LAWTECH UK

Case studies

Adoption of Machine Learning in Legal Services

LAWTECH UK PANEL

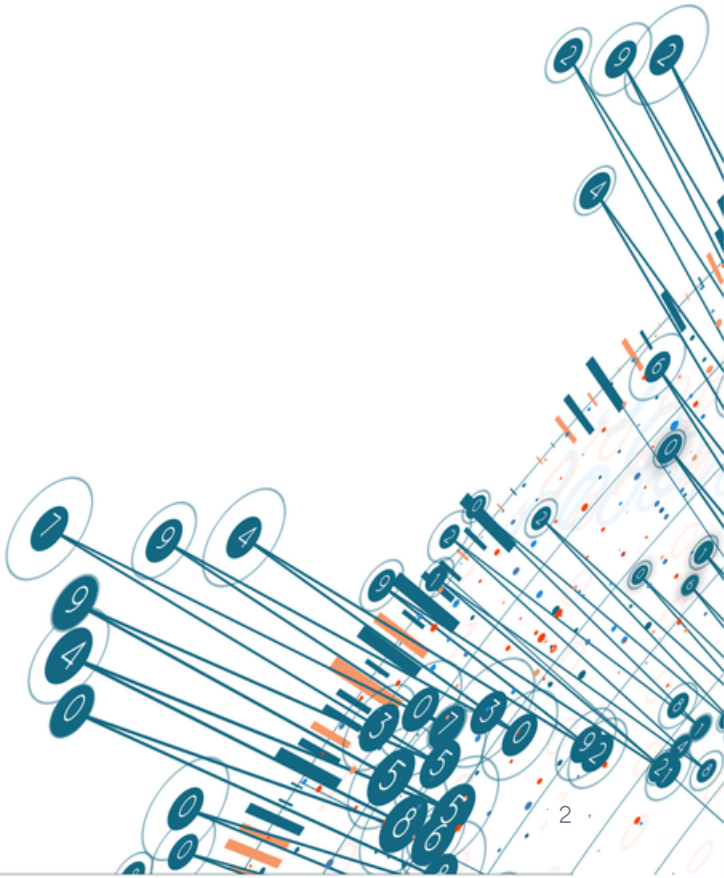
Ministry of Justice

TECH NATION

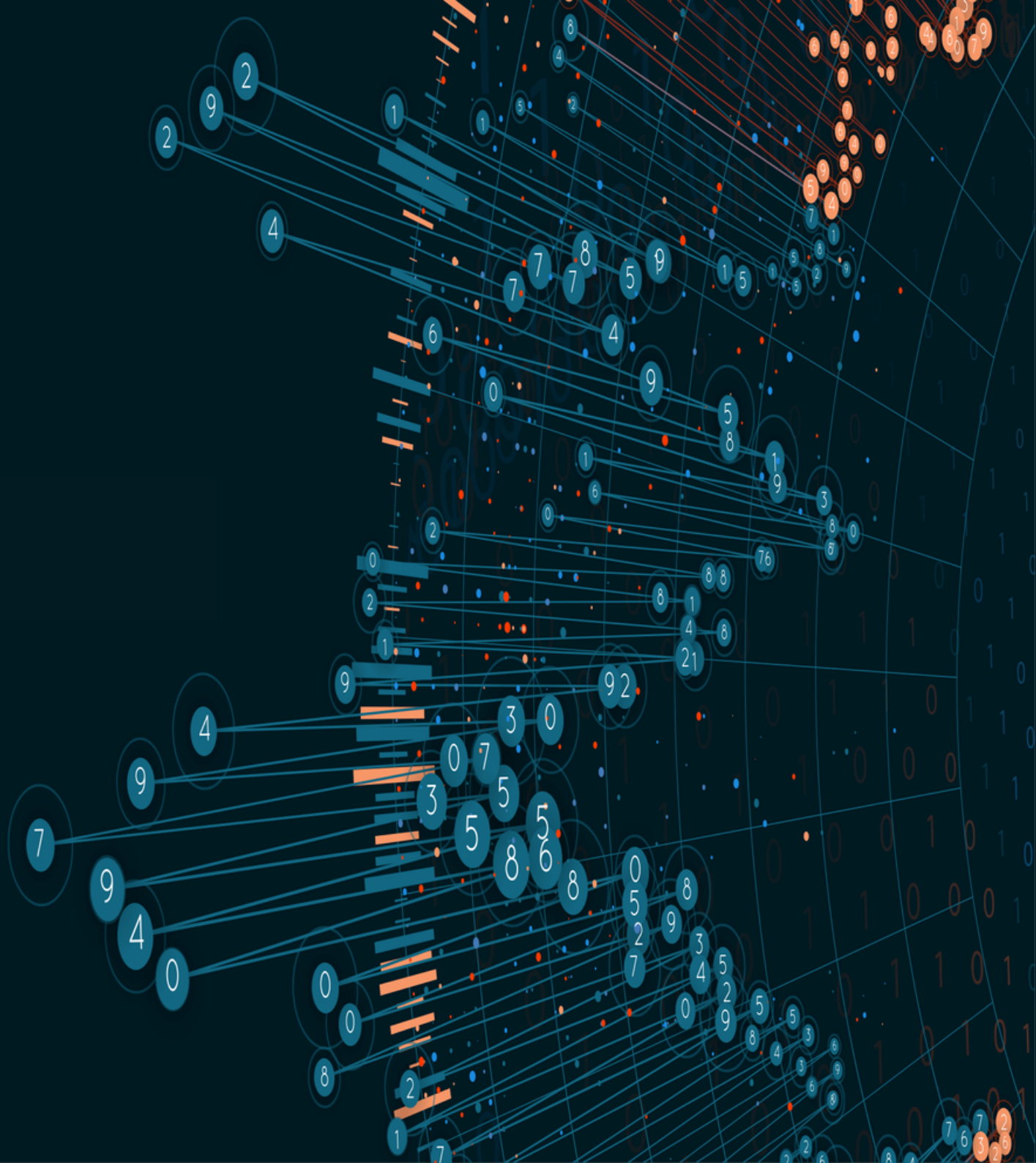


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1.
Deriskly



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Case study: Deriskly

Deriskly is a pioneering AI company founded by scientists from the University of Oxford. Its mission is to help businesses prevent disputes with their customers quickly, cheaply and effectively. We create simple, easy-to-use, and powerful AI-enabled solutions for firms to detect and act on early-warning signs of escalating customer problems.

INDUSTRY PROBLEM

Poor handling of customer problems and complaints cost UK businesses over £9 billion a month. Badly handled customer complaints not only result in customer churn and reputation damage but can also escalate into damaging, disruptive and costly disputes. Customer disputes can be particularly problematic for SMEs due to the drain on limited resources, reliance on reputation, legal complexities, time-consuming nature, and emotional toll.

