

# Sector planning: a framework for legal needs assessment and place-based planning

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## 1. Introduction

Victoria Legal Aid (**VLA**) has adopted a novel approach to collaborative planning at the local level and conducting data-driven legal needs assessments. This paper outlines VLA's sector planning project which spans the fields of data science, human-centred design and social innovation to develop a practical framework for legal needs assessment and place-based planning.

The paper starts by providing the context to this work and the social innovation dimension to it. We then outline difficulties associated with precisely defining legal need before proposing a narrow definition of the concept. The paper then details the operationalisation of our definition of legal need, the development of data resources, and our collaboration with the Statistical Consulting Centre at the University of Melbourne in the quantitative modelling of legal need. The final two sections of the paper describe how we have packaged this work into a practical framework for data-driven legal needs assessment and collaborative place-based planning.

In sharing this work, we hope to assist legal assistance providers undertake legal needs assessments and collaborative place-based planning for the benefit of their communities.

## 2. The opportunity for improvement

VLA is a public sector organisation that provides legal assistance services directly to individuals. VLA also administers funding to 37 independent community legal centres (**CLCs**) and a panel of private lawyers for the provision of legal assistance. Collectively, VLA, CLCs and private lawyers undertaking legal aid work comprise the legal assistance sector in Victoria.

In our experience, an accurate understanding of legal need and the ability of legal assistance providers to work together to plan services is critical to delivering legal assistance that meets the needs of the community.

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In Victoria, there is significant variation in whether or not needs assessments are conducted as part of strategic or routine planning. Moreover, there is no common approach to conducting needs assessment, including the measurement of legal need and identification of gaps. Decision making around planning and improvement initiatives currently relies heavily on practitioner intuition, information from stakeholders and historical practice. Where quantitative data on service provision is used, it is generally limited to one part of the sector like VLA or CLCs and is largely descriptive in application.

We identified an opportunity to provide planners with a more complete picture of the operating environment through a more rigorous use of quantitative data and appropriate statistical methods to measure legal need. The additional insights from this quantitative data analysis would complement, and not replace, the existing knowledge of on-the-ground practitioners and stakeholders.

The shortcomings in planning and needs assessment in the Victorian context were identified in reviews by the Productivity Commission and the Victorian Department of Justice and Regulation. In its inquiry into access to justice published in 2014, the Productivity Commission identified deficiencies in the use of data and a gap between the evidence on legal need and the allocation of funding within the legal assistance sector (Productivity Commission, 2014, pp. 742, 750 and 879). The Victorian Department of Justice and Regulation review into access to justice published in 2016 found that there were significant gaps in system-wide data and that current legal needs research in Victoria is often “ad hoc” and conducted among small samples of the population, which limits the extent to which findings can be applied across the system (Department of Justice and Regulation, 2016, p. 84).

Legal needs assessments can be technically difficult and require resources and time that many planners in the legal assistance sector struggle to find because they have other strategic and operational priorities like meeting demand for services, managing staff workloads, advocating for systemic change and securing resources to sustain service delivery. The absence of an accepted methodology and resources to help with legal needs assessments and collaborative planning has not made the job of legal assistance providers any easier.

### **3. A summary of the sector planning project**

To address the situation, VLA initiated the sector planning project in early 2017. The project aimed to improve the effectiveness of the Victorian legal assistance sector in two main ways. Firstly, the project sought to develop a credible and accessible way to measure legal need and gaps to improve the planning of legal assistance services at a statewide and local level. Secondly, it sought to bring together service providers at the local level to undertake collaborative planning of legal assistance services.

Given the relationship between legal problems and broader social and health problems, the sector planning project can be viewed as an example of social innovation, or the creation and implementation of novel solutions to social problems with the benefits of these solutions shared beyond the confines of the innovators (Tracey and Stott, 2017, p. 3). Legal problems affect disadvantaged groups in Victoria more than non-disadvantaged groups and can have a severe detrimental impact on a person’s health, wellbeing and social inclusion (Coumarelos, 2012, pp. 169, 175). Legal problems can lead to poverty or otherwise exacerbate existing poverty (Coumarelos et

al., 2012, p. 176). As a consequence, legal assistance has a role to play in preventing people falling into poverty or otherwise alleviating its consequences (Hanks, 1986).

Novel solutions in social innovation can be many things: product, process, technology, principle, idea or a combination of things (Lawrence et al., 2014, p. 319). In the sector planning project, the novel solutions consists of the following:

- (1) Model – a credible, rigorous and accessible model to measure legal need, existing service coverage and gaps using quantitative and qualitative data;
- (2) Data product – the digital presentation of the outputs of the Model in a way that is accessible to planners who may not have a background in planning, evaluation and quantitative data analysis; and
- (3) Process for collaborative place-based planning – a step-by-step process which service providers use follow to collaborate at a local level to undertake needs assessments and plan services.

Within the concept of social innovation, this project can be classified as both social intrapreneurship and social extrapreneurship. It involves social intrapreneurship because it is seeking to address social challenges from inside established organisations, namely VLA, a public sector entity (Tracey and Stott, 2017, p. 7). The project has involved organisational leadership and change at VLA in the use of sophisticated data analytics and human centred design, the publication of VLA service data on the internet, and the application of agile project management principles to public sector projects.

Furthermore, the project can be seen as social extrapreneurship in that it involves working across disciplines and fields to address social problems (Tracey and Stott, 2017, p. 7). In particular, the project draws on knowledge and approaches from the fields of legal assistance, statistics, data science, human-centered design and evaluation to achieve its objectives.

In developing the Model, VLA partnered with experts in relation to mathematics, data analytics and computer science from the Statistical Consulting Centre at the Department of Mathematics and Statistics at the University of Melbourne (**Statistical Consulting Centre**). This work was then incorporated into a framework for conducting legal needs assessment adopted from the field of evaluation. VLA also partnered with outside technical experts in relation to data visualisation and the use of appropriate software applications.

VLA applied human-centered design to both the development of a digital data product and to the process for multi-party collaborative place-based service planning.

To help ensure the things produced by the project were useful to end-users and met their needs, the project has been undertaken using agile, and in particular scrum, project management principles. We emphasised the use of multiple cycles of prototyping and getting user feedback, iterative development, and holding showcases open to all stakeholders to share project developments.

## 4. The definition of “legal need”

### It is difficult to define “legal need” and “unmet need”

Research on legal problems has often proceeded without explicit detailed definitions of important concepts like legal need (Coumarelos et al., 2006). As a result, we need to first outline the difficulties associated with the concept and our pragmatic definition for the purpose of this project.

There is no commonly agreed upon definition of legal need and numerous definitions exist varying in scope and complexity (Zander, 1978; Genn and Patterson, 2001; Curran and Noone, 2007; Pleasance, 2016).

At a fundamental level, the concept of social need can be viewed from a variety of perspectives. Bradshaw (1972) identified four ways to express social need. Firstly, normative need is that which the expert or professional defines as need in any given situation - the professional sets what is the desirable standard and these can change in time because of developments in knowledge or changing values of society. Felt need, on the other hand, involves asking the population what they want - need is equated with want in this approach. Bradshaw believed felt need was an inadequate measure of real need because it was limited by the perceptions of the individual and their knowledge of what services were available (1972, p. 3). Thirdly, expressed need was felt need that was converted into action by the individual. Need in this sense is conceptualised as the need of those people who demand a service. Finally, comparative need is based on studying the characteristics of a population who receive a service and assessing whether there are people with similar characteristics who do not receive the service to infer need in the latter group.

In the context of legal need, one broad definition of “legal need” is when an individual requires support from legal services to resolve problems with a legal dimension (Pleasance, 2016, p. 1). Unfortunately, beyond this broad definition, the precise definition of the concept remains contested and it has been difficult to translate the concept into a measurable form for empirical study (Coumarelos et al., 2012, p. 5; Productivity Commission, 2014, pp. 86, 92; Pleasance, 2016, p. 1).

The definition used by the Royal Commission on Legal Services in Scotland, often referred to as the Hughes Commission, has been adopted in numerous contexts and is a relatively sophisticated and robust conceptualisation of legal need (Curran and Noone, 2007, p. 81; Pleasance, 2016, p. 2). The Hughes Commission definition recognises there is more to legal need than people having a legal problem and not being able to secure the services of an adviser (Royal Commission on Legal Services in Scotland, 1980, p. 21). According to the Hughes Commission approach, need for legal assistance involves two stages (p. 21):

- (1) Enabling a person to identify, and if they think it appropriate, to choose a legal solution to their problem; and
- (2) Enabling the person to pursue a chosen legal solution.

The Hughes Commission emphasised the importance of legal information and the right to know about legal solutions. Moreover, it recognises that there may be legal and non-legal solutions to a problem and that people may satisfactorily resolve their legal problems using non-legal solutions.

On other other hand, the Law and Justice Foundation of New South Wales in its Legal Australia Wide Survey (**LAW survey**) adopted Genn’s justiciable approach to defining legal problems and legal need. Legal problems were defined broadly to comprise all situations where there is the potential for legal

resolution, regardless of whether the respondent recognises that the problem is “legal” or whether legal resolution was actively sought (Coumarelos et al., 2012, p. 46). Consequently, legal need was broadly defined as arising whenever a problem with a potential for legal resolution was experienced, and continuing until that problem was satisfactorily resolved (Coumarelos et al., 2012, p. 46).

In the Victorian context, not everyone with a legal problem sought help for it or sought help from a legal adviser for it: approximately 18 percent of legal problems involved people taking no action in response to the problem, 32 percent of legal problems were handled without professional advice and 50 percent of legal problems involved people seeking professional advice (Coumarelos et al., 2012, pp. 104-5). For the legal problems where professional advice was sought, legal advisers were only used in 31 percent of instances (p. 132). The relatively limited use of legal advisers may reflect problems with identifying legal problems and legal solutions in line with the Hughes Commission’s first stage of legal need. On the other hand, it also suggests that people do not restrict themselves to traditional legal advisers but use a variety of actions to try and resolve their legal problem ((Coumarelos et al., 2012, pp. 132).

Following on from variation in the definition of legal need, there is also variation in the definition of “unmet need” (Curran and Noone 2007). The Hughes Commission defined “unmet need” as instances where a person is unaware that they have a legal right or where they want to pursue a legal solution but cannot do so because of a lack of legal services of adequate quality or supply (Royal Commission on Legal Services in Scotland, 1980, p. 21). Dignan (2004) on the other hand proposed that unmet need was the gap between experiencing a legal problem and satisfactorily solving that problem.

### **Our narrow definition of legal need**

Our approach to defining legal need has been influenced by our project context and pragmatic considerations.

The sector planning project has a geographic scope ranging from statewide and multi-region right down to specific local regions and VLA’s guiding legislation mandates that the organisation focus on individuals experiencing socio-economic disadvantage (ss. 4 and 7 of the *Legal Aid Act 1978* (Vic)). In order to develop a model to measure legal need that is practical, accessible and replicable we were motivated to adopt a definition of legal need which could be operationalised using data that we had access to and which did not necessitate major statewide data collection efforts. We also wanted to model legal need at a commonly used spatial unit, in this case the local government area.

Accordingly, we propose a narrow definition of legal need: where an individual has a problem with a legal dimension and has decided to seek help from a legal assistance service. This definition of legal need can be described as “expressed need” or need felt by an individual that is turned into action (Bradshaw, 1972; Curran and Noone, p. 67). In the context of our sector planning project, this expressed need equates with demand for legal assistance services - every time an individual requests legal information, advice or other forms of help from a legal provider, they are expressing a particular legal need (Pleasance et al., 2001, p. 15; Coumarelos et al., 2008, p. 4).

Our definition provides a proxy measure of legal need and does not offer a comprehensive measure of the ground truth in relation to legal need, for example as the concept has been conceptualised by the Hughes Commission, Genn and the Law and Justice Foundation in the LAW Survey. Proxy measures should relate to the conditions which promote a need and a test of the adequacy of the proxy is whether the proxy provides a more accurate measure than any other available proxy and is a more accurate measure than no proxy at all (Pleasance et al., p. 40). Our proxy measure of legal

need can be considered a measure of the lower end of potential legal need in the community - it measures legal need that is expressed via the use of traditional legal assistance providers.

