that combine several technology functionalities in one platform offer the potential to provide users with a single coherent path towards support. Justice Connect, for example, brings together several tools to diagnose users' legal problems, collect information about their situation and triage them effectively to the right support organisation.

Linking up legal provision in a more streamlined way is also making some progress in North America, where several initiatives are integrating with data on community-based support provided collected according to common data standards.[147] Meanwhile, a pilot system for housing referral in Alameda County, California[148] allows a group of five non-profit housing law organisations to determine which organisation is best suited to meet an individual's needs when they are found to be ineligible for support, and to seamlessly connect that person to the appropriate nonprofit.[149]

Although we found few active examples of AI being used to support access to justice, interest in doing so will continue to increase.[150] Efforts launched include Learned Hands,[151] which uses crowdsourcing to train an algorithm to spot legal issues in the words ordinary people use to describe their legal problems; Annika,[152] which plans to use IBM Watson to support Australian law students as they respond to questions submitted by the public; and Microsoft's collaboration with the Legal Services Corporation and Pro Bono Net,[153] which aims to use

AI to identify legal issues when people describe their problems in plain English as part of a pilot developing online, statewide legal portals.

While AI could potentially make a contribution to legal empowerment, it is some way off.[154] The complex process of developing AI technology means implementation into legal empowerment tools is happening only relatively slowly[155] and the ethical dimensions of AI have not been sufficiently considered.[156]

At the other end of the technology spectrum, groups are approaching the communication of legal information using low-tech solutions. Initiatives such as Lawtoons[157] in India and Comic Contracts[158] in Australia and South Africa are using illustrations and cartoons to communicate legal information, such as contracts information, to laypeople.

Most importantly, technology may be most effective when it helps direct in-person support to where it is most needed, and gives extra resources to the people providing that in-person support.

This is particular relevant to initiatives that use non-lawyers to provide advice and information to people within their communities. In these cases, technology-enabled initiatives can give community paralegals and 'legal extenders' access to more detailed, relevant information, provided in a format and structure that allows them to help people more effectively.

Haqdarshak and PLP 2.0, two of the initiatives discussed in this report, provide strong examples of this potential for impact: both help their organisation communicate reliable, easily understandable advice through communication channels that people already use. This highlights the extent to which technology enables people to empower others, rather than focusing on the role of the technology itself.

Conclusion

05

With careful design, legal empowerment initiatives can integrate technology to help people resolve legal issues through clear, accessible language, communicated through an appropriate medium, which gives them information or services that would otherwise have been unavailable.

The initiatives we found were operating in contexts where the ability to access the formal justice system varied considerably, and their approaches varied dramatically as a result. However, we found several shared elements that helped them bring the law and legal services closer to people.

First, they were closely linked to the provision of in-person support, whether by making access to community paralegals easier, or reducing barriers to accessing lawyers. Rather than building something that was completely detached from the justice system, initiatives aimed to complement existing services and actively work with stakeholders.

Second, their work was founded on continual interaction with users, from initial design through to continuous user research, engagement, and marketing and outreach. Almost every initiative we spoke to found that in-depth user research led them to conclusions they did not expect. Adjusting to these lessons takes time, and initiatives that had business models or funding support that allowed them to experiment and iterate often said that it had been crucial to their development.

Despite enthusiasm around hackathons and innovation in legal tech in some regions, we found many technology-enabled initiatives focused on access to justice that became inactive soon after their launch, with little documentation for the reasons behind these their failure. We also found limited documentation on impact among many initiatives, although this is partly because their focus on a single step in a person's pathway to justice makes it challenging to follow up on the outcome of cases.

The diversity of the legal empowerment this research has found suggests there is now a unique opportunity for peer-to-peer exchange and learning. The initiatives we spoke to were keen to exchange lessons, knowledge and experiences. We hope this research will broaden awareness of the ways in which technology is being used, and the ways in which it is proving most useful.

Appendices

APPENDIX A: METHODS

Our research focused on initiatives worldwide that provided members of the public with legal information, connections to legal support and legal services through through the use of technology (defined here as tools that can only accessed through computers or mobile devices such as mobile phones and tablets).

06

As no review of these initiatives existed, we initially carried out online research and interviews with 54 people, based in 17 countries, to identify initiatives that could ground our analysis. To be included, initiatives needed to be currently in operation and publicly available, and to be focused primarily on providing information to the public, rather than lawyers or large businesses.

REVIEW OF LITERATURE, KEY INFORMANT INTERVIEWS AND CONTACTS WITH RELEVANT ONLINE COMMUNITIES

We reviewed literature related to legal empowerment and access to justice, as well as information related specifically to the use of technology in these fields. We also held semi-structured interviews with 13 key informants in this field, including academics, researchers and practitioners with experience in this sector, to gain an overview of trends and gaps in provision.

Finally, we contacted organisations with existing networks in this area to share contacts and information, and participated in the Global Legal Empowerment Forum, an online message board for organisations working on legal empowerment issues, leading a webinar in mid-2018 and regularly interacting with community members to post questions and requests for information.

METHODS FOR SOURCING INITIATIVES

The terminology used by organisations working on technology-enabled access to justice projects is vast and varied. To gain a rounded picture of the field, we conducted online research on various digital platforms to get a more accurate picture of the key actors and terminology used, and then used the keywords identified to carry out a more targeted search.

Targeted online search
Tracking conversations on Twitter and in academic literature improved our understanding of the language used in the sector. As a result, we were able to run search queries on search engines with more specific and targeted keywords. Some of the keywords used were as follows: legal tech (also a hashtag), access to justice tech, Legal innovation, ICT and justice, and Tech for justice. Names of countries and/or regions were used along with these search terms to achieve more specific results. Additionally, in some cases we replaced the word law or legal with the equivalent in the native language of a region for more specific results (e.g. 'qanoon' when researching initiatives in Pakistan). We also conducted searches of the Apple and Google app stores with these keywords.

Input from other actors

We asked organisations with strong networks in this field, such as Namati and HiiL, to add initiatives not already included in our mapping, and created an open public spreadsheet, to allow other actors to add their own initiatives. Around 15 additional initiatives were added using this method.

To provide a framework for our research, the data collected were organised under a set of categories, which were defined at the outset and continuously reviewed throughout the project. These were: country, region, type of technology, type of interaction, whether the initiative is currently available, and type of maker.