ML SOLUTION

Our solution leverages a range of cutting-edge machine learning models and techniques to collect and analyse different sources of customer interactions (such as emails, text, social media and online reviews and feedback) and assess the health of customer relationships based on each interaction and other related interactions. Deriskly helps users spot and anticipate issues with real-time insights and risk assessment of the likelihood that the inquiry or complaint may escalate into a dispute. It further provides AI-enabled tools to 'derisk' disputes, i.e., to prevent their escalation and facilitate prompt resolution. For example, Deriskly's Smart Reply tool uses advanced natural language processing to suggest highly personalised responses to customers' communications that de-escalate tension, tailored to the customers' problem.

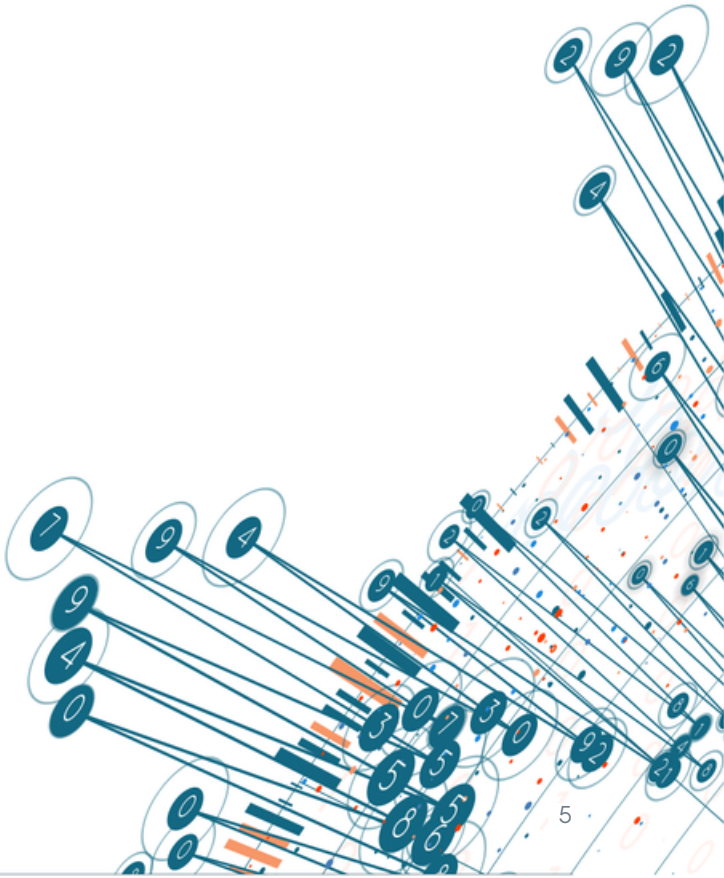
> **Poor handling of customer problems and complaints cost UK businesses over £9 billion a month**

BENEFITS

Leveraging the latest data analytics and AI technologies, Deriskly strengthens businesses' capability to avoid disputes with their customers through proactively containing and preventing problems from escalation. This will be a game changer for businesses (particularly SMEs) and their customers and have a significant impact on the wider legal sector. Businesses can quickly, cheaply and effectively avoid potential customer disputes and turn complaints into opportunities.

Deriskly received an Innovate UK award to develop a more complex solution for fintechs offering innovative products to consumers. Fintechs are subject to growing regulatory requirements related to consumer outcomes, customer service, and complaints handling. However, fintechs typically do not have the same level of resources as larger financial institutions. Our objective is to help UK fintechs prevent compliance risks such as misselling or breach of the new Consumer Duty, and support them in innovating with new products for the benefit of UK consumers.

This will be a game changer for businesses (particularly SMEs) and their customers and have a significant impact on the wider legal sector.



RISKS

There are potential risks associated with the deployment of AI models/systems, such as bias and discrimination, lack of transparency, data privacy and security. Moreover, there is the potential risk of overreliance on AI that may result in a loss of human touch in customer service and complaints handling that is needed for preventing disputes.

RISK MANAGEMENT AND ASSURANCE TECHNIQUES

Deriskly applies a high level of oversight and monitoring to address potential risks. This involves a range of measures to ensure the quality of the data used to train the AI model, including identifying reliable and trustworthy multiple sources of data, evaluating accuracy, completeness and relevance of data, cleaning and augmenting the data where appropriate, data validation, monitoring and incorporating feedback from our users. Its team of Oxford scientists are also deploying new assurance techniques, such as using Reinforcement Learning from Human Feedback (RLHF) to reduce bias, increase performance, fairness, and representation in our NLP models. Deriskly's IT architecture is compliant with Microsoft's standards to ensure the privacy and security of customer data.

Deriskly's AI is designed and deployed to promote human empathy and understanding. In our design, we emphasise the need for AI-enabled features to interact with the user in natural, intuitive ways, to be integrated with human workflows and decision-making processes, allowing for more efficient and effective collaboration between human and AI.

OUTCOMES

UK SMEs are already benefiting from deploying Deriskly. One customer, FurnitureBox, saves an average of around six minutes per response to a customer inquiry or complaint. This frees up their customer service agents for more strategic and value-added work. Furniturebox has achieved 4.8/5 stars on Trustpilot since using our solution two months ago.

For any questions regarding this case study please email lawtechuk@technation.io

To learn more please visit www.deriskly.com. If you are an ecomerce or retail business please visit www.deriskly.co.uk.

2.

LegalBeagles



LAWTECH UK

Case study: LegalBeagles

Community + AI = Access to Justice

INDUSTRY PROBLEM

There is a significant absence of consumer-focused machine learning based systems designed to narrow the justice gap by delivering tailored legal assistance to consumers. This absence is unsurprising given that such legal 'AI' tools must possess: legal knowledge specific to the users' questions, common sense to assess relevance to each use case and natural language capabilities to enable a meaningful exchange. This would require a level of AI 'general intelligence'; however, it can be partially addressed by studying subsets of legal specialisation. e.g. employment law. Another challenge is the shortage of accessible high-quality data sets to provide the source data for the machine learning process.

ML SOLUTION

The LegalBeagles forum holds 15 years of legal Q&A data, created by our 138,000 members who generated 904,000+ posts in that time period. As there are separate forums for each legal practice area, it is relatively easy to isolate desired datasets.

The large volume of Q&A data on the forum means that machine learning is the only viable tech tool to identify and analyse the valuable insights locked in the data. Aside from the obvious machine learning opportunities to analyse legal Q&As, it is subsequently possible to deploy beta versions of the outcomes of such solutions onto trial areas of the forum to allow the community to test the new technology in a safe and managed setting. LegalBeagles is visited by millions of users each year and Google is very adept at identifying relevant content and taking enquirers directly to the appropriate thread. The discussion threads are responded to by expert volunteers who regularly have to answer the same questions from different users.