We selected this narrow definition for a number of reasons.

Firstly, it reflects the reality that some people routinely look to resolve legal problems without courts and lawyers and even without reference to law (Pleasance, 2016, p. 5). Adopting a broader definition of legal need like the Hughes Commission or LAW survey definition for our project context, while being a more comprehensive measure of legal need, would also capture situations where people may not want help from a publicly-funded legal assistance provider for their problem. Given our focus is on better planning of legal assistance services for individuals experiencing socio-economic disadvantage, a broader measure of legal need that captured instances where people consciously decided not to seek legal assistance would potentially overstate the level of legal need. The Productivity Commission had recognised that additional funding for the sector was required (2014, p. 733) and so overestimating the level of legal need in the context of legal assistance planning for socio-economic disadvantaged people runs the risk of magnifying the severity of rationalisation decisions that providers may need to make to meet the the level of need.

Secondly, the broader definitions of legal need are generally measured using legal needs surveys (Coumarelos et al., 2008, p. 4). Legal need surveys requires data collection from individuals at the population or sub-population levels (eg, in the form of individual questionnaires), involve sampling considerations and the processing and analysis of the data. However, some have recognised that legal needs surveys, particularly those using telephone questionnaires, have limitations in capturing the legal need of hard to reach disadvantaged groups like the homeless and prisoners (Productivity Commission, 2014, p. 92). The obstacles to using legal needs surveys are the cost, time and technical skills required to undertake the surveys.

Our motivation was to establish a practical, less costly and replicable way to undertake legal needs assessment spanning the whole state and particular regions. As a result, we have had to compromise in our definition of legal need and adopt a less comprehensive measure.

### **Operationalising our definition of legal need**

We have operationalised our definition of legal need as the instances of legal assistance service provision by VLA, CLCs and private lawyers under legal aid work. This is based on the idea that every instance of service provision - whether it be information, legal advice, court representation or more intensive and bundled forms of help like casework - represent an instance where an individual has had a problem with a legal dimension and decided to seek help for it from a legal assistance provider. Therefore, every instance of service provision recorded in the administrative database of service providers approximates a manifestation of legal need in the form of expressed need.

VLA does not have access to service data for CLCs at the individualised “client” level and so we could only operationalise legal need across the Victorian legal assistance sector by using aggregated counts of service provision at the postcode and local government area level. Therefore it is important to note that in our operationalisation of legal need and the data we collected, more than one service could have been provided to the same individual. While this may be interpreted as potentially double counting legal need based on individual recipients, it could also be interpreted as numerous manifestations of legal need addressed in a variety of forms, instances and sources of help.

## Limitations in our definition of legal need

Before we proceed, it is important to acknowledge the limitations in our definition and operationalisation of legal need.

Firstly, our definition and operationalisation of legal does not include instances where people are unaware of the legal dimension of their problem, potential legal solution or avenues for legal assistance (the first stage in the Hughes Commission definition). This is particularly difficult for individuals who are experiencing disadvantage and social exclusion who may need help to just recognise the legal dimension of their problem and potential legal solutions. Our definition also does not measure instances where no action is taken in response to a legal problem or where the problem is dealt with through non-legal assistance providers. These instances are usually measured through survey methodology although as noted above, they may have their limitations in reaching particularly disadvantaged people.

Secondly, our definition of legal need does not include instances where people seek out legal assistance for a legal problem but have been denied services, for example due to eligibility criteria or service providers operating at full capacity. It has been noted generally that reliable data on people being turned away from services or not being properly assisted is difficult to obtain (Department of Justice and Regulation, 2016, p. 64).

Thirdly, our operationalisation of legal need does not incorporate the important dimensions of service quality, outcome, service user preference or service user satisfaction. There is currently no systematic collection and sharing of data across the Victorian legal assistance sector in relation to these dimensions. The lack of outcome measures and data in the civil justice system and difficulties in measuring quality were noted by the Productivity Commission in its review (2014, pp. 885, 890). Although there are a number of promising initiatives to address this situation, we did not have access to data on these aspects of service provision for this project. As a result, a major assumption in our definition and operationalisation of legal need is that all legal assistance services are of a sufficient quality and meet the needs and expectations of service users.

Addressing these limitations in our definition and operationalisation of legal need should be a priority for future work.

## 5. Data collection and the digital data product

Our experience is that data collection, preparation and analysis have been difficult and time consuming exercises for legal assistance providers and represents a barrier in doing legal needs assessments. As part of the sector planning project, we have sought to address this in a number of ways:

- (1) We have centrally assembled a range of quantitative data for use in legal needs assessments and published the data on the internet via the Tableau public website;
- (2) We have developed an instrument to collect qualitative data on legal need to complement the insights derived from the quantitative data;
- (3) We developed a number of data models to predict the level of legal need; and
- (4) We have packaged the quantitative data and data models into an interactive data product using Tableau software which participants can use without specialist software or training.

This section details the work in relation to data collection and the data product and the following section details the work of the Statistical Consulting Centre in relation to the data models.

## Quantitative data

We collected the following quantitative data for the purpose of the sector planning project:

- (1) Administrative data on services provided by VLA and private lawyers funded by VLA stored in the ATLAS database. This dataset covers the period July 2011 to June 2017 for various service types and legal problem types.
- (2) Administrative data on services provided by CLCs stored in the CLSIS database. This dataset covers the period July 2010 to March 2017 for various service types and problem types. The CLSIS database was decommissioned in March 2017 because CLCs transitioned to a new system and at the time we did not have access to data on the new system.
- (3) The New South Wales Law and Justice Foundation's Need for Legal Assistance Service (**NLAS**) indicators dataset which is publicly available and based on the 2016 Australian census. The indicators help identify who is most likely to need legal assistance services once they experience a legal problem (Law and Justice Foundation, 2015, p. 4). The NLAS indicators generally identify people who are least likely to have the personal or financial resources to manage their own legal problems and who are most likely to be eligible for legal assistance services (Law and Justice Foundation, 2015, p. 4). We collected and visualised this data at various spatial units, including statistical area one which have a population of between 200 and 800 people (Australian Bureau of Statistics, 2016) .
- (4) Various "open" or publicly available datasets on a range of phenomena like health, demographics, crime, abuse and electronic gambling (see Appendix 1 for a complete list of the data). In identifying quantitative data relevant to legal problems and legal need, we sought advice from VLA's sector innovation and planning committee, an expert advisory panel that includes experienced practitioners and subject matter experts.

Taken together, the administrative data on VLA, CLC and private lawyer service provision represents the operationalisation of our definition of legal need for the purpose of this project.

The VLA, private lawyer and CLC service provision data was mapped according to a common problem type and service type descriptive hierarchy to allow comparison of legal service provision by problem and service type across the various providers. We believe this was the first time this has been done on such a scale for the Victorian legal assistance sector.

It is important to note that the CLC service data VLA obtained does not comprehensively cover all service provision by the Victorian CLC sector although it covers the vast majority of providers. The data VLA obtained does not include organisations that did not use the CLSIS database or where VLA did not have the ability to access the organisation's data in CLSIS under the funding agreement between VLA and the individual CLC.

## Qualitative data

To collect qualitative data in relation to legal need, we developed a self-administered online questionnaire for participants undertaking a legal needs assessment. This instrument was developed on the basis of previous legal needs questionnaires and advice from the sector innovation and planning committee. The questionnaire can also be completed by other interested stakeholders who wish to contribute to the legal needs assessment.

## Data product

An important consideration in this work was to package the various data resources into a form that could be used by end users with relative ease and simplicity. In packaging the resources into a “data product” we aimed to create an interactive tool that visualises legal need, service coverage and other relevant data that legal assistance providers could use without the need for specific training or software. As a result, our data product is in the form of a series of Tableau dashboards and workbooks.

We visualised the data in relation to service provision, NLAS indicators and the various phenomena that may be relevant to understanding legal need in the form of interactive geographical maps at the local government area level. We published these maps on the internet via our Tableau public account.

During the discovery phase stakeholders were consulted on a series of iterative wireframes and prototypes to test the user experience of the data product and whether the data reflected the practitioner’s own conceptualisation of legal need at the local level. Each iteration of the data product incorporated feedback from the previous round of testing with users across the legal assistance sector. These prototype testing workshops were a valuable starting point for building relationships across the sector and building understanding in the value of data analysis.

Figures 1 and 2 are examples of some of the data visualisations which comprise the data product.

*Figure 1: the NLAS population at various spatial units across Victoria. In this visualisation we are able to count the number of people who are likely to need legal assistance at various spatial units, including focusing in on a geographic area of approximately 200 to 800 people.*

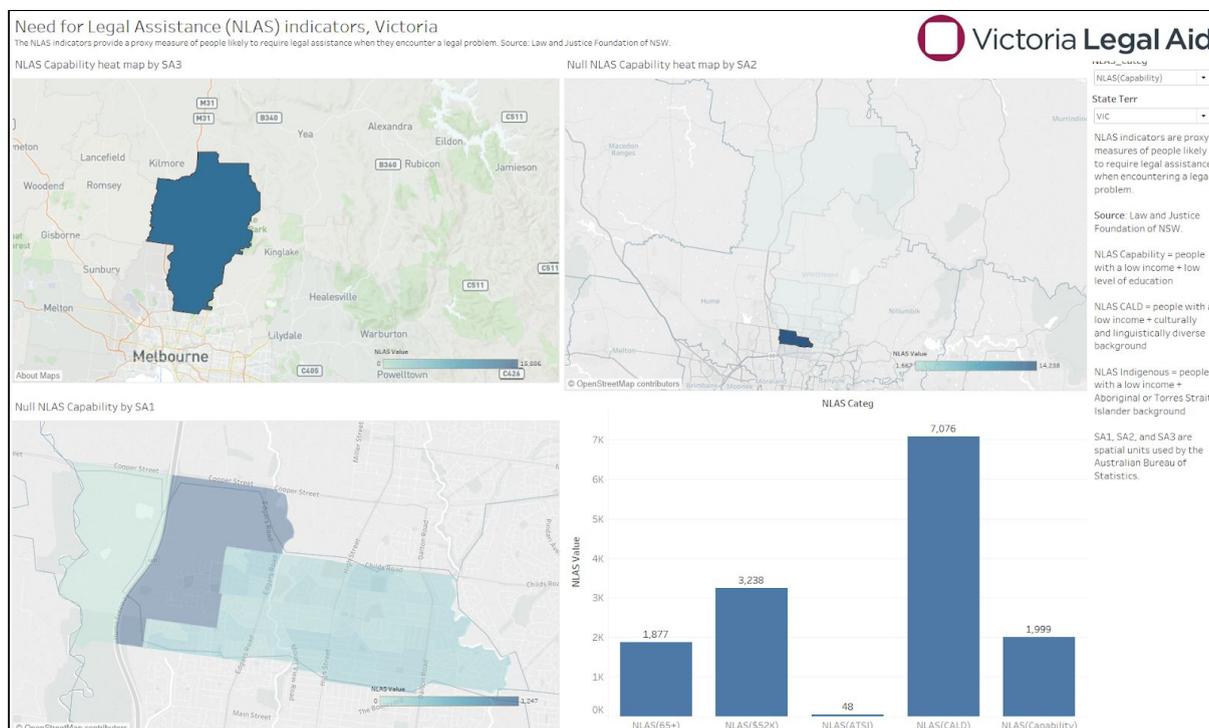
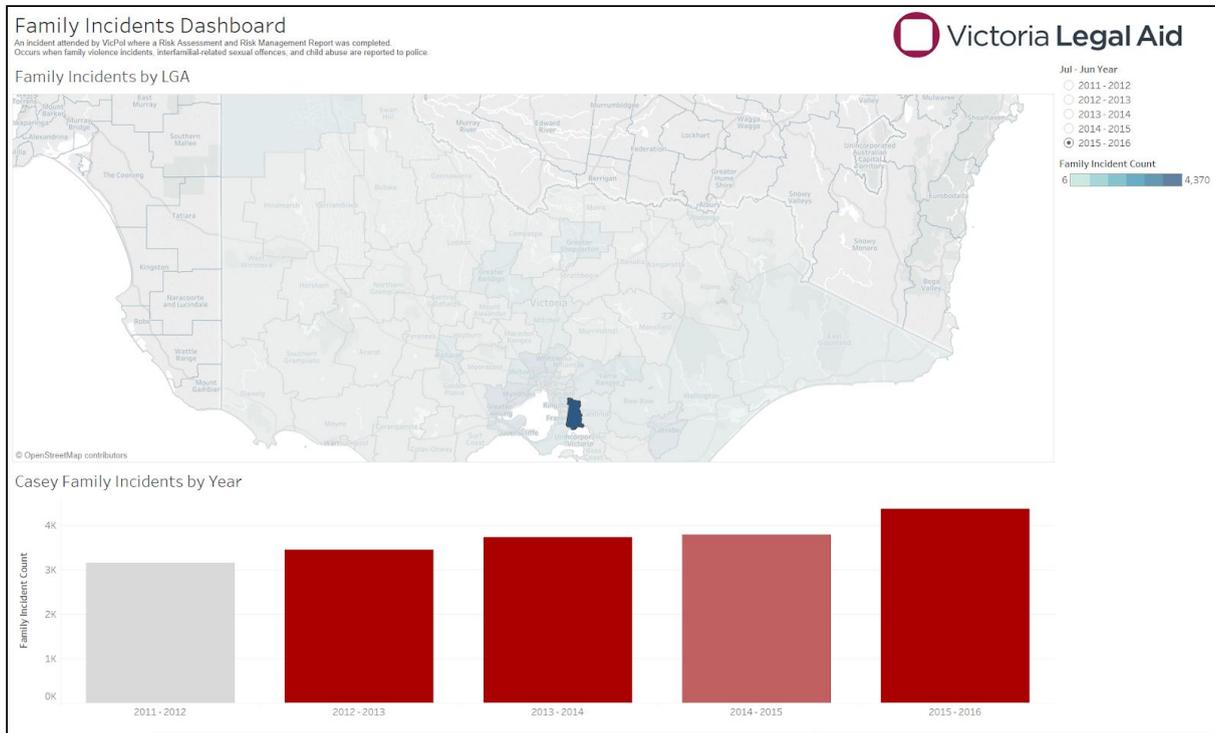