Additionally, we identified a set of sub-categories under types of technology and types of interaction. The sub-categories for types of technology were: website, SMS, mobile app, chat interface and others. The sub-categories under types of interaction incorporated seven key trends in the use of technology for access to justice.These were: static sites with legal information and links to lists of lawyers or support providers; guided pathways to legal information; guided pathways that connected users directly to lawyers or support providers; document assembly (i.e. creating legal docs automatically); online dispute resolution; and initiatives that supported documentation of evidence.

Twitter search

We used Twitter to identify key actors and understand the terminology used by them in their networks. By looking at the Twitter networks of organisations, such as Pro Bono Net, Namati, the Center on Access to Justice and the Hague Institute for Innovation of Law, we were able to identify initiatives across geographies as well as hashtags used in conversations about technology and justice.

Subsequently, a search on Twitter using hashtags such as #legaltech took us deeper into the space where startups, non-profits, legal publications, academic researchers, legal professionals and others discussed the impact of technology on law and the various ways in which legal services can benefit from technology. We created a Twitter list of many of the organisations and initiatives found during this scoping exercise, to retain an up-to-date ongoing picture of their activities.

Selection of initiatives

To gain a more in-depth understanding of the way in which technology-enabled public-facing legal empowerment projects were conceived, designed and managed, we selected a subset of 12 initiatives from the list developed in the previous section. Initiatives were segmented to ensure representation of the types of interaction mentioned above, regional variation, business models, and types of organisations involved, and aimed to include a range of mature projects (in operation for at least one year) that could provide useful lessons on aspects of legal tech project implementation. We then conducted semi-structured interviews with at least one staff member from each of these 12 organisations. Interviews were conducted in English, Spanish and Hindi.

In-depth case studies

Finally, to gain as full an understanding of the development of a legal empowerment initiative and identify practical lessons in terms of content development, technical considerations and interactions with stakeholders, we selected four initiatives from the subset identified above. These initiatives comprised:

Name	Implementing organisation	Country	Type of interaction(s)	Funding model
PLP 2.0	Themis	Brazil	Legal information and incident notification	Received Google Impact Challenge grant

Name	Implementing organisation	Country	Type of interaction(s)	Funding model
Lawyers4Farmers	Lawyers4Farmers	Uganda	Legal information sent via SMS and WhatsApp	Received Accelerator funding from HiiL; cross-subsidised activities
MyLawBC	Legal Services Society	Canada	Portal comprising guided pathways to legal advice and support, as well as online dispute resolution and document assembly	Combination of funds from foundation, state and private funds
Haqdarshak	Haqdarshak	India	App allowing community-based advisers to check eligibility for government benefits and help individuals apply	For-profit company, initially supported by angel investors

We conducted semi-structured interviews with at least three people from each initiative, with questions focusing on the processes used to design, build, monitor and evaluate the initiative. Wherever possible, we aimed to include the perspectives of users, including through interviews and consulting internal user testing reports.

Limitations

While the use of targeted keywords returned a wide range of results, initiatives with better media coverage and a stronger digital presence dominated the search results. However, given that most initiatives' success relied upon them being findable online, we believe this limitation is a manageable one. Other challenges included verifying the existence or longevity of initiatives in the rapidly developing legal tech space. Certain initiatives, for instance, either changed their name and objective, became unavailable, had unstable websites or were not updated. We were unable to independently verify details for a range of initiatives, meaning they may no longer be active. Despite these limitations, we succeeded in identifying more than 130 initiatives globally.

APPENDIX B: THE GLOBAL LEGAL EMPOWERMENT ECOSYSTEM

INTERNATIONAL ORGANISATIONS AND NETWORKS FOR KNOWLEDGE-SHARING ON LEGAL EMPOWERMENT

Several international organisations and networks aim to share approaches and information about legal empowerment, including on the use of technology. Namati focuses its work on Kenya, Liberia, Mozambique, Sierra Leone, Uganda, Bangladesh, India and Myanmar,[159] while its Global Legal Empowerment Network brings together more than 6,000 members from 1,700 organisations in person and online to share information and approaches – including on technology.[160] Netherlands-based social enterprise HiiL supports innovation in justice provision, through research, grant funding, an annual 'Innovating Justice Challenge' award, and an accelerator programme for initiatives that aim to create new justice solutions (including those that use technology).[161]

Other international organisations work to create links across national boundaries. The Open Society Foundations, the sponsor of this report, is currently halfway through a four-year Shared Framework initiative that aims to share experiences and methods on issues including technology use between 11 low-, middle- and high-income countries: Indonesia, Macedonia, Kenya, Moldova, Mongolia, Nepal, Pakistan, Sierra Leone, South Africa, Ukraine and the US. PILnet builds the capacity of activist lawyers working in NGOs, supports pro bono clearinghouses, and collaborates with national and local governments, as well as bar associations, to design effective legal aid systems.

The International Bar Association's International pro bono initiative, meanwhile, connects pro bono lawyers worldwide to share information and resources.[162] The International Legal Aid Group, a network of legal aid specialists from Legal Aid Commissions, civil servants and academics, holds a biannual conference and publishes papers and a newsletter collecting lessons on topics including the design of technical solutions.[163] Separately, New York University's Bernstein Institute for Human Rights themed its 2018 annual conference around legal empowerment, bringing together speakers from a range of countries to discuss topics including innovative methods of justice provision, and will look at the intersection of legal empowerment and technology in 2019.[164]

Several national- and regional-level networks provide opportunities to share information. The A2JInnovation Group is an online community of Australian actors working at the intersection of access to justice and technology/digital initiatives, which runs in-person meetups and maintains an index of Australia-based initiatives.[165] North America-focused networks include the Equal Justice Conference, which focuses on US-based civil legal aid groups,[166] the LSC's annual Innovations in Technology Conference,[167] Legal Services National Technology Assistance Project[168] and associated Best Practice Corner audio series; and Pro Bono Net's work to make links between legal aid providers across the US.[169] Law firm DLA Piper is also convening an event on access to justice and technology, to be held in London in June 2019, co-sponsored by PILnet. Finally, the Prague Civil Society Centre hosts events and provides grants aimed at initiatives using data, design and technology in Eastern Europe and Central Asia.[170]

There is also some intersection with the emerging field of work described as 'legal tech', which primarily focuses on using technology to improve efficiency and delivery in the commercial legal sector. Legal Tech Africa organises events and hackathons for Africa-based initiatives, including a small number of startups focused on access to justice,[171] while the Africa Legal Tech Network focuses primarily on commercial applications.[172] LegalGeek holds an annual conference – together with a satellite event, LegalDesignGeek – that brings together groups working in the field of legal tech, with a focus on commercial startup organisations (its most recent event included relatively little time for access to justice-related content).[173]

Interviews conducted for this project suggest there has been relatively little interaction between many of these initiatives. While interviewees were aware of Namati and HiiL in some contexts, in the majority of cases, initiatives had been started without an awareness of comparable projects and lessons that had been learned regarding the use of technology. Although this trend is also visible in other sectors,[174] there is a particularly clear opportunity to more explicitly connect initiatives and share experiences more widely.