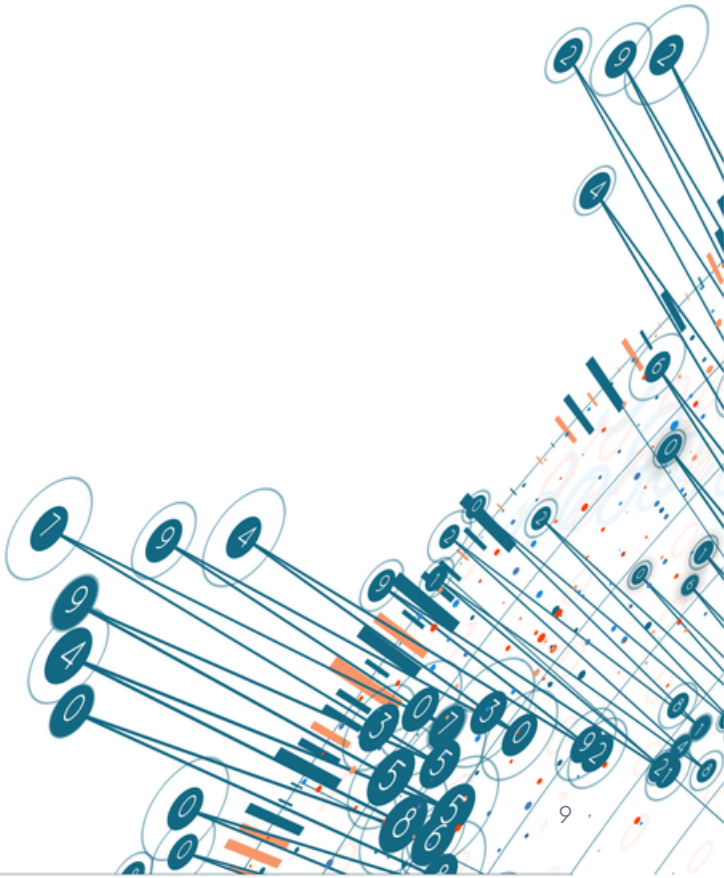
LegalBeagles have developed a machine learning solution to identify common, repeated questions. A chatbot named Lexie has been trained to respond to triage style employment law questions with the aim of establishing the basics of a circumstance to allow the expert to offer more tailored advice. This approach is used to manage large volumes of Q&A data, reducing the need for human involvement at the information gathering stage.

BENEFITS

The Lexie chatbot saves valuable expert time while reducing the wait time for the user to get the information they need. This is especially important for legal matters which are time sensitive.

Using forum data to machine learn legal topics such as employment law, court claims and family law will begin to unlock 15 years of consumer/SME legal knowledge and is an efficient and elegant way of reducing the cost of delivering tailored front-line legal advice.

> **This will be a game changer for businesses (particularly SMEs) and their customers and have a significant impact on the wider legal sector.**



RISKS

The biggest risk to ML is the chosen datasets used to train ML systems. Many datasets carry inherent biases which can deliver flawed predictions. LegalBeagles uses anonymised participation so there is low risk of bias in its data, but it can never be totally ruled out. However, machine learning is only used to speed up the process of spotting repeating questions in the Q&A data; this data is then used to ensure that the Lexie chatbot is focused on the correct areas of law to be able to respond to the highest number of enquiries.

The project to create Lexie started in partnership with IBM Watson Legal, funded by Innovate UK and culminated in using Google AI to train Lexie. During the two year design, learn, train phase of the project, a risk register was maintained to identify any flaws in the design and training. Human interaction was essential during the training phase to test each iteration, then refine and improve the chatbot's performance.

OUTCOMES

Lexie currently operates in a test forum as LegalBeagles await funding to launch it into the live forum environment. So far, Lexie can triage user queries in five areas of employment law which represent around 70% of queries and is trained to assess questions, suggest potential outcomes, provide useful documents, calculate the validity of contract timescales and transfer the query to an expert if required.

For any questions regarding this case study please email lawtechuk@technation.io

To learn more please visit www.legalbeagles.info

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3.

Kennedys IQ



LAWTECH UK

Case study: Kennedys IQ

The civil procedural rules apply to millions of insurance claims in the UK every year. Although only a small proportion of those claims get to court, insurance claims are one of the most common ways that individuals and corporates come into contact with court procedures.

INDUSTRY PROBLEM

Professional judgement in respect of claims decisioning and underwriting has been found to be inconsistent. Moreover, claim facts in respect of claims decisioning suffer from uncertainty, due to incomplete, and inconsistent data. The consequence of inconsistent judgement in respect of insurance claims increases areas in dispute and reduces the prospect of parties finding a compromise. This increases costs and utilises more court time and resources. All of this results in excess indemnity spend and/or claim costs which ultimately increase premiums for businesses and consumers.

Inconsistency from insurance professionals also means that insurance organisations are themselves inconsistent in making decisions that have legal consequences for corporates and individuals.

ML SOLUTION

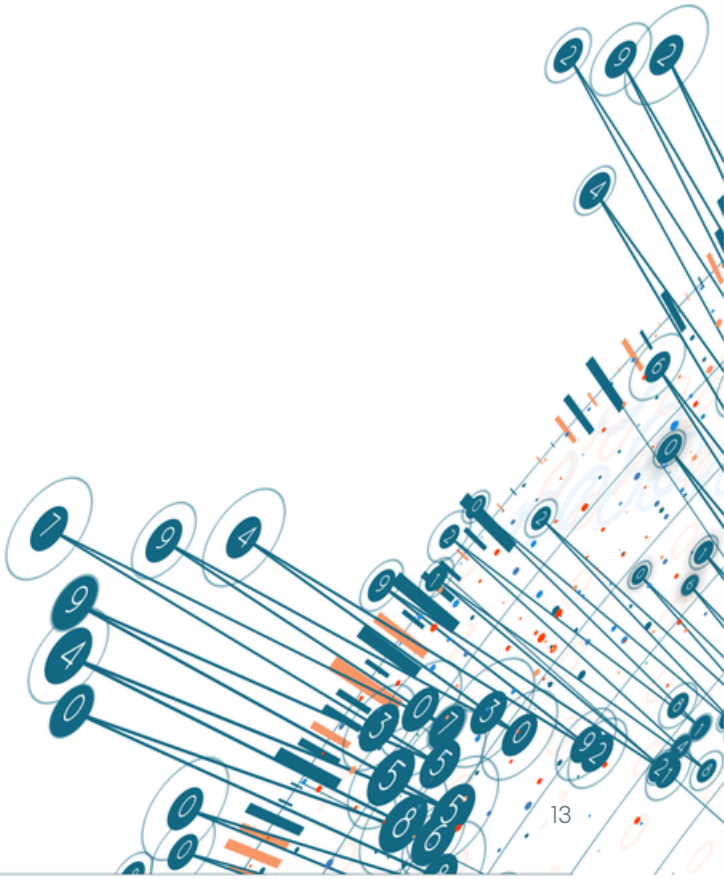
Kennedys IQ and the University of Manchester have collaborated on technology that enables decision-making to be scaffolded. All too often, machine learning is used in place of expertise, usually to the detriment of outcomes. This hybrid technique captures expert heuristics, models these as 'belief rules' and then trains the beliefs and weights of these rules using data. Weightings are trained using machine learning techniques ensuring the model flexes with market conditions and affording the possibility for organisations to override any 'rule' in order to test tactical decisioning or enforce organisational policies. As such it is a white-box solution and is 100% explainable and auditable.