Figure 2: family incidents across Victoria. This data comes from Victoria Police and helps people undertaking legal needs assessments understand family incidents in their local area.



## 6. Data modelling in relation to legal need

VLA partnered with the Statistical Consulting Centre to develop data-driven models using the quantitative data we assembled to help us understand legal need, service coverage, gaps and future expected service demand. VLA formulated the research questions and supplied the data to the Statistical Consulting Centre which cleaned the data, selected the best methods of analysis and modelling, and developed the models.

The data modelling was done at the local government area spatial unit and covers nine categories of legal problems: family problems, family violence, child protection, adult summary crime, youth crime, infringements, tenancy, debts and “all legal problems” which encompasses all legal problems covered in the service data, including but not limited to the eight other categories.

VLA did not have access to CLC data at an individual service user level and therefore the analysis and modelling of service data was not conducted based upon the “client” unit of analysis but rather on services provided.

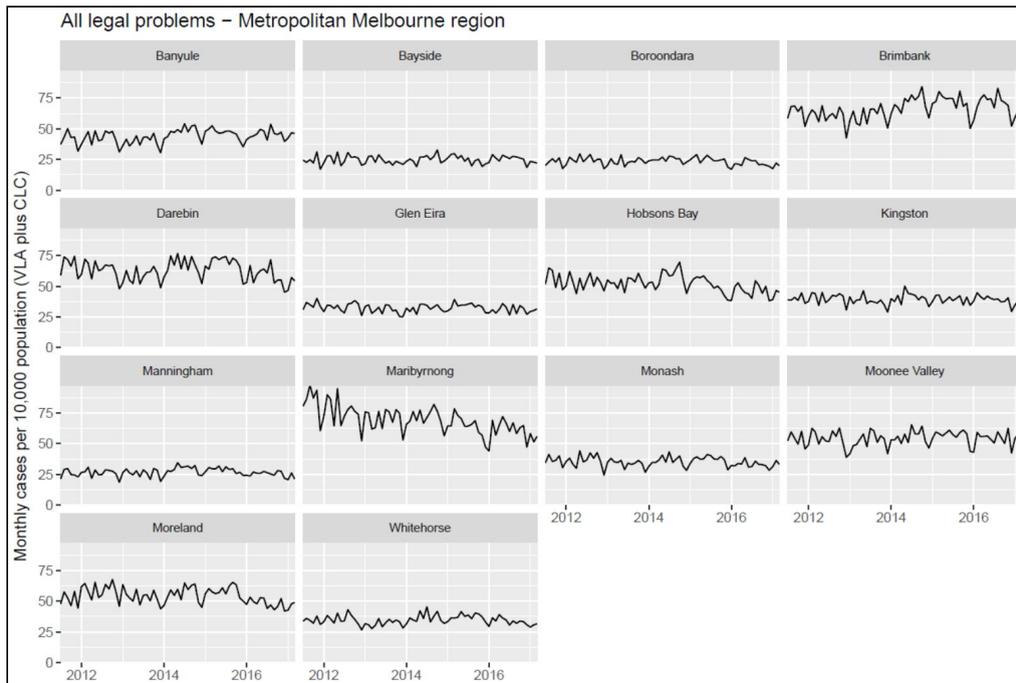
### Describing the level of legal assistance services

The Statistical Consulting Centre advised that legal assistance service provision could be expressed as a rate per 10,000 population. In doing this, the centre drew on official government data of Victoria’s estimated resident population by local government area by year up to 2016.

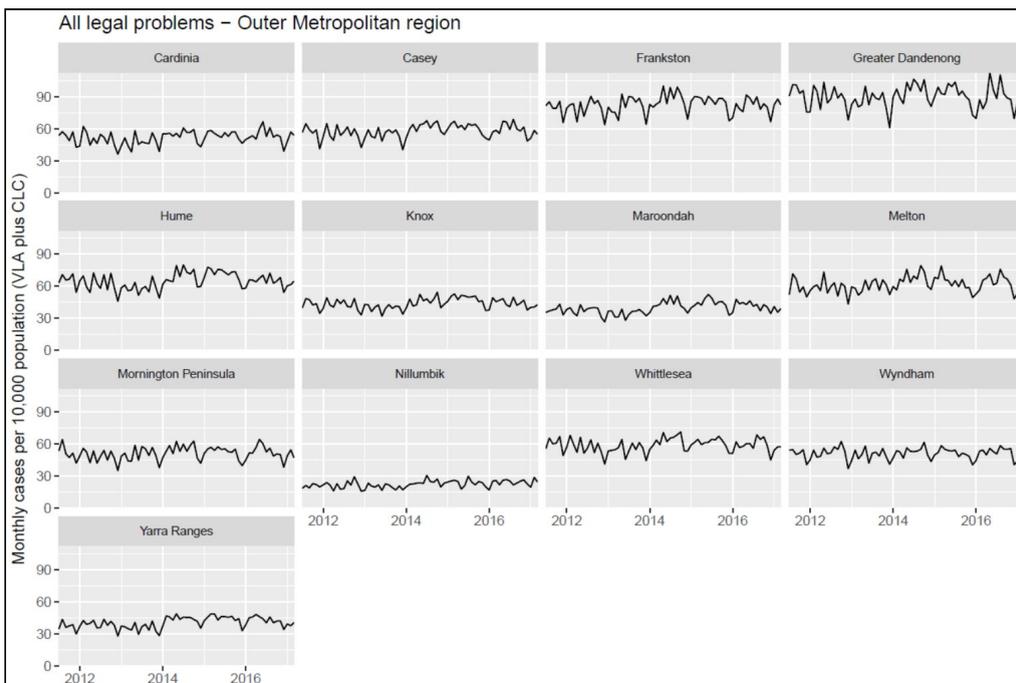
Analysis of service provision using the total number of services has a limitation in that it does not factor in variation in population over time and between different geographic areas. Expressing service provision as a rate per 10,000 population allows us to compare service provision across local government areas with different population sizes and also lets us observe changes in service

provision within a particular local government area over time factoring in population increases. It provides an underlying rate of service provision which is useful for comparison purposes. Figures 3 and 4 are examples of the panel plots developed by the Statistical Consulting Centre to visualise the rates of legal service provision.

*Figure 3: Legal assistance service provision in the Melbourne metropolitan region.*



*Figure 4: Legal assistance service provision in the outer Melbourne metropolitan region. The Melton and Whittlesea areas have experienced annual population growth of around 4-5 percent from 2013 to 2016 (City of Melton; City of Whittlesea) but the rate of service provision for these areas have remained relatively stable.*



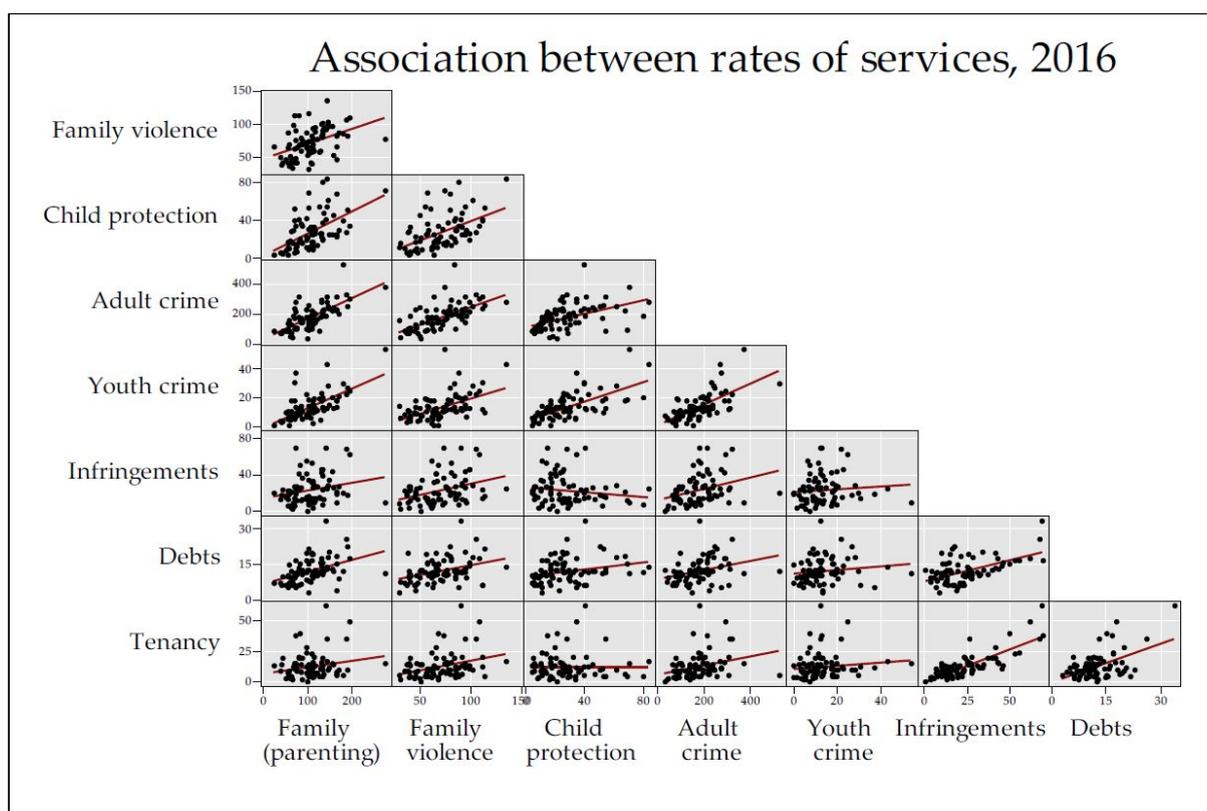
## Associations between the rates of legal assistance services

The Statistical Consulting Centre also explored the associations between legal assistance services for different legal problems. The centre used the rates of service for the nine legal problem categories and service data for the 2016 year. Figure 5 is panel plot showing the various associations with the line on each plot being a regression fit showing the direction and strength of the association (Gordon, Clarke and Patrick, 2017).