FURTHER READING

The use of technology in legal empowerment is a fast-moving field. The following sources of information were invaluable in our research, and can help initiatives to keep up with developments in the field:

The Hague Institute for Innovation of Law: https://www.hiil.org; and their associated *Justice Accelerato*r: https://innovatingjustice.com.

The *Law, Technology and Access to Justice* blog, managed by Roger Smith: http://law-tech-a2j.org.

Namati's *Global Legal Empowerment Network*: https://community.namati.org.

The *Legal Design Lab* at Stanford Law School and d.school, and the *Reading List of Legal Design*: http://www.legaltechdesign.com/. http://www.legaltechdesign.com/reading-list-on-legal-design/.

The *Open Society Justice Initiative*: https://www.opensocietyfoundations.org/about/programs/open-society-justice-initiative

The *Legal Design and Innovation* blog: https://medium.com/legal-design-and-innovation

The Legal Services Corporation's *Best Practices Corner* blog: https://medium.com/@sasakie.

The *Justice Futures* blog: https://justicefutures.com/.

APPENDIX C: GLOBAL SCAN OF PUBLIC-FACING LEGAL EMPOWERMENT INITIATIVES

DISCLAIMER: This network map aims to provide a non-exhaustive overview of initiatives that use technology to give people information about the law, connect them with legal advice, and provide them with legal services. All initiatives appeared to be currently in operation at the time of writing (pilot or planned projects were not included). The network map was created by The Engine Room through desk research, and contains names, links, countries and descriptions of initiatives collected throughout the course of the research project. For more details on the methodology used to collect these initiatives, see the 'Methods' section in the report's appendix. The inclusion of an initiative is intended to be illustrative, and does not constitute a recommendation or guarantee of their quality of work.

Sensitive information (e.g. names of individuals) was not included in this spreadsheet, and the information here was drawn from public, online sources of information rather than fact-checked directly with the institution/individual in question. Where information was unclear, researchers used their best judgement and intuition to judge.

The network map was last updated on 18 December 2018.

Name	Country	Link	Description
ASIA			
Virtual Lawyer	Bangladesh	http://futrlaw.org/virtual-lawyer/	Virtual Lawyer is a web-based platform where individuals can find legal assistance from a pool of virtual lawyers, based on their requirements.
Civis	India	https://civis.vote/about	Civis is a platform that enables citizens to understand and share feedback with the government on laws and policy decisions.
DilSeWill	India	https://www.dilsewill.com/	DilSeWill is an online platform where users can create a will, and have it mailed to them after completion
Haqdarshak	India	https://haqdarshak.com/home	Haqdarshak enables citizens to access government welfare schemes for which they are eligible. They provide online and offline support with documentation and applications.
Helpline Law	India	http://www.helplinelaw.com/	Helpline Law connects people with lawyers and law firms as per their needs.
Law for Me	India	http://lawforme.in/about-us/	LawforMe attempts to make the law and legal processes accessible to all citizens by simplifying Indian laws through the use of design and technology.
LawRato	India	https://lawrato.com/	LawRato is an online platform which allows individuals and businesses to find lawyers and receive free legal information online.
LawzGrid	India	https://www.lawzgrid.com/	LawzGrid allows individuals and businesses to seek legal information, find a lawyer and create online legal documents based on their requirements.
Legistify	India	https://www.legistify.com/	Legistify is a platform where people in need of legal assistance can find a lawyer.
Lexassisto	India	https://lexassisto.com/	Lexassisto is an interactive online resource that attempts to make the law and information about legal processes more accesible to people.
Lexcare	India	https://www.lexcarts.com/	Lexcare is an online forum where people can post legal questions and recieve advice. Users can also find lawyers and consult them for a fee.
Nyaaya	India	https://nyaaya.in/	Nyaaya's platform provides comprehensive information on various legal topics in an accessible and simple language, covering aspects of the law that the public interact with in their daily lives.
Online Mediation Center	India	https://onlinemediationcenter.ac.in/	Online Mediation Center is a pilot project at the National Law School in Bangalore, and provides online tools to address consumer grievances.
Presolv360	India	https://www.presolv360.com/	Presolv360 is an online dispute prevention service that aims to prevent legal disputes and litigation. The Presolv for All service is available as a free service for underprivileged members of the society.
Pro Bono Legal Services	India	http://doj.gov.in/page/about-pro-bono	The Department of Justice in India maintains this list of pro-bono lawyers, targeting organisations and individuals looking for pro bono legal assistance.