> **Professional judgement in respect of claims decisioning and underwriting has been found to be inconsistent.**

BENEFITS

Consistency in respect of decisioning where there is a legal effect means that justice is consistently applied at an organisational level. Consumers and corporations can expect to be fairly and consistently treated. From the insurers perspective, optimising decisions means that claims that are agreed are paid quickly and contended claims are dealt with quickly and efficiently. Measurements across three different organisations show that claims were frequently mis-classified, with over 50% receiving the wrong decision in a third of the claims examined.

> **Claims that are agreed are paid quickly and contended claims are dealt with quickly and efficiently.**



RISKS

Kennedys IQ developed a white box solution which includes a full audit trail for all decisions. This makes it very low risk.
Since the technique is a white box and is a hybrid combination of expert knowledge and data modelling, the rules and weightings of attributes in a decision process can be inspected and aligned with regulations and company policies. Initial models are built on elicited expertise and because the premise is that decisoning is scaffolded or augmented and not automated, the approach does not fall foul of GDPR.

OUTCOMES

Use of the approach has so far delivered $1.2M in savings for one major UK insurer, driving an incremental uplift of 10.2% on the company's overall savings.

The feedback loop and machine learning improved efficacy by 49.5% compared with prior to the application of the treatment. Against manual detection of claims, the system takes 38% fewer days to achieve positive outcomes with a 77% reduction in cost.

For any questions regarding this case study please email lawtechuk@technation.io

To learn more please visit
www.kennedysiq.co

> **$1.2M in savings for one major UK insurer, driving an incremental uplift of 10.2% on the company's overall savings.**

4.
Weightmans



LAWTECH UK

Case study: Weightmans

Weightmans' predictive analytics tool, PREDiCT Large Loss, helps insurers by driving improved reserving accuracy, reducing claims lifecycle and lowering overall indemnity spend in catastrophic motor injury claims. The firm's in-house data science team built and developed a Quantile Regression Model which interprets a granular dataset of historic settled claims data. The tool is designed to provide data driven insights and analysis to Weightmans' insurer clients as to their likely exposure on high-value motor claims, particularly in circumstances when the severity of injuries and likely prognosis (in the absence of medico-legal evidence) is uncertain, thereby leading to a lack of clarity as to the extent of any pleaded claim.

INDUSTRY PROBLEM

Insurers and their Defendant representatives are at a distinct disadvantage in claims of this type when the extent of the potential claim is unclear until relatively late in the claims handling process. This is problematic because insurers are required to place a realistic reserve on each claim on first notification, so claims are commonly handled in a 'knowledge vacuum'. This is exacerbated by rising claims inflation, an expected Discount Rate change in 2024, and wider economic volatility, all of which present a significant challenge to insurers whose key performance indicators are built around the control of indemnity spend.

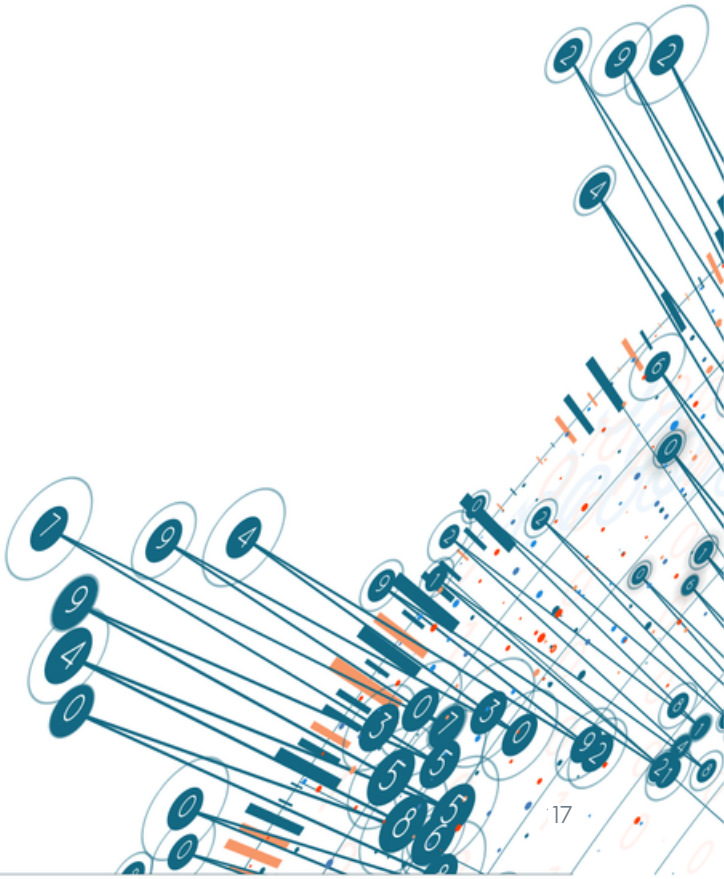
The ML solution

By interpreting the granular dataset detailed above, PREDiCT Large Loss is able to model outcomes based on the core parameters of claims which are known to dictate claim value and therefore impact on exposure and ultimate indemnity spend. The model can be adjusted according to each client's risk profile as well as differing discount rates and claims inflation factors. PREDiCT Large Loss seeks to redress the knowledge vacuum so that insurance companies are much better informed about likely claims exposure than would otherwise be the case. The model produces three key outputs; damages valuation, an estimate of Claimant solicitor costs, and the projected claims lifecycle.

BENEFITS

PREDiCT Large Loss offers Weightmans' insurance company clients significant benefits:

- It provides insight into potential claim exposure at an early stage, which improves reserving accuracy (which impacts significantly on subsequent capital 'lock up'), a key challenge for all insurers.
- It provides a quick assessment of claims valuation and promotes proactive case handling/settlement strategies that reduce claims lifecycles and overall indemnity spending.
- It provides an analysis of the interplay between particular features of claims to further inform proactive case handling.
- It augments the experience and expertise of Weightmans handlers and influences their ability to deliver optimised outcomes for our clients.



RISKS

Weightmans' Machine Learning models provide an estimation of financial exposure. PREDiCT Large Loss outputs and corresponding advice are based on handler expertise and data-driven insights. As Weightmans' insurance company clients understand this, the associated risks are low.