We believe this analysis has a number of potential applications: identifying potential downstream consequences of increasing service provision for a particular legal problem type on legal assistance services for other types of problems, and learning about optimal service provision arrangements from local government areas with exceptional rates of services.

We can observe strong positive correlations between legal assistance services in relation to a number of legal problems types, as indicated by the Pearson correlation coefficient value and statistical significance at the 5 percent level (*P-value* less than 0.05). For example, there is strong positive correlations between family (parenting dispute) legal assistance services in a local government area and legal assistance services in relation to adult crime (0.71;  $P < 0.05$ ), youth crime (0.64;  $P < 0.05$ ) and child protection (0.56;  $P < 0.05$ ). We can also observe a very strong positive correlation between infringements legal assistance services in a local government area and legal assistance services in relation to tenancy (0.81;  $P < 0.05$ ).

Figure 5: the association between rates of legal assistance services for 2016.



## **Predicting the level of legal assistance services**

The Statistical Consulting Centre developed two models to predict the level of legal assistance service expected to be provided in a given local government area using quantitative data. Both approaches provide data-driven predictions based on a wide variety of quantitative data and use mathematical and computer science approaches.

Both models operate on the basis that a prediction of the expected number of services for a particular local government area does not involve using data for that particular local government area but rather data for the other 78 local government areas. This is intended to avoid the models being overfitted (Gordon, Clarke and Patrick, 2017).

Each prediction produced by the models is accompanied by a prediction interval to give us an idea of the precision of the prediction. The Statistical Consulting Centre used a 95 percent prediction interval - this means the range of values within which we can be 95 percent sure that the true value of the variable lies.

Both models have potential application in predicting the level of service provision expected for a particular local government area. Given our definition of legal need is where an individual has a problem with a legal dimension and has decided to seek help from a legal assistance service, the predictions also operate as a prediction of the level of legal need in a particular local government area. Moreover, by comparing the predictions produced by the models with the actual observed level of service provision in a local government area, we can start to identify areas where service provision appears well calibrated to legal need and areas where there may be scope to increase service provision to meet the predicted level of need.

### ***Regression model***

The first model produced by the Statistical Consulting Centre predicts the level of legal assistance services in a local government area using a linear model on a logarithmic scale (Gordon, Clarke and Patrick, 2017). The regression model predicts the number of legal assistance services in a local government area for 2016 (2016 being the most recent full year of service data available to us for this project). This model uses two types of data:

- (1) The number of CLC, VLA and private lawyer legal assistance services provided, covering all problem types and the following types of service: legal information, legal advice, VLA duty lawyer service, VLA minor work, CLC casework (counted as files opened) and VLA grants. The month and year the service was provided and location of the service user is included in the data. Therefore geography is approached from the perspective of where the service user is from and not where the service is provided.
- (2) The Law and Justice Foundation's NLAS capability indicator: a count of people aged 15 to 64 with low income and educational attainment in each local government area in Victoria based on the 2016 Australian census.

### ***Random forests model***

The second model produced by the Statistical Consulting Centre predicts the level of legal assistance services in a local government area based on an ensemble of regression tree models. This model is a computationally intensive approach which considers 146 different types of data to produce the prediction (Gordon, Clarke and Patrick, 2017). It uses many decision-trees, or graphical representations of alternatives in a decision-making process, to analyse the data. For example, for a given legal problem type like infringements, 2,000 different trees are generated to analyse the

exploratory variables and this in turn is done 79 times, once for each of the 79 local government areas in Victoria.

The random forests model takes into consideration the various NLAS indicators developed by the Law and Justice Foundation (and not just the NLAS capability data), youth crime data, family incidents data, gaming machine losses data, crime data, and a range of socio-health-demographic data. Appendix 1 lists the data used in the random forests model.

According to the Statistical Consulting Centre, the use of the random forests approach offered a number of benefits (Gordon, Clarke and Patrick, 2017). Firstly, it offered flexibility and the ability to accommodate complexity in the data. Secondly, it is also capable of dealing with complicated interactions between the data and can capture non-linear relationships in the data. Thirdly, it enable us to consider a large range of data - the regression model uses two types of data whereas the random forests model uses 146 types.

Figure 6 is an example plot created by the Statistical Consulting Centre visualising the output of the regression model and the random forests model in relation to all legal problems in the Melbourne metropolitan region for 2016. The triangle represents the prediction from the regression model and the square represents the prediction from the random forests model. The horizontal line accompanying each prediction represent the 95 percent confidence interval for that prediction. In comparison, Figure 7 is a plot for family violence services in the Melbourne metropolitan region for 2016.

*Figure 6: Predicting legal assistance services/legal need for all legal problems in the Melbourne metropolitan region for 2016*

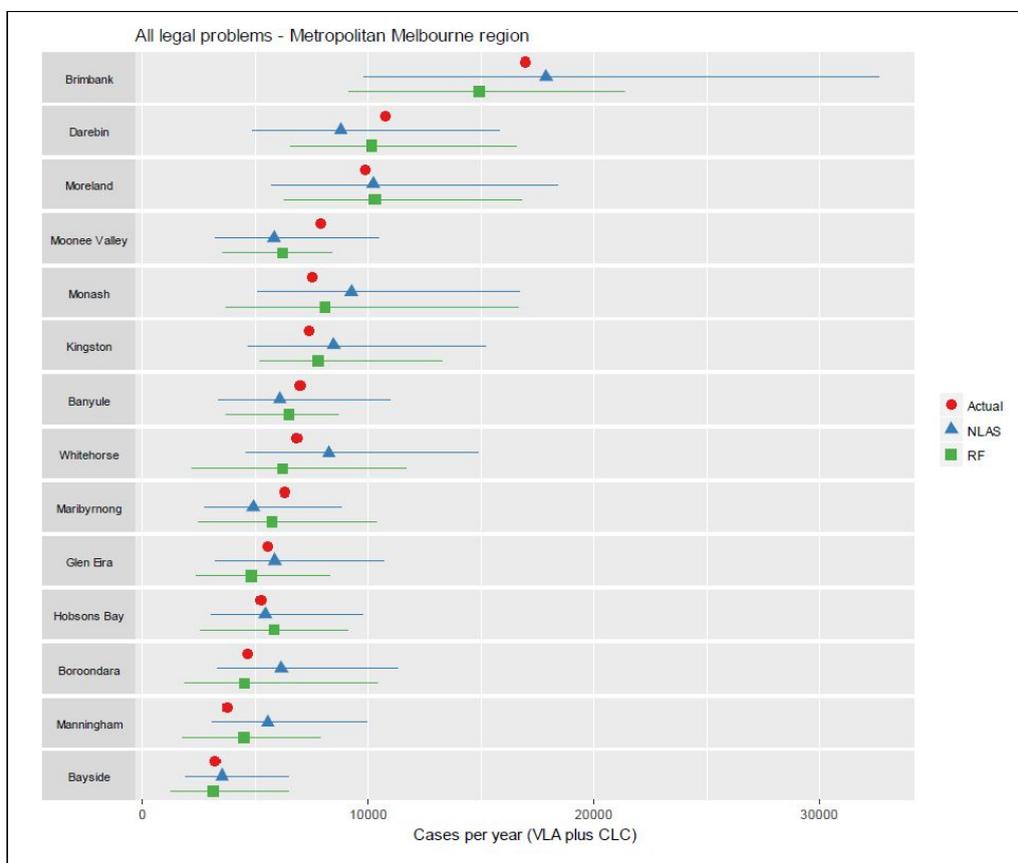
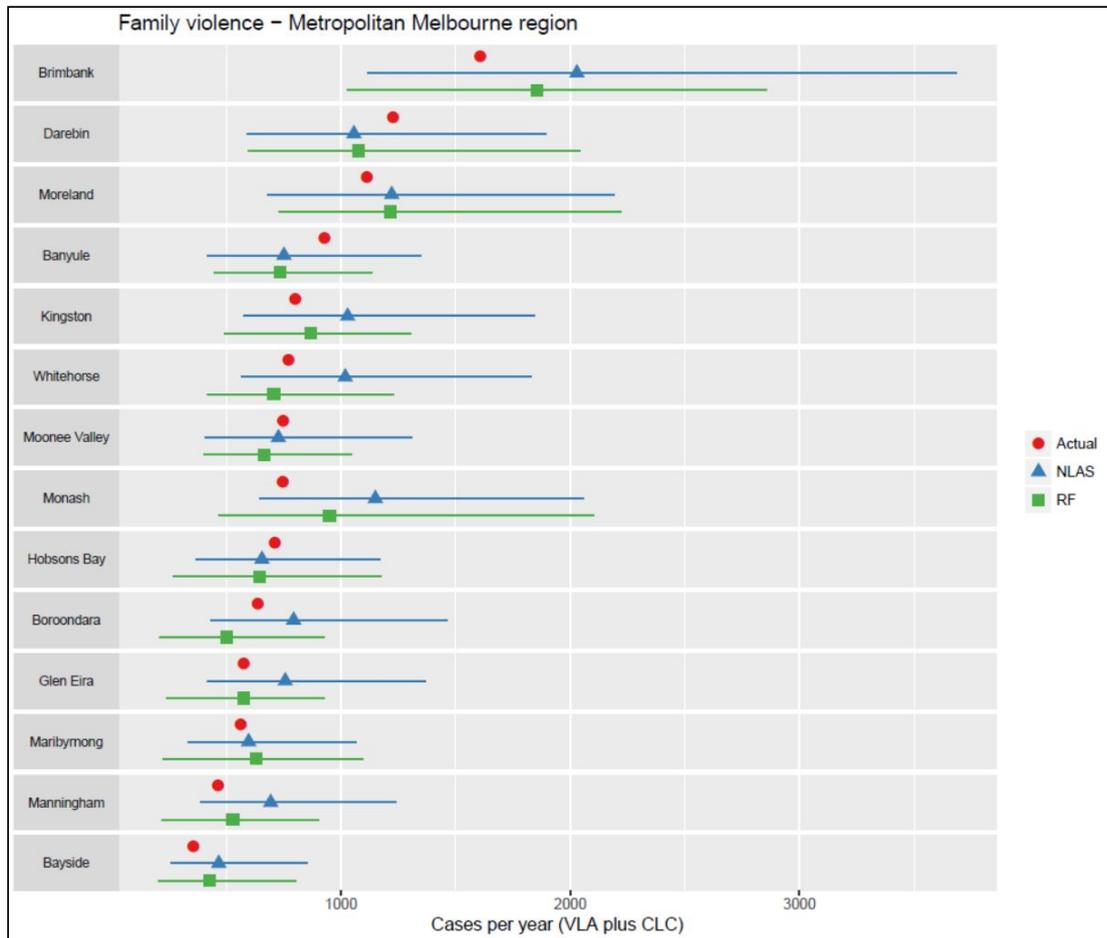


Figure 7: Predicting legal assistance services/legal need for family violence legal problems in the Melbourne metropolitan region for 2016

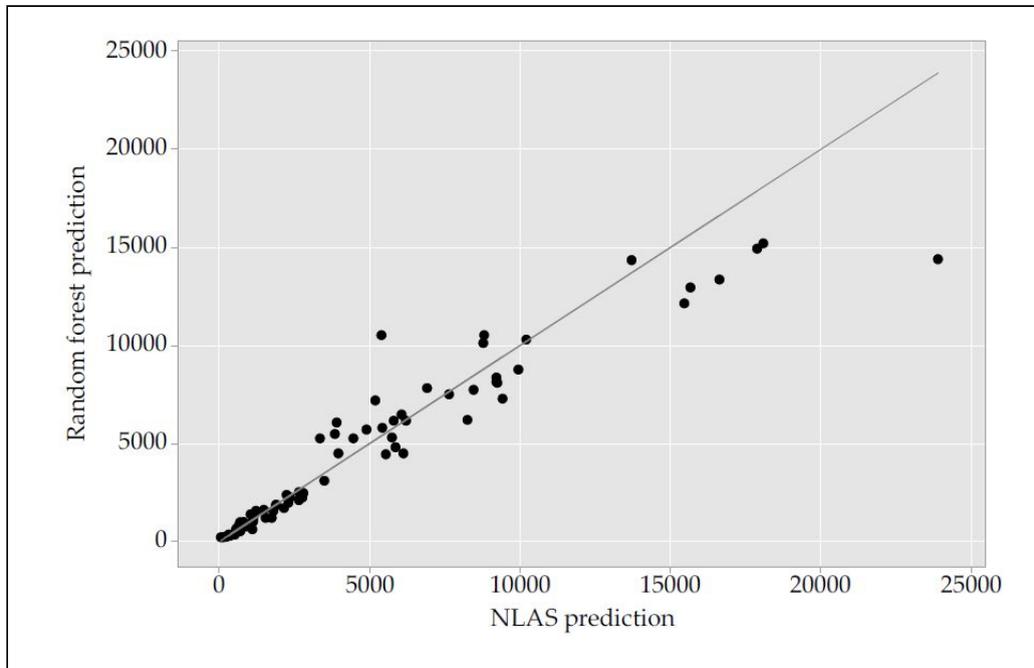


The two models are alternative ways to predict the level of legal assistance service provision/legal need over a 12 month period in a particular local government area.