Name	Country	Link	Description
SMS for Justice	India	https://smsforjustice.org/	SMS for Justice is a project by Nazdeek that combines legal training, mobile technology and community monitoring to build a Dalit women-led network of paralegals, trained to demand accountability for the delivery of basic services.
Tele Law	India	http://tele-law.in/	Tele Law facilitates the delivery of legal aid to marginalized communities, by connecting individuals with lawyers through volunteer-run service centres.
The Layman's Lawyer	India	http://thelaymanslawyer.com/	On the Layman's Lawyer, individuals and businesses can offer or request services related to online document creation.
Will Star	India	https://willstar.in/	Will Star facilitates the online creation of a will. Upon completion, users can download, print and sign the document.
Wonder.Legal	India	https://www.wonder.legal/in/	Wonder.Legal provides users with a guided process to create legal documents for personal and business purposes.
Justika	Indonesia	https://www.justika.com/konsultasi/perkawinan/	Justika offers real-time legal support over the telephone for a broad range of problems, such as marriage, inheritance, and employment.
Legal Smart Channel	Indonesia	http://lsc.bphn.go.id/	Legal Smart Channel is a web application that helps the public understand legal issues online, by offering free access to legal consultancy services.
CanLaw Syariah	Malaysia	https://www.canlawsyariah.com/	CanLaw is a web-based platform where individuals and businesses can find a lawyer with an expertise in sharia law.
Mero Adhikar	Nepal	https://play.google.com/store/apps/details?id=com.bmpinfology.meroadhikar	Mero Adhikar is an iOS and Android app that publishes information related to legal rights, laws and court decisions in a simple language. It is available in English and Nepali.
Pakistani Lawyer	Pakistan	https://pakistanlawyer.com/	Pakistani Lawyer is web-based platform that provides contact details of lawyers, as well as resources to educate students and non-lawyers about Pakistani law.
Pakistani Qanoon	Pakistan	https://play.google.com/store/apps/details?id=com.golive.pakqanoon&hl=en	Pakistani Qanoon is a mobile application that provides information about Pakistani laws free of charge.
Wukla	Pakistan	https://wukla.com/	Wukla is an online platform where users can create agreements and legal documents, and have these delivered to their house.
LexMeet	Phillipines	https://www.lexmeet.com/about-us	LexMeet is a web-based platform that connects individuals with lawyers, allowing them to filter out a lawyer with relevant expertise, experience and location.
My Labor Matters	Phillipines and Japan	http://mylabormatters.com/about-us/workers-communication-platform/	My Labor Matters helps workers and jobseekers in the Philippines-Japan migration corridor by providing information about migration laws and process, helpline numbers, and the option to report legal issues.

Name	Country	Link	Description
JusQuaere	Singapore	https://play.google.com/store/apps/details?id=com.customautosys.jusquaere	JustQuaere is a mobile application that allows users to find lawyers, schedule appoinments with, and send meeting invites to the lawyers.
LawGuide	Singapore	https://www.lawguidesingapore.com/	LawGuide helps users to find relevant legal information and lawyers. A Facebook Messenger-enabled chatbot helps users with legal questions and resources.
Singapore Legal Advice	Singapore	https://singaporelegaladvice.com/about/	Singapore Legal Advice is a web-based platform where users can find a lawyer, search for information related to legal matters, and find templates for common legal documents.
Singapore Legal Help	Singapore	http://www.legalhelp.com.sg/	Singapore Legal Help is a free legal forum where users can post questions and seek advice on legal matters.

AUSTRALASIA			
Ask Izzy	Australia	https://askizzy.org.au/housing/Sydney-NSW/	Ask Izzy helps users to find free and anonymous services near their location, related to health care, counseling, and legal advice.
Confident Commuter	Australia	http://www.confidentcommuter.org.au/p/116	Confident Commuter helps people deal with ticket inspectors and fines. The user follows a guided process of questions and answers to find a solution for their case.
Dear Landlord	Australia	https://applications-au.neotalogic.com/a/dearlandlord	Dear Landlord is an interactive app that helps tenants in privately-owned properties to understand their rights and eviction laws. It also helps users generate and review documents such as letters to their landlord or fill out a review application to the Civil Administrative Tribunal.
Fine Fixer	Australia	https://finefixer.org.au/	Fine Fixer provides a guided process for users who have been fined by local authorities. Based on the case, it guides people on how to fix a fine or determine a course of action in case of a fine.
Health Complaints Assist	Australia	https://healthcomplaintsassist.com.au/	Health Complaints Assist is a chatbot that helps users make a complaint about medical treatment they or someone they know received.
Justice Connect	Australia	https://justiceconnect.org.au/help/	Justice Connect provides legal help to people and communites at risk of being of left behind by the law. This includes a guided diagnostic, intake and triage tool, several online self-help tools, and a facility that allows other organisations to refer people to Justice Connect.
Legal Aid Checker	Australia	http://lac.vla.vic.gov.au/	Legal Aid Checker provides a guided pathway to information about common legal issues.
Legal Chat	Australia	https://lsc.sa.gov.au/cb_pages/legal_advice.php#Chat	Legal Services Commission of South Australia's Legal Chat service provides live chat support during working hours.

Name	Country	Link	Description
Penda	Australia	https://penda-app.com/about/	Penda is a mobile application for women who have experienced or are experiencing domestic violence or abuse. The app provides legal information and referrals.
Queensland Law Handbook	Australia	https://queenslandlawhandbook.org.au/	Queensland Law Handbook is a comprehensive and accessible resource designed to help Queensland residents with their legal problems.
Re-focus	Australia	https://play.google.com/store/apps/details?id=com.wlsq.legalask&hl=en	Re-focus is a mobile application that provides legal information and welfare advice for women who are separated or are thinking of separating.
Victoria Legal Aid	Australia	http://lac.vla.vic.gov.au/	Victoria Legal Aid's interactive tool helps users understand their options when facing a legal matter.
Wagbot	New Zealand	https://www.messenger.com/t/wagbot	Wagbot is a Facebook Messenger-based chatbot designed to answer questions from school children about sexual health and related issues.

EUROPE			
Online Lawyers	Belgium	https://onlinelawyers.be/nl_BE/	Online Lawyers is an online platfrom where individuals and businesses can connect with lawyers and seek legal advice online.
Demander Justice	France	https://www.demanderjustice.com/	Demander Justice is a dispute resolution tool that helps people to settle disputes that can be brought to court without a lawyer.
E-court	Netherlands	http://www.e-court.nl/	E-Court specialises in private and civil online dispute resolution. It aims to provide administrative justice at low costs.
Juridsche Hulp Online	Netherlands	https://www.juridischehulponline.nl	Juridsche Hulp Online helps users draft and check legal documents online.
Rechtwijzer	Netherlands	https://rechtwijzer.nl/	Rechtwijzer is an online dispute resolution site. It provides legal remedies and online tools to help parties settle disputes without a lawyer.
Uitelkaar	Netherlands	https://uitelkaar.nl/	Uitelkaar helps couples organise their separation or divorce procedure online. The website offers step-by-step consultation and complete guidance at a fixed price.
yAvo	Moldova	https://yavo.md/	yAvo is a free legal advice service where users can post legal or law related queries on the platform, which are then answered by lawyers and legal professionals registered on the site.
AdviceNow	UK	https://www.advicenow.org.uk/pip-tool	Advice Now's Mandatory Reconsideration Request Letter Tool aims to simplify the process of asking the Department for Work and Pensions to reconsider their decision about a claim for Personal Independence Payment.