For any questions regarding this case study please email lawtechuk@technation.io

OUTCOMES

PREDiCT Large Loss provides value to clients in multiple contexts, for example:

- PREDiCT Large Loss was a key component of a recent time-limited, costs-controlled settlement strategy project for one of Weightmans' (National) insurer clients. Weightmans and three other panel suppliers were instructed on an identical basis and the results were used to inform (or potentially replace) a tender process for appointment to their wider panel. Handler expertise augmented by PREDiCT Large Loss enabled Weightmans to significantly outperform other suppliers and win appointments to the wider panel without a formal tender process.
- As a key component of a due diligence process for a client involved in mergers and acquisitions. The PREDiCT Model enabled Weightmans to report on the adequacy of reserves on an individual and claims portfolio basis within extremely tight timescales.

5.
Amplified Global



LAWTECH UK

Case study: Amplified Global

Amplifi (a product from Amplified Global) utilises Artificial Intelligence and Machine Learning to assess how intelligible legal and related communications are, and to guide their simplification. It helps clients manage regulatory risks, such as the Consumer Duty, and improve outcomes for customers.

INDUSTRY PROBLEM

Consumers not understanding or engaging with key information about the regulated products and services they use causes significant harm. This might include not understanding their rights and obligations, the risks they may be subject to and the action they can take when things go wrong. It affects their ability to compare products and ensure they receive a positive outcome. Consumer comms being intelligible is a legal obligation, yet remains a problem across all sectors, and nowhere more than financial services.

ML SOLUTION

Amplifi Score uses AI and machine learning to score the intelligibility of legal and regulated documents and provide targeted suggestions for improving them. Amplifi learns contextual relationships between words in the text when assessing intelligibility of the information within the document. The model takes a number of metrics into account, from classical readability measures and linguistic frameworks to cutting-edge natural language processing techniques, to assess how complex the words and sentences are to understand. These then power editing suggestions to the user based on which of those key metrics need to be improved in order to make a document more intelligible for a target audience, while staying compliant.



Consumers not understanding or engaging with key information about the regulated products and services they use causes significant harm.

BENEFITS

For client organisations the benefits are:

- Effective and objective testing of intelligibility (eg for Consumer Duty Regulation)
- Mitigating intelligibility risk
- More engaged and better-informed customers
- Fewer claims of mis-selling or complaints due to poor consumer choices or negative outcomes.

For customers:

- Improved chance of a positive outcome
- Better able to compare products and check suitability
- Improved comprehension of their rights, obligations and what to do when things go wrong
- Fewer instances of debt

RISKS

One risk that affects legal services in particular is not having enough high-quality datasets of legal documents available to train models, which could lead to less accurate predictions/scoring for the consumer. Most legal services providers are wary of an AI solution using their documents to train models that their competitors could potentially use and benefit from, and this usually rules out acquiring suitable datasets from the vendor's own client pool. Furthermore, while public domain and government websites often have troves of digitised legal documents, they are often in formats which make it difficult or impossible to process into ML datasets, further stifling the pipeline of suitable training sets for firms/models.This can lead to poorly-trained models entering the marketplace that can provide erroneous or misleading results, potentially putting the end-consumer at serious risk of harm/legal jeopardy.

RISK MANAGEMENT AND ASSURANCE TECHNIQUES

There are a number of ways to manage this risk, including (but not limited to) leveraging large open-source pre-trained models as a starting point, fine-tuning models on legal-sector specific tasks, or when possible, curating small but high-quality data from experts. While these are good practices for any ML application, they are particularly useful when applied to the data scarcity challenges of the legal domain.

> **Most legal services providers are wary of an AI solution using their documents**

OUTCOMES

A test currently being carried out in the FCA regulated sandbox involves the Amplifi tool being used to test the intelligibility of a simplified default notice that is communicated to consumers in arrears. The simplified version produced an improvement in the intelligibility risk score from Advanced (36/100) to Moderate (64/100), a jump of two intelligibility levels and a 78% improvement in intelligibility.

A 'moderate' score of 64 reflects a document that typically requires an A-Level education or equivalent experience. While a lot simpler, the score indicates that the language used in the second document still includes a range of comparatively complex words and concepts (often due to regulatory prescription). Complexity of words and concepts is a critical factor when considering how intelligible a document is.

The test also compared the Amplifi results with a readability tool that claims to be 'the world's most advanced readability service'. The same simplified document was graded A and suitable for the general public. However, the tool failed to identify the inherent complexity that remained, and the challenges some consumers will still face to fully understand the document.

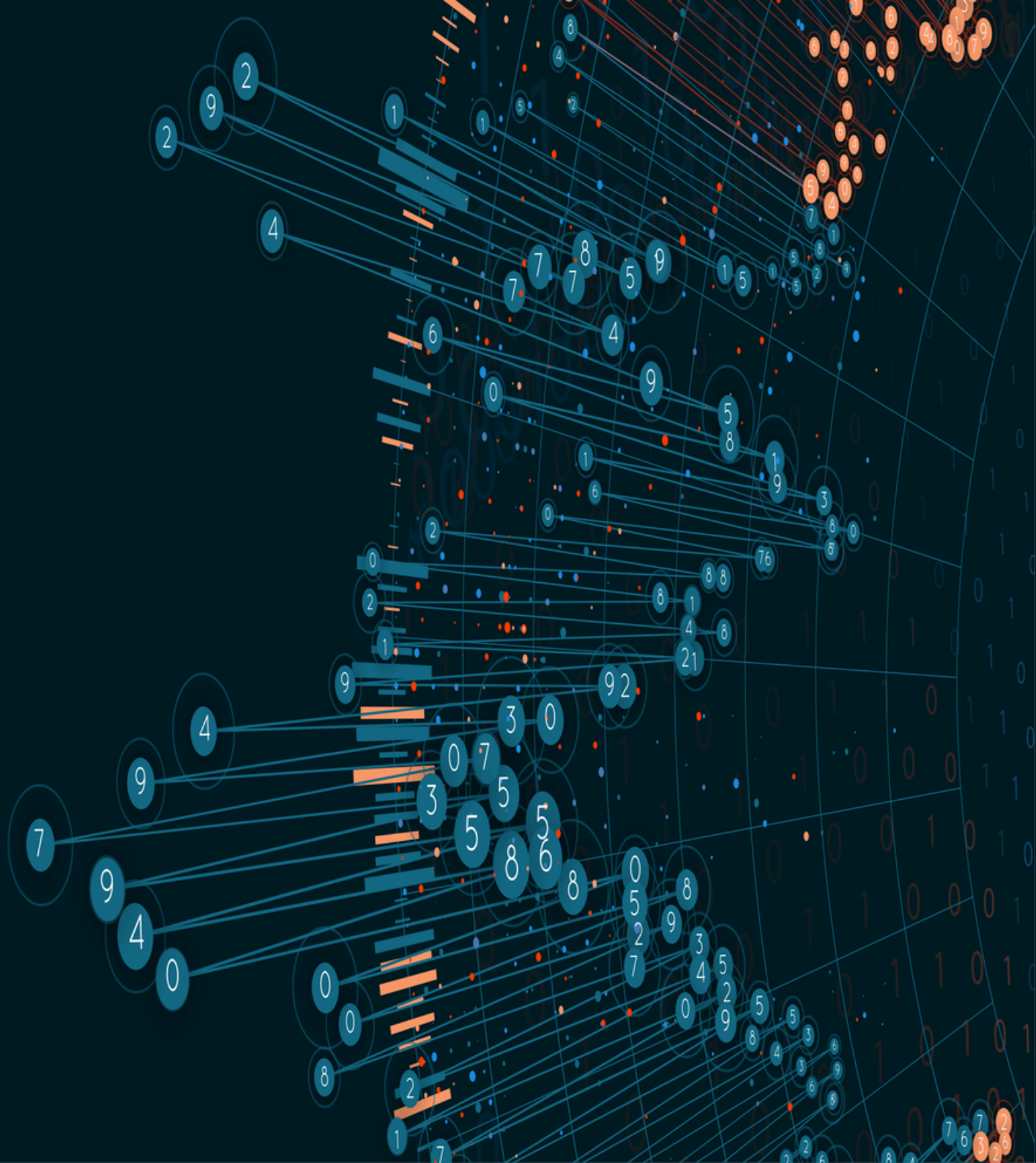
This highlights the difference between Amplifi and readability tools that don't consider lexical complexity and the challenges posed by complex words and difficult or unusual concepts. We often see sentences featuring combinations of short words that are hard to understand, but would score similarly highly. Whereas Amplifi picks up the inherent complexity within the document. As such it more closely reflects the factors that ensure consumers can understand and process complex information.