The advice from the Statistical Consulting Centre is that where the predictions from the two models agree with each other closely, it is reasonable to have confidence in the results (Gordon, Clarke and Patrick, 2017). On the other hand, if the predictions are significantly different, and in particular, one is below and one is above the actual figure for 2016, the predictions should be treated cautiously. In this situation, it is possible that differences between the two models indicate that service usage may be related to things other than the NLAS capability indicator which is the basis of the regression model.

There appears to be reasonable consistency between the predictions produced by each model. Figure 8 details the level of agreement between predictions using the random forests and the regression model for the all legal problems category for 2016. Each observation represents a local government area. The plot indicates there is generally good agreement between the two models but there is greater divergence in local government areas with higher levels of service provision.

Figure 8: the level of agreement between predictions using the random forests and regression methods for all legal problems for 2016.



One benefit of including many exploratory variables in the random forests model is that we can derive a ranking of the importance of the various variables in the model (Gordon, Clarke and Patrick, 2017). This indicates how frequently the particular exploratory variable featured in trees used to predict the response variable, that is, the level of legal assistance service. The ranking gives a relative indication of the ability of the exploratory variable to predict the level of legal assistance service/legal need.

Many of the datasets used in the random forests model are more frequently updated and published than datasets based on national census surveys like the NLAS indicators. As a result, the random forests model enables us to open up new lines of research about social-economic-health phenomena that co-occur with particular legal problems. We can use the insights from the ranking of variables as a basis to try and develop more dynamic real-time predictors of legal need for specific legal problems at the local government area. It should be noted that we are not currently able to infer any causation between the highly ranked variables and particular legal problems and this is one potential area for further research.

The random forests model considered all 146 variables as possible predictors of legal service provision and it can be considered that the most important ones by ranking have the greatest contribution to the prediction. Figure 9 lists the top four most important variables for the relevant random forests prediction for the particular legal problem category. The Statistical Consulting Centre used a scale for importance for the variable with 100 being the highest number in terms of importance.

Figure 9 : the four most important variables in predicting the level of legal assistance services for particular legal problems. The importance ranking for each variable is in brackets next to the description of the variable.

<b>Legal services - all problems</b>	Crime - theft (100)	Crime – robbery (69)	Crime - Total (51)	People with an annual income less than AUD\$26,000 (49)
<b>Legal services - parenting disputes</b>	Family incidents (100)	Crime – total (97)	Crime – theft (86)	Crime – property damage (66)
<b>Legal services - family violence</b>	Crime – theft (100)	Unemployment (87)	Electronic gaming machine player losses (79)	Crime – robbery (73)
<b>Legal services - child protection</b>	Social housing dwellings (100)	Aboriginal and Torres Strait Islander people 15 and over with low personal income (NLAS ATSI) (65)	Family incidents (57)	Aboriginal and Torres Strait Islander people 15 and over with low personal income (NLAS ATSI) (65)
<b>Legal services - adult summary crime</b>	Crime - theft (100)	Electronic gaming machine player losses (98)	Crime – total (76)	Crime – robbery (65)
<b>Legal services - youth crime</b>	Youth offences (100)	Crime – property damage (98)	Crime – assault and related offences (77)	People with a disability aged between 15 and 64 (56)
<b>Legal services - debts</b>	Crime – theft (100)	Single parents (91)	People with an annual personal income less than AUD\$52,000 (87)	People with an annual income less than AUD \$26,000 (87)
<b>Legal services - infringements</b>	Population (100)	Crime – robbery (84)	Unemployment (79)	Children and young people (79)
<b>Legal services - tenancy</b>	Electronic gaming machine player losses (100)	Crime – robbery (76)	People with poor English proficiency (42)	Crime - theft (73)

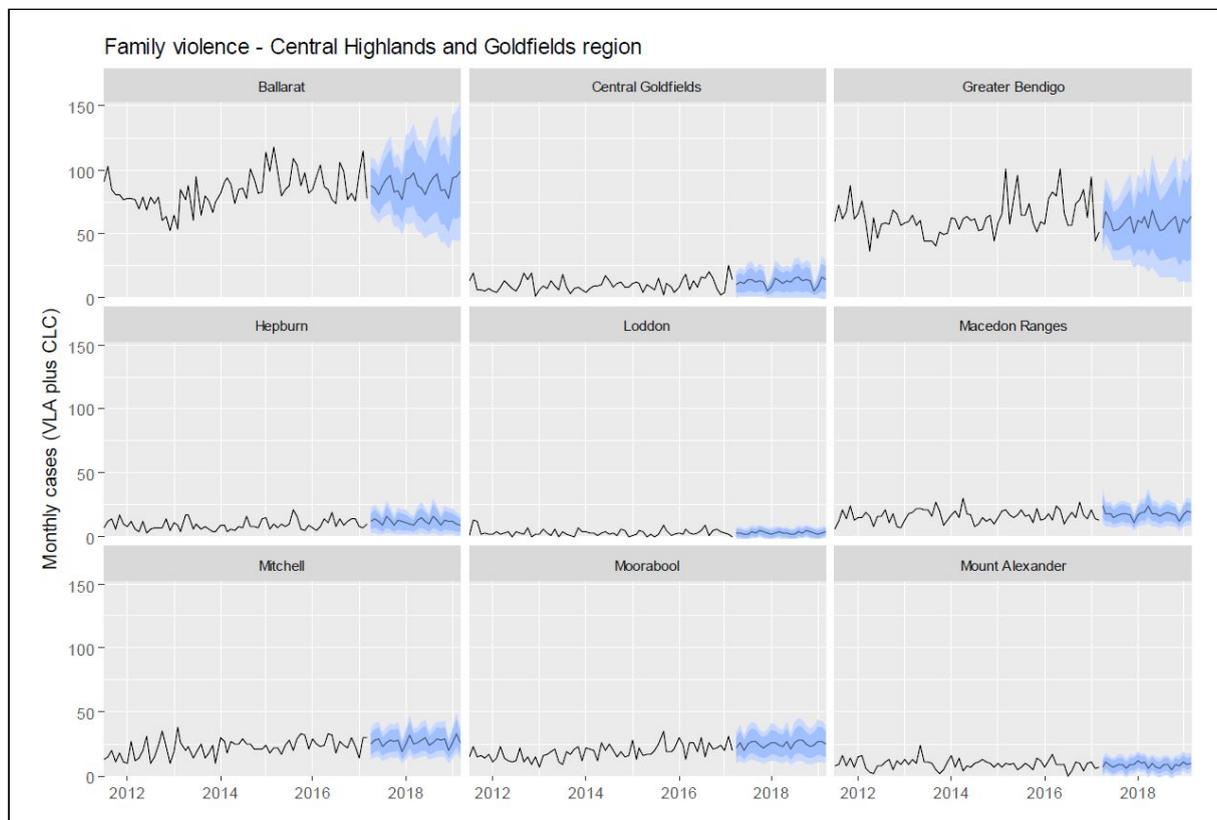
## Forecasting the level of legal assistance service provision

The Statistical Consulting Centre developed a Holt-Winters seasonal time series model to forecast the level of legal assistance service provision at a local government area level. This model was used to produce monthly forecasts from May 2017 until April 2019 and incorporated Victoria's future population projections for each local government area.

Given our definition of legal need is where an individual has a problem with a legal dimension and has decided to seek help from a legal assistance service, the forecasts also operate as a prediction of the future level of legal need in a particular local government area.

Each prediction is accompanied by a 80 percent and a 95 percent forecast interval. Figure 10 is a panel plot with forecasts of the number of legal assistance services in relation to family violence in the Central Highlands and Goldfields region. The 80 percent prediction interval is shaded dark blue and the 95 percent interval is shaded light blue.

*Figure 10 : Forecasting the number of legal assistance services/legal need in relation to family violence in the Central Highlands and Goldfields region.*



## 7. A framework to conduct legal needs assessment

We have proposed a narrow definition of legal need, a way to operationalise that concept based on legal assistance service data and have also developed a number of data-driven models to predict the level of legal need. The next step is to incorporate this work into a practical framework to conduct legal needs assessment and identify unmet need.

### The concept underpinning the framework

There is broad support for the idea that independent assessments and measures of the level of legal need based on empirical research can better inform policy-making and ensure that legal services are better coordinated and reach those in need (Curran and Noone, 2007, p. 64; Productivity Commission, 2014, p. 893; Department of Justice and Regulation, 2016, p. 61).

However, it has long been recognised that it is impossible to measure the exact extent of the need for legal services or of the level of unmet need for such services (Zander, 1978, p. 276). This may be due to a range of factors like legal need and legal problems being social phenomena incapable of precise definition and measurement through scientific methods and the complexity of consumer behaviour in seeking legal assistance.

Despite the elusiveness of a perfect measure of need for legal assistance and unmet need, there have been various approaches to the task since the 1930s (Pleasance et al., 2001, p. 7). The most well established, comprehensive and robust approach to conducting legal needs assessments involve going into the community and asking people about their legal problems ie, legal needs surveys which, as we have discussed, provide the big picture understanding of legal need in the community (Pleasance, 2016, pp. 6-7).

Driven by practical considerations, we have developed an alternative approach to legal needs assessments that although not as comprehensive as a legal needs survey, has benefits in terms of less resources and skills required to conduct and the ability to repeat assessments on a more frequent basis than legal needs surveys. What we are sacrificing in big picture understanding of legal need we are gaining in practicality and replicability.

Our proposed framework to conduct legal needs assessments is based on needs assessment methods found in the field of proactive evaluation (Roth 1990; Kaufman, 1994; Owen, 2006). In this sense we are engaging in social extrapreneurship in combining approaches from the field of evaluation to the legal assistance sector.

The fundamental principle of our proposed framework is that “unmet need” is conceptualised as the difference between the “desired state” and the “actual state” in relation to a particular phenomena (Roth 1990; Owen, 2006):

$$\text{unmet need (U)} = \text{desired state (D)} - \text{actual state (A)}$$

This expression can be used for any number of phenomena, issues, units of analysis and units of geography.

The actual state (A) is the situation as it currently stands - it is something that can be counted or observed. For example, the number of tenancy legal assistance services provided in the Melbourne local government area for the 2016 calendar year.

In contrast, the desired state (D) involves articulation of the situation as it should be by those undertaking the needs assessment. For example, the desired state could be the number of tenancy legal assistance services provided in the Melbourne local government area over a 12 month period that local stakeholders believe to be the desired or ideal amount to satisfy legal need.

The desired state component in assessing for unmet need explicitly recognises the judgment involved in undertaking needs assessments - what ought to be depends on the frame of reference for the evaluation (Pleasance et al., 2001, p 38; Owen, 2006, p. 174). Needs assessments, like other forms of evaluation, can be seen as political activities (Owen, 2006, p. 174).