Name	Country	Link	Description
Amicable	UK	https://amicable.io/amicable-divorce-app	Amicable is a divorce app which helps couples close an amicable agreement. The chatbot, Alex, provides instant and real time support to users.
C-App	UK	http://c-app.org.uk/	C-App provides guidance, support, and advice for most parts of the application process for Employment and Support Allowance and Personal Independent payment benefits, respectively.
Citizens Advice	UK	https://www.citizensadvice.org.uk/	Citizen's Advice is an online resource which provides free, independent and confidential advice to users on their legal rights and responsibilities.
Find a legal aid adviser	UK	https://find-legal-advice.justice.gov.uk/	Find A Legal Aid Adviser is an online tool through which users can find a legal aid adviser or a family mediator.
Sorting out Separation	UK	https://www.sortingoutseparation.org.uk/	Sorting Out Separation provides resources including legal for families that are going through separation.
Legal Alarm	Ukraine	http://www.legalalarm.com/	Legal Alarm provides emergency legal help to people who are unable to quickly find a lawyer and/or cannot correctly describe their place or situation.

MIDDLE EAST			
Robota	Israel	http://robotaprojects.com/bot/	Robota is a chatbot that guides workers to file a lawsuit against their current or former employers.
Lexyom	Lebanon	https://lexyom.com/about	Lexyom is an online legal services platform which connects users to lawyers based on the user's needs.
Souktel	Palestine	http://www.souktel.com/work/item-1538308404.html	Souktel is a communication platform that delivers information through SMS, mobile audio and mobile messenger, which has been used to provide legal information to Syrian refugees by SMS.
Hukoomi	Qatar	http://portal.www.gov.qa/wps/portal/about-hukoomi	Hukoomi is an e-governance application which provides access to a broad range of information, including legal information for business, and information about visa and immigration procesess.
Matras 2	Qatar	https://portal.moi.gov.qa/metrash2/	Matras 2 offers a range of services, related to matters such as vehicle registration, immigration and visa documentation, and loss of documents.
SAK	Qatar	https://play.google.com/store/apps/details?id=com.informatique_.SAK	SAK is the Qatari Ministry of Justice's official application for real estate registration.
Legal Advice Middle East	UAE	https://legaladviceme.com/	Legal Advice Middle East is an online legal services marketplace which connects users and lawyers across the UAE.

Name	Country	Link	Description
LATIN AMERICA			
Laudelina	Brazil	http://themis.org.br/laudelina/	Laudelina is a mobile application, aimed to empower domestic workers. It has an accessible guide to labour rights, a benefits calculator, a list of protection agencie, and an option to create a social network with fellow domestic workers.
PLP 2.0	Brazil	https://juntas.geledes.org.br/plp-2-0/plp-2-0-app/	The PLP 2.0 mobile application allows victims of domestic violence to report violence. Users feeling threatened by a former or current partner can use the app to report the issue to the police. The app allows a user to contact the police by using the phone's power button. The police receives an alert as well as the GPS location of the user at risk of facing abuse.
Documenta	Mexico	http://observatorio-de-prisiones.documenta.org.mx/beneficios/	Documenta's 'Observatorio de prisiones' platform helps detainees and their families to calculate their benefits, while informing them about their rights.

Name	Country	Link	Description
NORTH AMERICA			
Attorned	Canada	http://www.attorned.com/	Attorned is a platform that links clients to lawyers through a bidding system. It increases access to justice by presenting a large pool of lawyers from multiple sectors.
Civil Resolution Tribunal	Canada	www.civilresolutionbc.ca	The Civil Resolution is an application for online dispute resolution. It helps resolve small claims and strata property disputes.
ClickLaw	Canada	https://www.clicklaw.bc.ca/	ClickLaw provides legal information and a map of legal support services in British Columbia.
Fired Without Cause	Canada	http://www.firedwithoutcause.com/employmentlawtutorial2.html	Fired Without Cause helps users understand whether their employer treated them fairly. The app also has a severance pay calculator.
JusticeTrans	Canada	http://justicetrans.org/	JusticeTrans offers legal information about transgender rights across Canada.
Lawger	Canada	http://lawger.com	Lawger uses an online bidding system to connect people with lawyers. Once users submit their legal problem, lawyers registered with the programme can bid on the case.
LawGives	Canada	https://www.lawgives.com	LawGives is an online legal service platform. Users can input their legal problem and the site generates free quotes and consultations from registered attorneys.
LawyerLinx	Canada	https://www.lawyerlinx.com/	LawyerLinx is a legal marketplace where individuals and businesses can find lawyers on demand.
Legal Aid Ontario mobile app	Canada	http://www.legalaid.on.ca/en/getting/legalaidapp.asp	The Legal Aid Ontario application allows people with legal issues to assess their financial eligibility for legal aid.