For any questions regarding this case study please email lawtechuk@technation.io

To learn more please visit www.amplified.global



6.
Orbital Witness



LAWTECH UK

Case study: Orbital Witness

INDUSTRY PROBLEM

In 2022, the UK residential property market transacted roughly 1.5 million properties. The latest data from Rightmove indicates that completion times peaked at an average of 5 months for residential property transactions during this period, which is much longer than in previous years. There has also been a significant increase in the number of transactions which fall through – this is in part being caused by issues coming to light late in the transaction and the long transaction process leading to withdrawals due to changes in circumstances or "cold feet". Two significant contributing factors to this are:

1. A lack of sufficiently skilled and experienced lawyers able to conduct the necessary title checks, particularly for leasehold transactions. It is hard to attract and retain experienced conveyancers, many having left as a result of the pressures caused by the peak in transactions in 2020/2021 due to the pandemic and related stamp duty 'holidays'.
2. The increasing complexity of leasehold transactions – factors such as new lender requirements on lease terms, ground rent increases, assured tenancies under the Housing Act, building safety, and fire risks, all add to the conveyancing work load, and impact profit margins as the market faces a predicted downturn.

There is also a drive for better upfront information for potential buyers with certain 'material information' being mandated by National Trading Standards, the first phase of which came into effect at the end of May 2022.

> **Completion times peaked at an average of 5 months**

ML SOLUTION

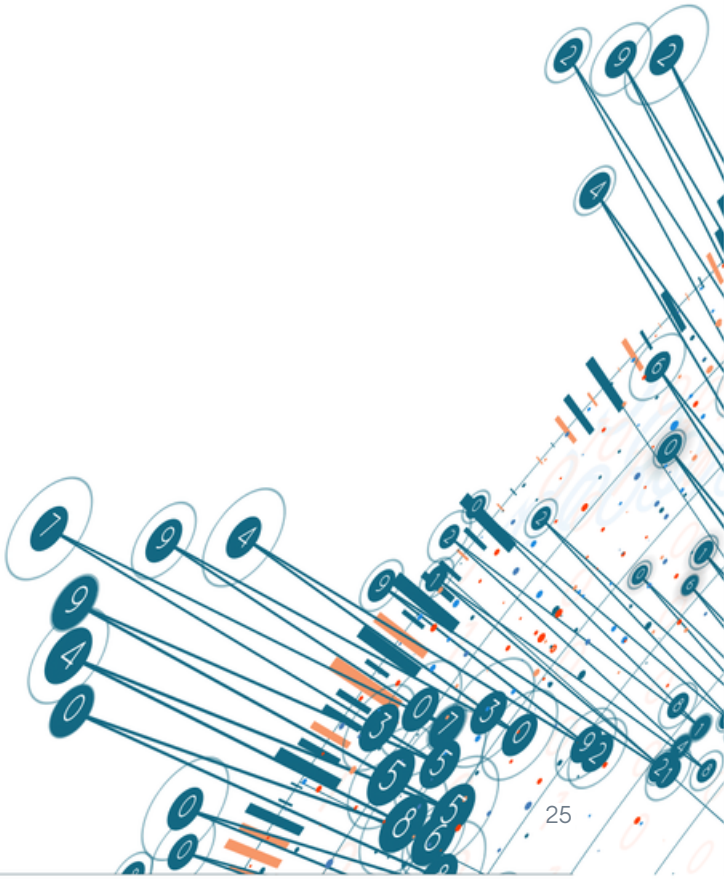
With transaction times, fall throughs, complexity and risk all increasing year-on-year, it is crucial for the ML solution to be centred around:

- speeding up the transaction process by reducing the time taken to title check, and increasing the capacity of conveyancing lawyers;

- providing earlier visibility of potential issues and material information for consumers and their lawyers in relation to cost, acceptability to a mortgage lender, and managing expectations of impact on timescales. There may be factors which are of concern to a particular buyer but not another (for instance, restrictions on keeping pets or altering the property in the future)

- risk reduction by appropriate case allocation based on complexity and consistent identification of high-risk factors.

Orbital Witness' product achieves the above by providing a standardised, automated check against key aspects of a leasehold property. With the use of Artificial Intelligence and Natural Language Processing, the lease and associated documents can be broken down into their key component parts, with models trained to find entries, extract key data points and provide answers to questions in a report format that links back to the individual clauses in the documents that informed its decision-making.



BENEFITS

The positive impact the product can have on homebuyers is substantial.

First, by reducing the time taken to title check, and increasing the case handling capacity of conveyancing lawyers, the product can help speed up the transaction process overall. A conveyancing lawyer may have as many as 100 cases on the go, taking on 20 new cases a month. Saving as little as one hour per case would give each lawyer an additional 2.5 days a month to progress their transactions.

Secondly, the homebuyer can have greater visibility of material information about the property at the very start of the transaction enabling them to make a better-informed decision based on their particular circumstances and needs. Eventually, Orbital Witness believes the homebuyer can be positioned to conduct preliminary automated checks themselves, even before putting in an offer and instructing a lawyer.

This will help to reduce current fall-through rates by reducing instances of buyers having to abort on a transaction as a result of issues that come to light during the conveyancing process.
Thus the product has the combined effect of ultimately allowing a homebuyer to proceed faster and with greater visibility and certainty with their transaction.