The subjective judgment involved in articulating the desired state does not mean this part of the exercise should be arbitrary and unreasonable. Formulation of the desired state is a critical step and must be informed by as comprehensive an understanding of the operating environment as possible. We believe this is achieved by taking into consideration stakeholder perceptions, relevant quantitative data and robust and appropriate data analysis techniques. It involves utilising all of the data and analytical means available to us to arrive at an articulation of the desired state that is well-founded and reasonable.

Unmet need (U) is the discrepancy, if any, between the actual state (A) and the desired state (D). As a result, the level of unmet need is immediately quantified as part of using this approach. Where the value for U is positive, it may be interpreted as a gap or unmet need and where the value for U is zero it can be considered that there is no gap or unmet need. Where the value of U is negative, it may be interpreted as a situation where the expectations of those undertaking the assessment are being exceeded.

Conceptualising legal need in this way is not without precedence: the Hughes Commission stated in 1980 that total legal need could be seen as the sum of actual use plus unmet needs (Royal Commission on Legal Services in Scotland, 1980, p. 21). Our proposed approach is different to the Hughes Commission one in that ours explicitly includes a subjective desired state component.

Our proposed framework for legal need assessment uses our definition of legal need, which is operationalised as the number legal assistance services provided at the local government area, as the basis for expressing the actual state, desired state and unmet need. While it is possible to use other units of analysis pursuant to this approach, for example, the number of people assisted or number of tenancy eviction notices overturned, we are recommending that at a minimum planners use the number of legal assistance services provided as a foundation.

## Practical steps in conducting a legal needs assessment

Building upon the conceptualisation of unmet need as the difference between the desired state and the actual state, we have adapted the work of Owen (2006) and Kaufman (1994) in the field of needs assessment to develop a practical guide to conducting legal needs assessments. This approach incorporates the data resources and data models we have developed in this project.

There are six steps in conducting a legal needs assessment:

### 1. Planning the legal needs assessment

Step one generally involves identifying who is involved in the legal needs assessment and the scope of the exercise. In particular, it comprises the following tasks:

- (1) Define the entities and the group undertaking the assessment, referred to as the “participants”. This has important implications for articulating the desired state (D).
- (2) Define the geographic region of interest using local government area as the spatial unit and the legal problems of interest. This helps to set the geographic and thematic boundaries of the exercise and hence, the time and resources required for the assessment.
- (3) Define the purpose of the assessment and the target audience - is it to review current service arrangements or to design a new service? Will it be used primarily for planning purposes or does it have an advocacy role? This influences the scope of the assessment and the way it is communicated.

### 2. Data management

In order to fully understand legal need, we recommend that participants take into consideration both quantitative and qualitative data, the latter comprising practitioner and stakeholder perspectives. Step Two generally involves collecting data to inform the assessment, both quantitative and qualitative, and selecting the methods to analyse the data. In particular, it comprises the following tasks:

- (1) Identify and collect quantitative and qualitative data relevant to the legal needs assessment.
- (2) Select the method of data analysis and the data models to be used to analyse the quantitative data.

VLA has sought to minimise the effort and resources required of participants in step two by providing a suite of data resources to help with tasks (1) and (2).

The quantitative data VLA collected and published via the data product in Tableau acts as the foundation for step 2(1). Moreover, the survey instrument we have developed can be used by participants to collect the qualitative data on legal need required in step 2(1). Participants are free to collect additional data relevant to their assessment.

In partnering with the Statistical Consulting Centre, we have developed a number of data models for the purpose of step 2(2). These were outlined in section 6 of this paper.

### **3. Describing the characteristics of the region of interest and the actual state (A)**

Step three generally involves participants synthesising the data compiled in step two, both quantitative and qualitative, to produce a description of geographic region of interest and the actual state (A). The geographic region of interest, by local government area, and the legal problems of interest were set in step one. This step involves describing in more detail what is currently happening in the region based upon the available data.

Step three comprises the following tasks:

- (1) Describe the characteristics of each local government area comprising the region of interest. This should include detailing how many people live in the region, how many are likely to need legal assistance, where are the concentrations of people experiencing disadvantage, and what is the prevalence of health-economic-social phenomena associated with the legal problems of interest. Participants use the data product and the results of the qualitative survey to source the information required in this step.
- (2) Identify the actual state (A) of the region of interest and for the legal problems of interest. Participants should express the actual state (A) in terms of the number of legal assistance services provided in each local government area over a twelve month period for legal problems of interest. Participants use the data product for this step and should express the actual state in terms of 2016 service data, the most recent year of complete data for the legal assistance sector that we have available. Participants may elaborate on this and express the actual state in additional ways like service type, service provider, service quality, service user satisfaction or sub-population provided with services but they will need to collect the additional data.

### **4. Articulating the desired state (D)**

Step four generally involves articulating the desired state for each local government area comprising the region of interest and for each of the legal problems of interest.

The desired state should be expressed in terms of the number of legal assistance services provided in each local government area over a period of twelve months for each legal problem of interest. This actual state and desired state should be expressed in the same units covering the same time period, twelve months, to enable comparison and quantification of the extent of unmet need, in any.

The predictive models developed by the Statistical Consulting Centre are based upon analysis of large amounts of quantitative data and are a powerful basis upon which to formulate the desired state in relation to service provision.

To help articulate the desired state in terms of services provided for a particular legal problem in a particular local government area, participants should use the following data models developed with the Statistical Consulting Centre:

- (1) The regression model and random forests model to predict the number of legal assistance services/legal need for the 2016 calendar. The predictions should be compared with the actual observed number of services for 2016.

- (2) The Holt-Winters model to forecast future legal assistance services/legal need.
- (3) Analysis of associations between rates of service for different legal problems.

The predicted number of legal assistance services for 2016 derived from the data models should be the starting point in articulating the desired state. We recommend that participants start with the regression model and random forest model to set the initial figure for the desired state and then analyse the forecasting model to see if demand in the particular local government area is predicted to change. Changes in demand may result in participants amending the initial figure for the desired state.

For example, figure 11 details the predicted level of child protection legal assistance services/legal need in the Mallee region of Victoria, an outer regional area. The actual state, expressed as the number of child protection services in 2016, can be observed on the plot as the red point. The predicted level of child protection services/legal need can be derived from the regression and random forests models. These predictions are relatively close together and can form the initial basis for expressing the desired state in terms of child protection services in each of the local government areas. Participants can then refer to the forecasts for child protection services in figure 12 and consider whether any forecasted changes in the level of legal need should be reflected in the expression of the desired state. The local government areas of Mildura and Swan Hill are forecasted to experience an increase in child protection legal assistance services/legal need. This in turn may influence the final decision of participants in relation to the desired state for these two areas.

*Figure 11: The predicted level of child protection legal assistance/legal need in the Mallee region for 2016.*

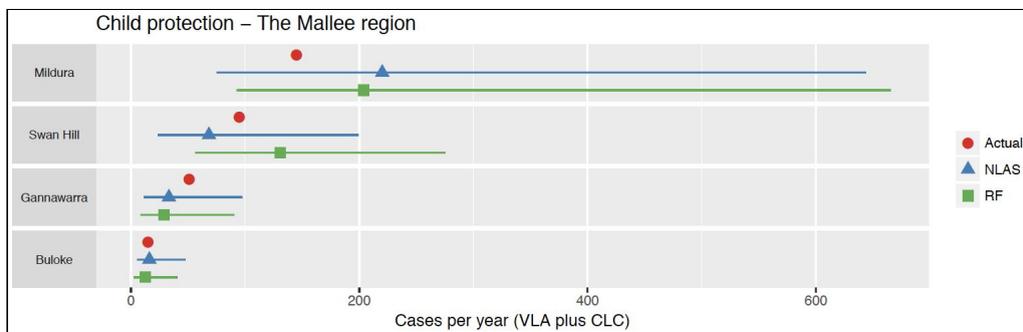
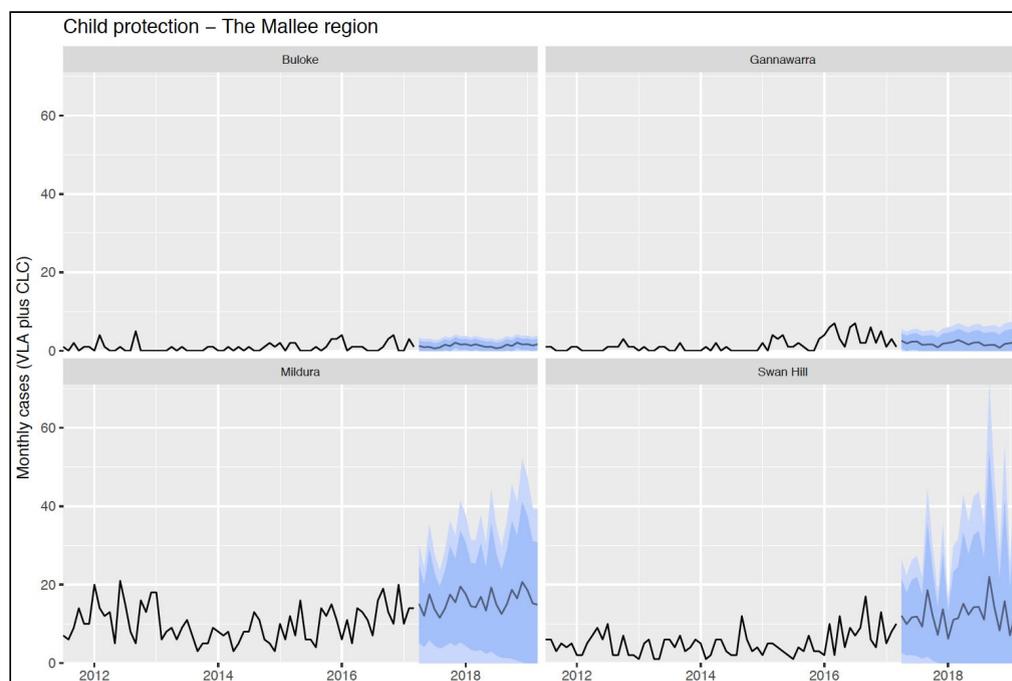


Figure 12: Forecasting the level of child protection legal assistance/legal need in the Mallee region.



Predictive needs models in themselves do not provide the last word in terms of planning decision making and local knowledge and understanding are necessary ingredients in the needs assessment process (Pleasant et al., 2001, p. iii). The models do however provide a critical perspective and source of information.

The use of the predictive models should be combined with insights from participants and stakeholders with local knowledge to help ensure the results of the models are not being distorted by local phenomena that will only be known to those familiar with the area (Blake in Percy-Smith (ed), 1996, pp. 123-4).

As a result, we recommend that participants take the desired state figures derived from the models and consult with stakeholders as part of the process of finalising the articulation of the desired state. The stakeholder consultation may result in amendment to the desired state or reinforcement of it as an appropriate objective with broader support.

##### 5. Identify areas of unmet need (U)

Step five generally involves identifying the discrepancy between the actual and desired states, the instances of unmet need, and the reasons for the unmet need. In particular, this step comprises the following tasks:

- (1) Compare the desired state with the actual state for each local government area and legal problem of interest to identify any areas of unmet need.
- (2) Test these findings with participants and stakeholders.
- (3) Participants work together to identify the reasons and causes of the unmet need (Kaufman, 1994, p. 14).

## **6. Utilisation of findings from the legal needs assessment**

Strictly speaking, the needs assessment concludes at step five because this framework separates the task of identifying unmet need with the formulation of solutions (Owen, 2006, p. 175; Watkins et al., 1998, p. 41). Steps one to five can be viewed as providing the data for assuring that the solutions, once selected in step six, deliver the desired results (Watkins et al., 1998, p. 41). Step six comprises the following tasks:

- (1) If there is more than one instance of unmet need in relation to the region of interest and legal problems of interest, participants should work together to prioritise the instances of unmet need for action.
- (2) Participants should explore solutions to address the prioritised instances of unmet need. This may involve conducting further research into the reasons for the unmet need, designing or redesigning services, prototyping solutions, creating action plans and creating metrics and other measures of success for the proposed solutions. This step may also involve identifying other organisations and stakeholders to work with.