Name	Country	Link	Description
Legal Health Checkup	Canada	https://www.legalhealthcheckup.ca/en/	Halton Community Legal Services uses a guided process to help people who are living in poverty identify their legal problems and find a solution.
Legal Swipe	Canada	https://www.legalswipe.com/	Legalswipe educates users about their legal rights through a series of menus and cues.
My Legal Briefcase	Canada	www.mylegalbriefcase.com	My Legal Briefcase helps individuals and businesses handle their legal cases with or without a lawyer. It also assists users in preparing simple legal documents.
MyLawBC	Canada	https://mylawbc.com	Through various tools on its website, MyLawBC provides legal aid, legal advice, information and representation to people facing a legal problem.
Steps to Justice	Canada	https://stepstojustice.ca/	Steps to Justice provides users with step-by-step legal information, practical tools, and referral information for legal and social services across Ontario.
A2J Author	US	https://www.a2jauthor.org/	A2J Author aims to improve access to justice for people who represent themselves. The service hosts simplified legal information and resources created by legal professionals.
Arizona Eviction Help	US	https://www.azevictionhelp.org/	Arizona Eviction Help makes it easier for tenants to learn about eviction hearings, identify potential defenses to use and create court documents to use.
Citizenshipworks	US	https://www.citizenshipworks.org/	Citizenshipworks provides step-by-step advice for people on the pathway to citizenship by helping them prepare for citizenship tests, and inform them about in-person legal services in their proximity.
Court Buddy	US	https://www.courtbuddy.com/about-us	Court Buddy is an online service that connects individuals with lawyers. The service is particularly meant for people who can't afford a lawyer and self-represent in court.
DoNotPay	US	http://www.donotpay.com/	DoNotPay is a chatbot that helps people win up to USD 25,000 in small claims court.
Good Call NYC	US	https://goodcall.nyc/	Good Call NYC provides support during an arrest process. Its 24/7 hotline puts people in touch with lawyers, free of charge.
Hate Crime Help	US	https://hatecrimehelp.com/	Hate Crime Help helps victims of a hate crime by providing access to legal resources, information about local and regional law enforcement and non-profit organisations.
HeatSeek	US	https://heatseek.org/how-it-works-2	HeatSeek helps tenants in New York resolve their home heating issues by providing objective, and reliable temperature data they need to expose the problem and hold their landlords accountable.
Helpself Legal	US	https://www.helpselflegal.com/	Helpself Legal is an online document automation system. Users can use the guided workflows to find legal assistance.
Housing Court Answers	US	http://housingcourtanswers.org/	Housing Court Answers educates and empowers tenants and small homeowners through information tables and a hotline.

Name	Country	Link	Description
Illinois Legal Aid Online	US	https://www.illinoislegalaid.org/	Illinois Legal Aid Online presents legal resources and information about legal aid in a simple and accessible manner.
Immi	US	https://www.immi.org	Immi helps immigrants understand their rights and options during the immigration process. The website's guided process helps users determine their path to legal immigration, and offers a list of organisations and self-help resources.
Law Dojo	US	https://itunes.apple.com/us/app/law-dojo-know-your-rights/id564556805?mt=8	Law Dojo is a quiz for citizens and non-citizens in the US. It quizzes users on their basic rights, and on what they should do when dealing with the government and law enforcement.
Law Help Interactive	US	https://lawhelpinteractive.org/	Law Help Interactive is an online service which helps users fill out legal documents for free.
LawHelp New York	US	https://www.lawhelpny.org/what-is-livehelp	LawHelp New York provides legal information and helps to connect low-income people with lawyers.
LawHelp.org	US	https://www.lawhelp.org/find-help/	LawHelp provides referrals to local legal aid services, as well as information about legal rights, court forms, self-help information, links to social service organisations and other basic legal information.
LexLucid	US	https://lexlucid.com/	LexLucid is a service that grades elements in contracts and online legal documents, such as terms of service and privacy policies.
LISA	US & UK	http://robotlawyerlisa.com/	DoNotPay is an iOS app that allows users to complete legal processes and generate documents, including filing cases worth to USD 25,000 in US small claims courts.
Maryland Law Help App	US	http://marylandlawhelp.mobapp.at/landing/Desktop	Maryland Law Help is a mobile application that connects Maryland citizens with legal information, tools and resources.
Notifica	US	https://notifica.us/	Notifica allows users to inform family members, legal advocates, and other contacts that they have been detained by the police or Immigration and Customs Enforcement (ICE).
Pine Tree Legal Association	US	https://www.ptla.org/	Pine Tree Legal Association provides online legal resources to improve access to law for people with low incomes.
Project Callisto	US	http://www.projectcallisto.org/	Project Callisto helps survivors of sexual assualt and harrasment on college campuses document sexual assault, seek counseling, and start an investigation.
RePresent	US	https://ctlawhelp.org/en/represent	RePresent is a law game that provides self-represented parties in Connecticut with foundational advocacy experience.
Stateside Legal	US	https://statesidelegal.org/	Stateside Legal provides legal information and resources about the basic rights and benefits of people in military service, veterans, their families and caregivers.

Name	Country	Link	Description
Stop and Frisk Watch	US	https://itunes.apple.com/us/app/stop-frisk-watch/id583006596?mt=8	Stop and Frisk Watch allows bystanders to fully document stop-and-frisk encounters and alert community members when a street stop is in progress. The app also allows the user to report the incident to the police.
Text a Lawyer	US	http://www.textalawyerinc.com/	Text a Lawyer offers users the option to ask a legal question to, or request legal assistance from a pool of lawyers.
Upsolve	US	https://upsolve.org/	Upsolve provides assistance to low-income groups by helping them file for bankruptcy. It provides free online guidance for the entire process with the help of pro bono lawyers.
Veterans Legal Checkup	US	https://veteranslegalcheckup.com/	Veterans Legal Checkup is an online guided process which helps veterans identify their legal needs, and find resources.

SUB-SAHARAN AFRICA			
HeLawyer	Benin	https://play.google.com/store/apps/details?id=com.lightbenin.helawyer&hl=en	HeLawyer provides legal information and access to lawyers through an Android application, SMS, phone call and Whatsapp.
Sauti	East Africa	http://sautiafrica.org/	Sauti is a mobile-based platform allows cross-border traders to access real-time market prices, exchange rates and trade procedures, using a basic phone.
Famalia	Kenya	http://www.famalia.co.ke/	Famalia is an SMS-based tool that seeks to inform people about succession law.
Haki Law App	Kenya	http://knownafrique.com/#	Haki Law App intends to make knowledge about laws easily accessible. The mobile application provides legal information and connects citizens to lawyers.
M-Haki	Kenya	https://m-haki.co.ke/	M-Haki allows users to send SMS messages with legal questions, which the organisation's lawyers and volunteer lawyers answer for a small fee.
Mulika	Kenya	http://mulikakenya.co.ke/	Mulika allows users to annoymously report corruption by government officials and other crimes through SMS. Users can report a case by sending a text message, which is forwarded to relevant officials.
Wakili Mkononi	Kenya	https://wakilimkononi.co.ke/	Wakili Mkononi helps individuals in need to find lawyers or law firms.
Ufula Wanga	Malawi	http://ufuluwanga.com/#section-about	Ufulu Wanga allows users to file anonymous reports on human rights violations such as domestic violence, questions about separation and divorce procedures, and issues related to child custody.
Uliza Wakili LLP	Nairobi	http://www.ulizawakili.weebly.com/	Uliza Wakili LLP aims to provide low-cost alternative dispute resolution and legal advice to SMEs and startups.