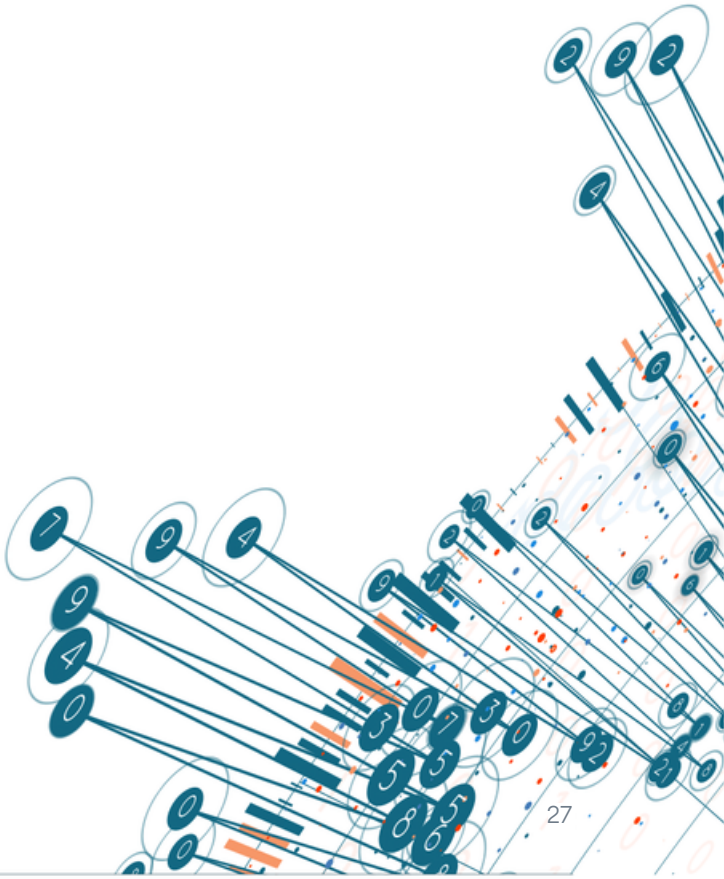
RISKS

The risks in this context are around an error or omission that results in the lawyer or homebuyer acting on the basis of partial or incorrect information.

There are several possible root causes to consider: (1) Wrong input data (an AI system would not flag that it has accidentally been provided the wrong document to review); (2) Inaccuracy in the answer predicted by the system. This risk is inherent in any machine learning system because these systems are probabilistic by nature. Applied to document analysis, accuracy is commonly measured as a combined score of two key metrics, precision and recall. But there is a ceiling and even a highly accurate system will not consistently achieve predictions with 100% accuracy; (3) A change in requirements which is not yet reflected in the product (e.g. as a result of a change in regulation or conveyancing guidelines).

The first and third of these causative factors are relatively easy to control, so the risk is low. It is possible to introduce checks and balances to ensure that correct and complete data is fed into the system, and it is possible to stay on top of changing product requirements to ensure these are either reflected in the system or users are informed if they are not.

The second causative factor – accuracy – needs to be unpacked a bit in order to understand the end-consumer risk. The overall risk to the end-consumer is a function of how well the machine learning performs each task, the safeguards in the product to filter out inaccurate results, the risk of an inaccurate result resulting in a material adverse impact on an end-consumer, the level of indemnity and insurance provided, and the relative risk posed when not using an AI system (i.e. the normal risk of human error).



RISK MANAGEMENT AND ASSURANCE

Highly performant machine learning models are continuously trained on large datasets and accuracy is measured by reference to the 'ground truth' – meaning, in this case, properties that have been reviewed by experienced lawyers. The more high-quality training data the system is trained on, the better the model performs in terms of precision and recall, and therefore the more accurately the model predicts the correct answer. Orbital Witness' product is trained on a database of over 200,000 legal documents, with each document containing between 50 and 150 separate labelled data points.

The product includes several safeguards to filter out inaccurate results. The first safeguard is that each predicted answer carries a machine learning confidence score. Any answer that is predicted with a confidence score that does not meet a given threshold is referred back to a legally trained individual to review, confirm or amend. The review process creates a feedback loop with the machine learning system helping it become more accurate over time.

The second safeguard is that the product is provided in a format whereby each answer links back to the specific clauses in the documents that informed its decision-making. We call this 'showing the evidence'. This is critical in LawTech applications which are more than simply text extractive, and seek to answer questions, by reference to multiple clauses and documents.

Finally, it is important to acknowledge that even the best AI system – like the best lawyer – is not always perfect. Law firms carry professional indemnity insurance to protect themselves and their clients from losses as a result of inevitable human error. AI systems that aim to make lawyers more efficient and help consumers make better decisions also need to be backed by indemnity insurance so that the risk is not passed on to the user.

OUTCOMES

At the time of writing (Feb 2023), Orbital Witness' product is being piloted by volume conveyancing and remortgage teams across the country. Almost 200 properties are run through the system each week. User feedback suggests that leasehold title checks which would typically take one hour, now only take 10-15 minutes.

For any questions regarding this case study please email lawtechuk@technation.io

7.

transparently



LAWTECH UK

Case study: transparently

transparently is a software platform that facilitates the practice of law, enabling consumers to access legal expertise, as needed and within their resources.

The UK legal profession operates to the highest standards of confidentiality and regulation, however, when sophisticated technology is introduced, it must be managed so that it (i) protects the clients it is designed to serve and (ii), accelerates legal processes, helping to maintain the UK's global market-position in legal services.

INDUSTRY PROBLEM

Natural Language Processing (NLP) solutions that attempt to predict intent are not fully trusted because predictions may be unreliable where the data-capture context is complex. This may be because the data is unstructured, i.e. it is derived from a conversation rather than from discrete answers (e.g. provided via a web-form), or because the context is unstable (e.g. highly emotional, high-conflict or deliberately manipulative/destructive).

This is a potential barrier to technology adoption in legal services including criminal justice and consumer (family) law.

In complex applications such as perpetrator detection, NLP may generate false negatives (where serious issues are incorrectly not detected) and false positives (where incorrect predictions/conclusions are made because the context is misunderstood).

For example, a standard NLP 'tone-meter' will 'recognise' an emotion it has learned to associate with particular words and phrases. For example, ML rules may flag someone as abusive from the tone of a statement or comment, but an enhanced context-based AI system might consider this as a false positive if, for example, in a family law context, an otherwise amicable personality reacted emotionally to a trigger such as an aggressive letter from a former partner's solicitor (context).

Therefore, using non-context-based NLP techniques to inform triage decisions, involve police or protection agencies, or produce Court evidence, would be at best unreliable and at worst irresponsible and unethical because severe consequences could follow an inaccurate prediction.

ML SOLUTION

Over recent years, transparently, supported by Innovate UK, have engaged in a number of projects to improve the accuracy and reliability of NLP predictive outputs by enabling contextual data to be analysed concurrently within the NLP model.