We have provided an overview of the framework for conducting legal needs assessment which incorporates the data resources we have developed in the project. The next section of the paper details a process for collaborative place-based planning of legal assistance by local providers. This process in turn encompasses undertaking a legal needs assessments pursuant to our framework.

## 8. A process for collaborative place-based planning using a human-centred design approach

As part of the sector planning project we also developed a way for legal assistance providers to collaborate at the local level to plan services. The Collaborative Place-Based Planning Process (**Process**) is a human-centred design approach to addressing legal need at a local level - it is a step-by-step guide to collaborative place-based planning that includes a number of design activities as well as incorporating the framework to conduct legal needs assessments.

The Process consists of four stages and is based on a series of workshops held with local legal assistance providers. The stages are:

- (1) Establishing the group and region of interest (one workshop)
- (2) Understanding legal need (one workshop)
- (3) Creating future visions and pathways (two workshops)
- (4) Developing an implementation plan (one workshop)

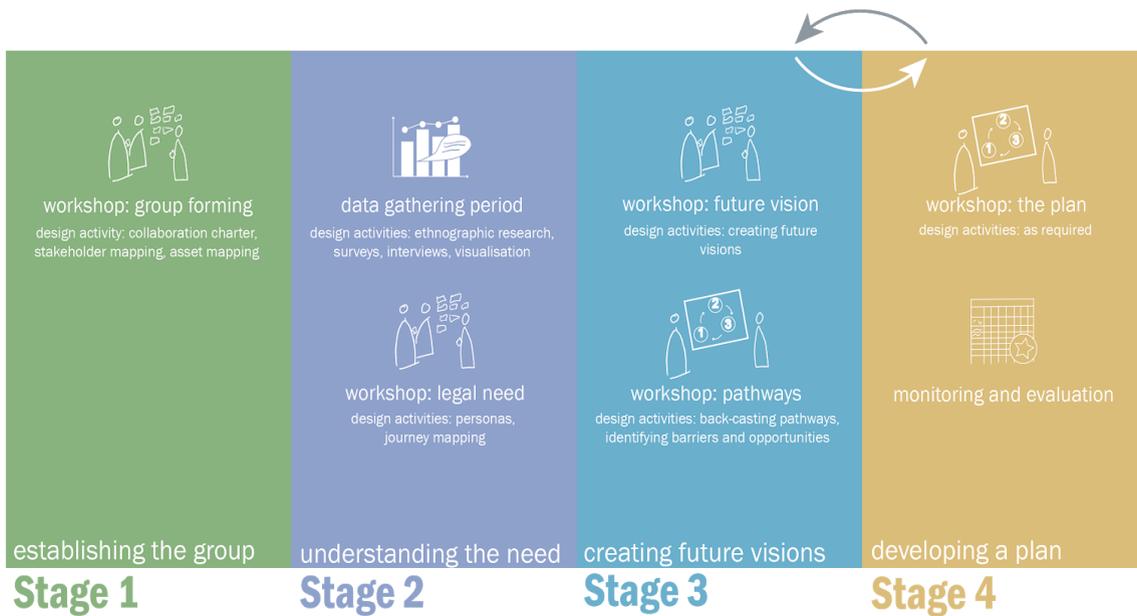
All workshops are lead by an experienced facilitator in the sector planning project team. Broadly speaking, stages one and two of the Process covers steps one to four of the legal needs assessment framework and stages three and four of the Process covers steps five and six of the framework. The legal needs assessment framework and Process have been kept separate because there may be instances where service providers may want to undertake a needs assessment without having to go through an entire collaborative place-based planning exercise.

The legal needs assessment framework and the Process is being piloted in three regions across Victoria. The sites cover a variety of geographic and demographic conditions, as well as a mix of participant organisations and experience in conducting legal needs assessments.

The Process builds on existing practices in the Victorian legal assistance sector and applied social research and co-design methodologies. We recognise the wealth of knowledge and experience of legal assistance providers and aim to provide the tools for them to work together to establish a common understanding of need, service coverage and priorities so that they may coordinate efforts to respond appropriately to need in their local area.

In developing the Process, we looked to precedents in the legal assistance sector, including Legal Aid New South Wales' Cooperative Legal Service Delivery (**CLSD**) program. We learnt from this initiative, adapting elements of it and complementing them with a human-centred design components like observation, personas and journey mapping. In particular, the place-based nature of the CLSD program and collaboration amongst local stakeholders are core aspects of the Process. We also learnt from initiatives in other sectors, in particular, the Victorian Eco Innovation Lab's Visions of Resilience process (Biggs et al., 2014) and the Waitemata District Health Board's Health Service Co-design process (Boyd et al., 2010). Figure 13 is a summary of the Process.

Figure 13: A summary of the Process.



### Stage one: establishing the group and region of interest

The first stage of the Process is about facilitating a group of local and interested legal assistance providers who take ownership of the planning process. The importance of the stakeholders trusting each other and the Process should not be underestimated. Meaningful relationships and a shared understanding of the issues, goals and commitment to change will positively affect the successful application of the Process.

The main aspect of stage one involves the interested legal assistance service providers coming together to hold a start-up workshop. These stakeholders will comprise the participants in the legal needs assessment. The aims of this workshop are to develop a shared understanding of the Process and how to best work together, define the region of interest and the problems of interest, map the strengths and assets of the region, and identify and map important stakeholders.

The stage one workshop comprises the following activities:

- (1) Acknowledge past experiences of planning processes and collaboration.
- (2) Present aims of the Process.
- (3) Develop a shared commitment to the Process and a way of working. This activity produces an artefact in the form of a collaborative placed-based planning charter.
- (4) Mapping stakeholders through a design activity – participants identify stakeholders and their influence and importance. This activity produces an artefact in the form of a stakeholder map.
- (5) Spatially mapping the strengths and assets of the region of interest through a design activity. This activity produces artefacts in the form of a series of asset maps for the region of interest.

Figure 14: the stakeholder mapping exercise in practice.



Figure 15: Spatially mapping the strengths and assets of the region of interest.



## **Stage two: understanding legal need in the region of interest**

Stage two of the Process is about acquiring a shared understanding of legal need in the community (ie, region of interest), how it is currently being serviced, and identifying any unmet need and priorities. Critically, this is where the legal needs assessment is introduced. This stage applies the legal needs assessment framework and also incorporates a range of other activities to enhance stakeholder understanding of legal need in the region.

Stage two involves participants gathering data and participating in a workshop.

In relation to data gathering, participants complete a qualitative survey in relation to legal needs and may also administer the survey to their own stakeholder network. Participants also conduct field research in the form of interviews with non-legal service providers and ethnographic observation of courts, reception areas and client service provision to better understand how people access and experiences services. These insights can be viewed as additional data to help participants understand the region and legal need.

The stage two workshop focuses on understanding legal need. It comprises the following activities:

- (1) Apply the legal needs assessment framework. In particular, select the legal problems of interest, describe the region of interest, the current state and attempt to articulate the desired state. Participants will use the data product and the qualitative data collected and following this workshop, participants will produce an artefact in the form of a draft legal needs assessment.
- (2) Understanding service experience for clients and staff through a design activity. Participants create personas representing particular service users and service providers. This exercise assists participants to understand need and legal assistance seeking behaviour from the perspective of service users. This activity produces artefacts in the form of various personas.
- (3) Create journey maps through a design activity to understand the current service experience for typical service users. Participants identify pain points, barriers and emotions experienced by service users throughout the journey of recognising that they have a legal problem, deciding whether to seek help, and seeking help from a legal source. This activity produces artefacts in the form of various journey maps. The personas and journey maps contribute to understanding the current state in relation to clients and their experience in relation to local legal assistance.

## **Stage three: creating future visions and pathways**

The third stage of the Process focuses on creating a shared vision for access to justice in the region and pathways to achieving the vision. We use the themes and high level outcomes from the Victorian Community Legal Sector Outcomes Measurement Framework (Planigale and Thwaites, 2017) as a starting point to have a facilitated aspirational conversation about what participants want for the legal assistance sector in the region in five years time. The five year time frame allows for some blue sky thinking but is not so far off that it feels unrealistic.

Stage three comprises two workshops: one in relation to the future vision for access to justice and the other in relation to creating pathways to achieve the vision.

The future vision for access to justice workshop comprises the following activities:

- (1) Exploring the desired state in relation to legal need and identify any instances of unmet need. Participants should explore the reasons for any unmet need and attempt to prioritise



sites. The value of meeting regularly, working towards tangible outcomes and having a facilitator who is external to the group of participants should not be underestimated.

Secondly, individuals in the legal assistance sector can find future visioning exercises challenging. Specifically, the ability to temporarily disengage from daily tasks and service delivery demands in order to imagine how they would like to see the future in relation to legal need can be challenging for participants.

## 9. Conclusion

We have provided an overview of the sector planning project by VLA and highlighted it as a form of social innovation in a public sector context.

The sector planning project aimed to improve the effectiveness of the Victorian legal assistance sector by firstly developing a credible and accessible way to measure legal need. Secondly, it sought to bring together service providers at the local level to undertake collaborative planning of legal assistance services.

The project has produced a practical framework to undertake legal needs assessment and various data resources including datasets, data collection instruments, data-driven models to predict legal need, and a data product for legal assistance providers to use. The project has also produced a resource to guide collaborative place-based planning of legal assistance services using human-centred design principles.

In sharing this work, we hope to assist legal assistance providers undertake needs assessments and collaborative place-based planning for the benefit of their communities.

## References

- Australian Bureau of Statistics (2016) *1270.0.55.001 - Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas, July 2016*. Available at: [http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1270.0.55.001~July%202016~Main%20Features~Statistical%20Area%20Level%201%20\(SA1\)~10013](http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1270.0.55.001~July%202016~Main%20Features~Statistical%20Area%20Level%201%20(SA1)~10013) (accessed 4 June 2018).
- Biggs, C., Ryan, C., Bird, J., Trudgeon, M. and Roggema, R. (2014) *Visions of Resilience: A Workshop Manual, Victorian Eco-Innovation Lab*, The University of Melbourne.
- Blake, A. (1996) 'Assessing needs for legal services' in Percy-Smith, J (eds), *Needs Assessments in Public Policy*, Buckingham: Open University Press.
- Boyd, H., McKernon, S. and Old, A. (2010) *Health Service Co-design: Working with Patients to Improve Healthcare Services Guide and Toolkit*, Waitemata: District Health Board.
- Bradshaw, J. (1972) 'A Taxonomy of Social Need' in McLachlan, G (ed.) *Problems and Progress in Medical Care*. London: Open University Press.
- Coumarelos, C., Macourt, D., People, J., McDonald, H., Wei, Z., Iriana, R. and Ramsey, S. (2012) *Legal Australia-wide survey : legal need in Victoria*, Sydney: Law and Justice Foundation of New South Wales.
- Curran, L, Noone, M. (2007) 'The Challenge of Defining Unmet Legal Need', *Journal of Law and Social Policy*, 21(4), pp. 63 - 89.
- Department of Justice and Regulation (2016) *Access to Justice Review*. Available at: <https://engage.vic.gov.au/accesstojustice> (Accessed 2 June 2018).
- Gordon, I., Clarke, S. and Patrick, C. (2017) *Legal need in Victoria and service provision by Victoria Legal Aid*. Statistical Consulting Centre Report for Victoria Legal Aid. Unpublished.
- Hughes, W. (1980). The report of the Royal Commission on Legal Services in Scotland, vol. 1, 1st ed. Edinburgh: Her Majesty's Stationery Office.
- Hughes, W. (1980). The report of the Royal Commission on Legal Services in Scotland, vol. 2, 1st ed. Edinburgh: Her Majesty's Stationery Office.
- Kaufman, R. (1994) 'A Needs Assessment Audit', *Performance and Instruction*, 33(2), pp. 14 - 16.
- Lawrence, T. B., Dover, G. and Gallagher, B. (2014) 'Managing Social Innovation' in Dodgson, M., Gann, D. M. and Phillips, N. (eds.) *The Oxford Handbook of Innovation Management*. Oxford: Oxford University Press, pp. 316-334.
- Owen, J. (2006) *Program Evaluation: Forms and Approaches*. 3rd edition. Crows Nest: Allen & Unwin.
- Planigale, M. and Thwaites, R. (2017) *Victorian Community Legal Sector Outcomes Measurement Framework*.