Name	Country	Link	Description
Gavel	Nigeria	http://www.gavel.ng	Gavel provides various tools for people to track court cases and the delivery of justice. It also provides pro bono legal services to inmates and people with limited means.
In4Justice	Nigeria	http://in4justice.com/#about	In4Justice is an online dispute resolution service, and provides an alternate dispute resolution mechanism for small claim settlements.
Law Padi	Nigeria	http://www.lawpadi.com/	LawPadi started as an online legal advice system to provide information and resources to people in Nigeria. It now provides virtual assistance on legal issues through a chatbot.
Law Strive	Nigeria	https://www.lawstrive.com/	Law Strive is a website through which individuals and businesses can get instant legal advice, and hire lawyers.
Project Lemon Aid	Nigeria	https://twitter.com/lemonaid_ng	Project Lemon Aid matches people awaiting trial behind bars with pro bono lawyers who can represent their case.
The Nigerian Law blog	Nigeria	http://www.legalnaija.com/	The Nigerian Law blog publishes blogposts to educate users on legal issues. It also engages users through social media by publishing information about laws and citizens' rights.
Viamo	Rwanda	https://innov8tiv.com/rwandans-to-access-legal-aid-services-from-the-convenience-of-an-app-on-their-mobile-phones/	Viamo has partnered with the Legal Aid Forum to share information on access to justice that is made available in prerecorded audio and text, on a toll-free mobile service.
Police Case	Sierra Leone	http://advocaidsl.org/police-case/	Police Case uses popular TV culture to educate the public about legal rights and the justice system.
Baobab.law	South Africa	http://baobab.law/	Baobab.law attempts to remove barriers to legal assistance by providing DIY legal solutions in the form of video tutorials. Videos are recorded with professional lawyers, and are available in multiple languages.
Legal Legends	South Africa	https://www.legallegends.co.za/	Legal Legends allows small businesses to purchase legal services at fixed prices on its platform.
Pocket Law	South Africa	http://www.publiclaw.uct.ac.za/news/legal-library-pocketlaw	Pocket Law is an offline legal library for students with no internet connection at home, and for courts with limited internet connectivity. Additionally, smaller or younger law firms can also subscribe to use this legal library.
Barefoot Law	Uganda	https://barefootlaw.org/	Barefoot Law offers free legal information and assistance to people through social media, SMS, Skype calls, and community engagement.
J2P	Uganda	https://www.justice2people.com/	Justice2People is a mobile and web-based application where users can report crimes or accidents in real time by uploading images as proof, and get a response from the police.
Citizen Justice	Zimbabwe	http://www.citizenjustice.org.zw/	Citizen Justice uses crowdfunding to help people raise funds for their legal cases. A user can upload their case to the website, which is then moderated and assigned a legal counsel.

APPENDIX D: GLOSSARY AND ACKNOWLEDGEMENTS

GLOSSARY

Agile methodology — A project management approach to software development that uses iteration, adaptive planning and continual improvement to encourage a flexible response to necessary changes that emerge during a project.

Chatbot — A piece of code that performs specific automated functions in the style of a direct-messaging chat interface, often within an existing instant messaging app. For example, it may provide information when a user requests it (often in natural language that makes it resemble a human operator – hence 'chatbot'), request information from another user, or provide a means of linking to other web services.

Constituent relationship management (CRM) — A category of software that covers a broad set of applications designed to help businesses in their interactions with customers (or constituents).

Data audit — A process for an organisation to assess what data it holds, needs and/or is missing, and review the quality of that data.

Data retention — The length of time that data is kept by the organisation that gathered it.

Feature phone — A mobile phone with the capacity to make calls and send SMS messages, but with few other advanced capabilities. The term is used to distinguish these devices from more advanced 'smartphones'.

General Data Protection Regulation (GDPR) — A regulation in EU law on data protection and privacy that was adopted in May 2018. Its primary aim is to give citizens and residents control over their personal data and to simplify the regional regulatory environment within the EU.

Guided pathway — Tools that help users identify if their issue is a legal one, what rights they may have, and resources and information that are available to help them. Typically, users will be able to download or print information relevant to them after completing the pathway, either in full or divided by topic. Pathways also often provide users with small amounts of information during the guided process, typically with accompanying questions.

Informed consent — The mechanism by which people agree to provide information for research or data collection projects. Generally, consent has been understood as something that is given by individuals during direct interaction with researchers or surveyors, and comprises three components: disclosure of research objectives and any risks or negative consequences of participating; capacity of individuals to understand the implications of participating; and voluntariness of their participation.

Interactive voice response (IVR) — A technology that allows a computer to interact with humans through a combination of voice telephone input and touch-tone keypad selection, and provides the appropriate responses in the form of voice, fax, callback, email and other contact methods.

Internet Protocol (IP) address — a unique string of numbers separated by full stops that identifies each computer, router or printer using the Internet Protocol to communicate over a network.

Journey map — A diagram or set of diagrams that shows the stages a user goes through when interacting with a website or other digital tool.

Legal capability — A term that aims to describe and understand how people resolve legal problems by looking at their knowledge, skills and psychological readiness.

Legal empowerment — A range of approaches that aim to make the protections of the law accessible to ordinary people. These range from improving institutional processes such as grievance mechanisms, to helping people find solutions to their own legal problems through providing accessible information on the law, and remote or in-person legal advice.

Metadata — Data describing a data subject's data; for example, the time a photo was taken or the camera that was used. Metadata can reveal a lot of personal information that a person would deliberately not collect or would want to protect.

Online dispute resolution (ODR) — Tools that provide an online interface to facilitate the resolution of disputes, typically consumer disputes or civil law matters such as divorce. It can support negotiation and mediation, or a combination of the two.

Privacy impact assessment (PIA) — A systematic analysis of all the factors (including legal, operational and environmental) that may lead to rights violations or abuse. Context-specific privacy impact assessments are conducted to test a project's impact on privacy and prepare it for different types of critical incidents regarding data.

Responsible data — The duty to ensure people's rights to consent, privacy, security and ownership around the information processes of collection, analysis, storage, presentation and reuse of data while respecting the values of transparency and openness.

Risk assessment — The process of identifying, analysing and evaluating risk related to the use of data and technology. In other words, it identifies gaps between staff and existing processes, as well as gaps in technology itself, and proposes mitigation strategies to minimise risk.

Scrum — A framework for project management, usually applied in software development within the Agile methodology. It emphasises iterative progress, collaboration and accountability.

Short Message Service (SMS) — Commonly referred to as 'text messaging', a service for sending short messages of up to 160 characters to mobile devices, including mobile (cellular) phones and smartphones, digital phones and web-based apps within a web browser.

Threat modelling — A strategy to map data-related threats that an organisation might face, to inform decision-making about how to prevent or mitigate those risks. This typically includes mapping out: threats that are plausible in a given context; people that might want to access the organisation's data; potential uses to which they might put the data; and ways in which they might access the data.

User Experience (UX) design — The process of researching a user's behaviours and needs when designing a product, with the goal to improve the usability and accessibility of the product.

User persona — An exercise that identifies and describes key stakeholder groups in broad terms. They can help highlight assumptions about user needs and identify risks when planning a project.

User testing — A technique in user-centered interaction design used to evaluate a product by testing it on users. Testing with users can happen in a variety of ways, from online tracking of a user's behaviour, to remote interviews with users, and in-person workshops with users.

Unstructured Supplementary Service Data (USSD) — A communication technology used to send text between a mobile phone and the service provider's computers. Sometimes referred to as "Quick Codes" or "Feature Codes", messages are up to 182 alphanumeric characters long. They can be used for prepaid callback services, information services and mobile-money services.

Wireframe — An image or set of images that outlines the functional elements of a website or webpage, typically used for planning a site's structure and functionality.

LIST OF INTERVIEWEES

We offer our sincere thanks to the 58 people who generously offered their time and wisdom to us during this project; those with whom we conducted official interviews, who contributed to the body of research we read, appreciated and built upon, and who we spoke to us in informal conversations.

People who were interviewed for this report and gave their consent to be included in this list are below.

Name	Organisation
Mark Benton	MyLawBC
Arti Bhakta	PeaceGeeks
Nicole Bradick	Theory & Principle
Amanda Brown	NextGen
Natalia Camburian	Soros Foundation Moldova
Catrina Denvir	Department of Business Law & Taxation, Monash Business School
Aniket Doeger	Haqdarshak
Mathew Egessa	Famalia
Tobias Eigen	Global Legal Empowerment Network
Kate Fazio	Justice Connect
Lance Hadley	Sauti
Jessica Hurd	Housing Court Answers
Babatunde Ibidapo-Obe	Lawpadi
Gautam John	Nandan Nilekani Philanthropies
Özgür Kahale	DLA Piper

Name	Organisation
Timothy Kakaru	Barefoot Law
Madhura Karnik	Haqdarshak
Dan Kass	JustFix.nyc
Gina Kim	ACLU
Fortunata Kitokesya	Legal Services Facility
Candice Lee	MyLawBC
Sherry MacLennan	MyLawBC
Hellen Mukasa	Lawyers4Farmers
Alice Murgier	DLA Piper
Esther Mary Nalumansi	Lawyers4Farmers
San Ng	Independent
Nelson Olanipekun	Gavel
Michael Otto	Global Legal Empowerment Network
Glenn Rawdon	Legal Services Corporation
Ignatius Richards	Lawyers4Farmers
Terri Ross	Illinois Legal Aid Online
Simran Sachdev	Nazdeek
Jayshree Satpute	Nazdeek
Connor Sattely	HiiL
Léonard Sellem	Demander Justice
Srijoni Sen	Independent
Alexey Sidorenko	Teplitsa
Roger Smith	Independent
Siddharth Peter de Souza	Humboldt University of Berlin
Sumeysh Srivastava	Nyaaya
Allen Tan	ACLU
Michelle Ton	HiiL
Tim Verheij	HiiL

Endnotes

1   See: https://aspirationtech.org/publications/manifesto; https://alidade.tech/; https://digitalprinciples.org/; https://buildwithnotfor.wordpress.com/

2   https://www.hiil.org/

3   https://namati.org/

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18   McGill, J., Salyzyn, A., Bouclin, S., Galldin, K. (2016). op. cit.

19   For example, the recent global survey on technology and access to justice for persons with disabilities suggests that justice systems are not leveraging technology to help persons with disabilities. See: Global Initiative for Inclusive ICTs (2018). Results: Global Survey on Technology & Access to Justice For Persons with Disabilities. Washington DC: G3ICT, p. 21. Available at: http://g3ict.org/upload/publication/report-technology-effective-access-to-justice/G3ict-Access-to-Justice-Survey-Data-20180624_AccessibleVersion.pdf [Accessed 6 December 2018].

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22   See Appendix for a full description of methods.

23   http://www.firedwithoutcause.com/employmentlawtutorial16.html

24   https://singaporelegaladvice.com/law-articles/how-do-i-make-a-will/

25   http://www.higrit.com/query; see also Moldovan initiative Yavo.md: https://yavo.md/rom/raspunsuri/v/bonurile, which also connects people with pro bono lawyers.

26   https://www.justika.com/konsultasi

27   https://lexyom.com/Find_lawyers/lawfirm

28   https://www.lawstrive.com

29   https://www.canlawsyariah.com/

30   http://baobab.law/

31   http://www.confidentcommuter.org.au/

32   illinoislegalaid.org

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35   https://www.immi.org/

36   https://pakistanlawyer.com/

37   https://www.citizenshipworks.org/

38   https://justiceconnect.org.au/refer/

39   https://www.citizensadvice.org.uk/about-us/contact-us/contact-us/web-chat-service/

40   https://www.lawhelpny.org/

41   https://applications-au.neotalogic.com/a/dearlandlord

42   https://www.seap.org.uk/services/c-app/

43   https://www.donotpay.com/

44   https://www.a2jauthor.org

45   https://www.citizenshipworks.org/

46   JustFix.nyc also allows users to notify their landlords of repair issues by a letter sent by recorded delivery: https://app.justfix.nyc/?utm_source=orgsite

47   http://www.e-court.nl/

48   https://www.presolv360.com/service-presolvforall

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