Pleasence, P. (2016) '*Legal Need' and Legal Needs Surveys: A Background Paper*'. Available at: <https://namati.org/resources/legal-need-and-legal-needs-surveys-a-background-paper/> (Accessed 2 June 2018).

Pleasence, P., Buck, A., Goriely, T., Taylor, J., Perkins, H. and Quirk, H. (2001) *Local Legal Need*, Legal Services Research Centre.

Productivity Commission (2014) *Access to Justice Arrangements*. Available at: <https://www.pc.gov.au/inquiries/completed/access-justice/report> (Accessed 2 June 2018).

Roth, J. (1990) 'Needs and The Needs Assessment Process', *Evaluation Practice*, 11(2), pp. 141-143.

Tracey, P. and Stott, N. (2017) 'Social Innovation: a Window on Alternative Ways of Organizing and Innovating', *Innovation: Organization & Management*, 19(1), pp. 51-60.

Watkins, R., Leigh, D., Platt, W. and Kaufman, R. (1998) 'Needs Assessment - A Digest, Review and Comparison of Needs Assessment Literature', *Performance Improvement*, 37(7), pp. 40 - 53.

Zandar, M. (1978) *Legal Services for the community*. London: Maurice Temple Smith Ltd.

## Appendix 1

### Data used in the regression model

Description of data	Time period	Source
VLA service data	various	Victoria Legal Aid - ATLAS
CLC service data - indicates service provider, client location (by local government area and postcode), problem type, service type, and month and year a service was provided. The structure of the data requested is similar to the former CLSIS CA4 report	July 2010 to March 2017	Commonwealth Attorney-General's Department - CLSIS
NLAS Capability	2016 Australian census	New South Wales Law and Justice Foundation

### Data used in the random forests model

Description of data	Time period	Source
Estimated resident population by LGA and year	various	Australian Bureau of Statistics
Population projections by LGA and year	various	Department of Environment, Land, Water and Planning
NLAS Capability	2016 Australian census	New South Wales Law and Justice Foundation
NLAS ATSI	2017 Australian census	New South Wales Law and Justice Foundation
NLAS CALD	2018 Australian census	New South Wales Law and Justice Foundation
NLAS 65+	2019 Australian census	New South Wales Law and Justice Foundation
NLAS \$52k	2020 Australian census	New South Wales Law and Justice Foundation

Population (all)	2021 Australian census	New South Wales Law and Justice Foundation
Population (15 and over)	2022 Australian census	New South Wales Law and Justice Foundation
Population (15-64)	2023 Australian census	New South Wales Law and Justice Foundation
People with a personal income <\$26K (15 and over)	2024 Australian census	New South Wales Law and Justice Foundation
People with a personal income <\$52K (15 and over)	2025 Australian census	New South Wales Law and Justice Foundation
People with a household income <\$26K (all ages)	2026 Australian census	New South Wales Law and Justice Foundation
People with a lower education (15-64)	2027 Australian census	New South Wales Law and Justice Foundation
Unemployed people (15 and over)	2028 Australian census	New South Wales Law and Justice Foundation
Single parents (15 and over)	2029 Australian census	New South Wales Law and Justice Foundation
Children and youth (0-24)	2030 Australian census	New South Wales Law and Justice Foundation
Disengaged youth (15-24)	2031 Australian census	New South Wales Law and Justice Foundation
Older people (65 and over)	2032 Australian census	New South Wales Law and Justice Foundation
People with a disability (14 and under)	2033 Australian census	New South Wales Law and Justice Foundation
People with a disability (15-64)	2034 Australian census	New South Wales Law and Justice Foundation
Aboriginal and Torres Strait Islander (ATSI) people (14 and under)	2035 Australian census	New South Wales Law and Justice Foundation
Aboriginal and Torres Strait Islander (ATSI) people (15 and over)	2036 Australian census	New South Wales Law and Justice Foundation

Aboriginal and Torres Strait Islander (ATSI) people with personal income <\$52K (15 and over)	2037 Australian census	New South Wales Law and Justice Foundation
CALD people (15 and over)	2038 Australian census	New South Wales Law and Justice Foundation
People with poor English proficiency (15 and over)	2039 Australian census	New South Wales Law and Justice Foundation
People who did not access the internet from their dwelling (15 and over)	2040 Australian census	New South Wales Law and Justice Foundation
Number of offences by geographic area and offence type (includes various categories of offences)	October 2011 to September 2016	Crime Statistics Agency
Family incidents recorded by police region and local government area	July 2011 to June 2016	Crime Statistics Agency
Electronic gaming machine LGA level expenditure	July 2014 to December 2016	Victorian Commission for Gambling and Liquor Regulation
Crimes where the offender was a child or young person aged 0-17	2012-2013 to 2014-2015	Crime Statistics Agency
Area of LGA (km <sup>2</sup> )	*	DHHS - LGA profiles 2015
Most populous community	*	DHHS - LGA profiles 2015
Distance to Melbourne	*	DHHS - LGA profiles 2015
Travel time to Melbourne	*	DHHS - LGA profiles 2015
Remoteness area	*	DHHS - LGA profiles 2015
Actual annual population change, 2004 - 2014	*	DHHS - LGA profiles 2015
Projected annual population change, 2014 - 2024	*	DHHS - LGA profiles 2015
Total fertility rate	*	DHHS - LGA profiles 2015
Teenage fertility rate	*	DHHS - LGA profiles 2015
People of Aboriginal and Torres Strait Islander origin	*	DHHS - LGA profiles 2015
People born overseas	*	DHHS - LGA profiles 2015
Top 5 overseas countries of birth - country 1	*	DHHS - LGA profiles 2015

Top 5 overseas countries of birth (%) - country 1	*	DHHS - LGA profiles 2015
Top 5 overseas countries of birth - country 2	*	DHHS - LGA profiles 2015
Top 5 overseas countries of birth (%) - country 2	*	DHHS - LGA profiles 2015
Top 5 overseas countries of birth - country 3	*	DHHS - LGA profiles 2015
Top 5 overseas countries of birth (%) country 3	*	DHHS - LGA profiles 2015
Top 5 overseas countries of birth - country 4	*	DHHS - LGA profiles 2015
Top 5 overseas countries of birth (%) - country 4	*	DHHS - LGA profiles 2015
Top 5 overseas countries of birth - country 5	*	DHHS - LGA profiles 2015
Top 5 overseas countries of birth (%) - country 5	*	DHHS - LGA profiles 2015
People born in a non-English speaking country	*	DHHS - LGA profiles 2015
People who speak a language other than English at home	*	DHHS - LGA profiles 2015
Top 5 languages other than English - language 1	*	DHHS - LGA profiles 2015
Top 5 languages other than English (%) - language 1	*	DHHS - LGA profiles 2015
Top 5 languages other than English - language 2	*	DHHS - LGA profiles 2015
Top 5 languages other than English (%) - language 2	*	DHHS - LGA profiles 2015
Top 5 languages other than English - language 3	*	DHHS - LGA profiles 2015
Top 5 languages other than English (%) - language 3	*	DHHS - LGA profiles 2015
Top 5 languages other than English - language 4	*	DHHS - LGA profiles 2015
Top 5 languages other than English (%) - language 4	*	DHHS - LGA profiles 2015
Top 5 languages other than English - language 5	*	DHHS - LGA profiles 2015
Top 5 languages other than English (%) - language 5	*	DHHS - LGA profiles 2015
New settler arrivals per 100,000 population	*	DHHS - LGA profiles 2015
Humanitarian new settler arrivals	*	DHHS - LGA profiles 2015

People who believe multiculturalism makes life better	*	DHHS - LGA profiles 2015
Family violence incidents per 1,000 population	*	DHHS - LGA profiles 2015
Drug usage and possession offences per 1,000 population	*	DHHS - LGA profiles 2015
Total offences per 1,000 population	*	DHHS - LGA profiles 2015
People who feel safe on streets alone	*	DHHS - LGA profiles 2015
Children attending 3.5 year old maternal and child health checks	*	DHHS - LGA profiles 2015
Kindergarten participation	*	DHHS - LGA profiles 2015
Children with emotional or behavioural problems at school entry	*	DHHS - LGA profiles 2015
Children with speech or language problems at school entry	*	DHHS - LGA profiles 2015
Children developmentally vulnerable in one or more domains	*	DHHS - LGA profiles 2015
Children developmentally vulnerable in two or more domains	*	DHHS - LGA profiles 2015
Child protection investigations completed per 1,000 eligible population	*	DHHS - LGA profiles 2015
Child protection substantiations per 1,000 population eligible population	*	DHHS - LGA profiles 2015
Child FIRST assessments per 1,000 eligible population	*	DHHS - LGA profiles 2015
People with need for assistance with core activity	*	DHHS - LGA profiles 2015
People of all ages with severe and profound disability living in the community	*	DHHS - LGA profiles 2015
People receiving disability services support per 1,000 population	*	DHHS - LGA profiles 2015
Disability support pension recipients per 1,000 eligible population	*	DHHS - LGA profiles 2015
People reporting fair or poor health status	*	DHHS - LGA profiles 2015

People reporting high/very high psychological distress	*	DHHS - LGA profiles 2015
Clients that received Alcohol & Drug Treatment Services per 1,000 population	*	DHHS - LGA profiles 2015
Registered mental health clients per 1,000 population	*	DHHS - LGA profiles 2015
General practitioners per 1,000 population	*	DHHS - LGA profiles 2015
General practice clinics per 1,000 population	*	DHHS - LGA profiles 2015
Allied health service sites per 1,000 population	*	DHHS - LGA profiles 2015
People who could definitely access community services and resources	*	DHHS - LGA profiles 2015
People who live near public transport	*	DHHS - LGA profiles 2015
People with low English proficiency	*	DHHS - LGA profiles 2015
Index of Relative Socio-Economic Disadvantage (IRSD)	*	DHHS - LGA profiles 2015
Percentage of highly disadvantaged SA1s	*	DHHS - LGA profiles 2015
Unemployment rate	*	DHHS - LGA profiles 2015
People with income less than \$400 per week	*	DHHS - LGA profiles 2015
Families headed by one parent	*	DHHS - LGA profiles 2015
Low income families with children	*	DHHS - LGA profiles 2015
Median household income	*	DHHS - LGA profiles 2015
Gaming machine losses per adult population	*	DHHS - LGA profiles 2015
People who delayed medical consultation, unable to afford	*	DHHS - LGA profiles 2015
People who delayed purchasing prescribed medication, unable to afford	*	DHHS - LGA profiles 2015
People who did not complete year 12	*	DHHS - LGA profiles 2015
Age pension recipients per 1,000 eligible population	*	DHHS - LGA profiles 2015

Households with mortgage stress	*	DHHS - LGA profiles 2015
Households with rental stress	*	DHHS - LGA profiles 2015
Rental housing that is affordable	*	DHHS - LGA profiles 2015
Social housing dwellings	*	DHHS - LGA profiles 2015
Social housing as a percentage of total dwellings	*	DHHS - LGA profiles 2015
Homeless people (estimated) per 1,000 population	*	DHHS - LGA profiles 2015
Journeys to work which are by car	*	DHHS - LGA profiles 2015
Journeys to work which are by public transport	*	DHHS - LGA profiles 2015
People with at least 2 hour daily commute	*	DHHS - LGA profiles 2015
Dwellings with no motor vehicle	*	DHHS - LGA profiles 2015

\* Please refer to the data definition document for the individual time periods for these data:  
<https://www2.health.vic.gov.au/about/reporting-planning-data/gis-and-planning-products/geographical-profiles>