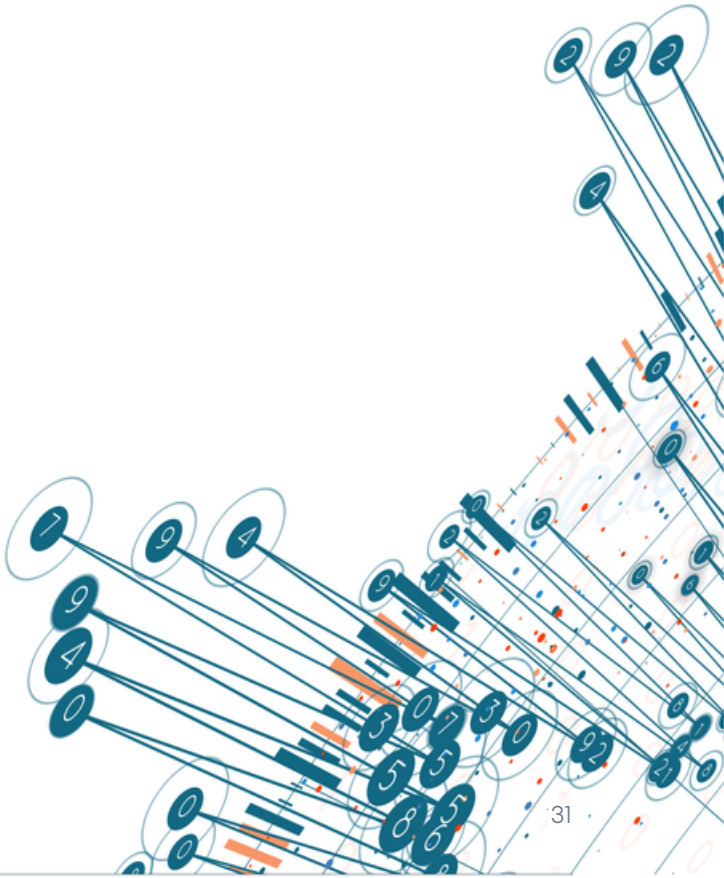
Data indicators that define the context are collected in parallel and in-step with the primary data. These are then analysed by the NLP solution. This improves analysis accuracy and trustworthiness, as NLP intent/sentiment predictions can be calibrated against a contextual baseline.

BENEFITS

Given an accurate sentiment-analysis NLP AI solution, legal professionals will be able to rapidly risk-assess cases and understand the dynamic between the parties; particularly in high-conflict, coercive or controlling contexts. Private clients will be afforded increased support and protection, and improved service-delivery efficiencies will result in tangible cost-reductions and lawyers being able to accept more clients.

Accurate triage has the potential to promote and accelerate the use of alternative dispute resolution (ADR) processes and significantly reduce the burden currently placed on the Courts. In relation to this objective, transparently is supported by the UK Domestic Abuse Commissioner, Nicole Jacobs.

In the wider context, proving solutions initially within highly regulated sectors will ensure in time that AI / ML solutions are more widely accepted by society.



RISKS

Compliance organisations and regulators in all sectors recognise the importance of ensuring that ethics, transparency and the removal of bias are the minimum foundation for any AI-solution, and organisations are held to account to evidence trustworthiness and demonstrate responsible AI implementation.

transparently highlights four key risk areas that should be considered when designing responsible AI solutions:

1. Data quality and availability (ranking: high)

The availability, continuity and repeatability of data is critical to the success of any AI/ML solution transparently discovered early on that dispersed data sources could not be relied upon to support next-generation sentiment-analysis AI-solutions. Via a series of research-projects, the company was able to specify and prototype a system capable of gathering both primary and secondary (context) data to ensure that data curation and pre-processing could be carried repeatedly and reliably.

2. Immature solution deployment (ranking: high)

The agile/fail-iterate mindsets that are often applied to software design can lead to systems being deployed that are not fit for purpose, particularly in highly complex, regulated markets. Use cases must be well understood and narrowly focused - at least initially - to ensure that they are sufficiently supported by the data available at the time.

While this may extend the time taken to deploy a full market solution, it is vital to ensure that false negatives and false positives are understood and managed to acceptable levels, to ensure that end-user confidence and well-being are not compromised.

3. Inadequate testing/algorithm-retraining cycles (ranking: medium to high)

It is vital that any system is designed in a way that enables it to be assessed/tested for accuracy on a continuous rolling basis. Reservoirs of known control-data (use-case proof data) must be built and regularly curated and maintained. Test failures and false outputs must be managed by a robust algorithm design iteration, retraining, retesting and reporting process.

4. Professional over-reliance on the AI/ML solution (ranking: medium)

To protect end-users, build trust and demonstrate responsible deployment, AI/ML solutions should (for at least the foreseeable future) only ever augment legal expertise; they should not replace it. Such solutions should only ever be intelligent, machine-supported second-opinions to support legal experience and expertise.

RISK MANAGEMENT AND ASSURANCE

When considering how the quality, reliability and responsibleness of any AI system may be assessed and assured, the ‘UK National AI Strategy’; ”the most trusted and pro-innovation system for AI governance in the world", is a good place to start.

transparently also makes use of the ‘US National Institute of Standards and Technology’ (NIST) ‘AI Risk Management Framework’ within its design process.

transparently has learned that not only should any such policy be embedded within the management process of the organisation, it must also be dynamic - i.e. sympathetic to the stages of the AI-process lifecycle and able to take into account continually evolving technologies, legislation, societal imperatives and regulatory frameworks.

With respect to the management of AI-system risk, the key challenges relate to (i) the measurement of (ii), the tolerances to be applied to and (iii), the prioritisation of any risk.

Assurance and compliance present different challenges; compliance may be assessed relatively straightforwardly against existing regulatory-frameworks; however, it is substantially more difficult where that framework is new and evolving as well - e.g. to include new AI / ML legal solutions.

It is essential therefore that solutions companies work closely with legal regulators as solutions evolve. transparently references The Law Society’s AI and the Legal Profession and the Solicitors Regulation Authority’s Technology & Legal Services initiatives and regularly liaises with both organisations.

For any questions regarding this case study please email lawtechuk@technation.io



Not only should any such policy be embedded within the management process of the organisation, it must also be dynamic

8.

NeuralSpace



LAWTECH UK

Case study: NeuralSpace

NeuralSpace Intelligent Document Processing (IDP) solution utilises proprietary Machine Learning models to automatically extract relevant information from any scanned document in 100+ languages. An ML-driven semantic search function enables the recorded information to be accessed with natural language queries such as “bring up all the cases in which the FCA has levied fines for insider trading that are in excess of £3m”. The solution can process handwritten and typed documents, and integrate with any existing CRM to store the extracted information.

INDUSTRY PROBLEM

Although paper is still widely used in the legal sector, documents are increasingly archived in the cloud or on an on-premise server. However, a large number of documents are still processed inefficiently.

Extracting and aggregating information from legal documents is laborious and expensive. The process is prone to human error and is limited when it comes to performing complex searches.

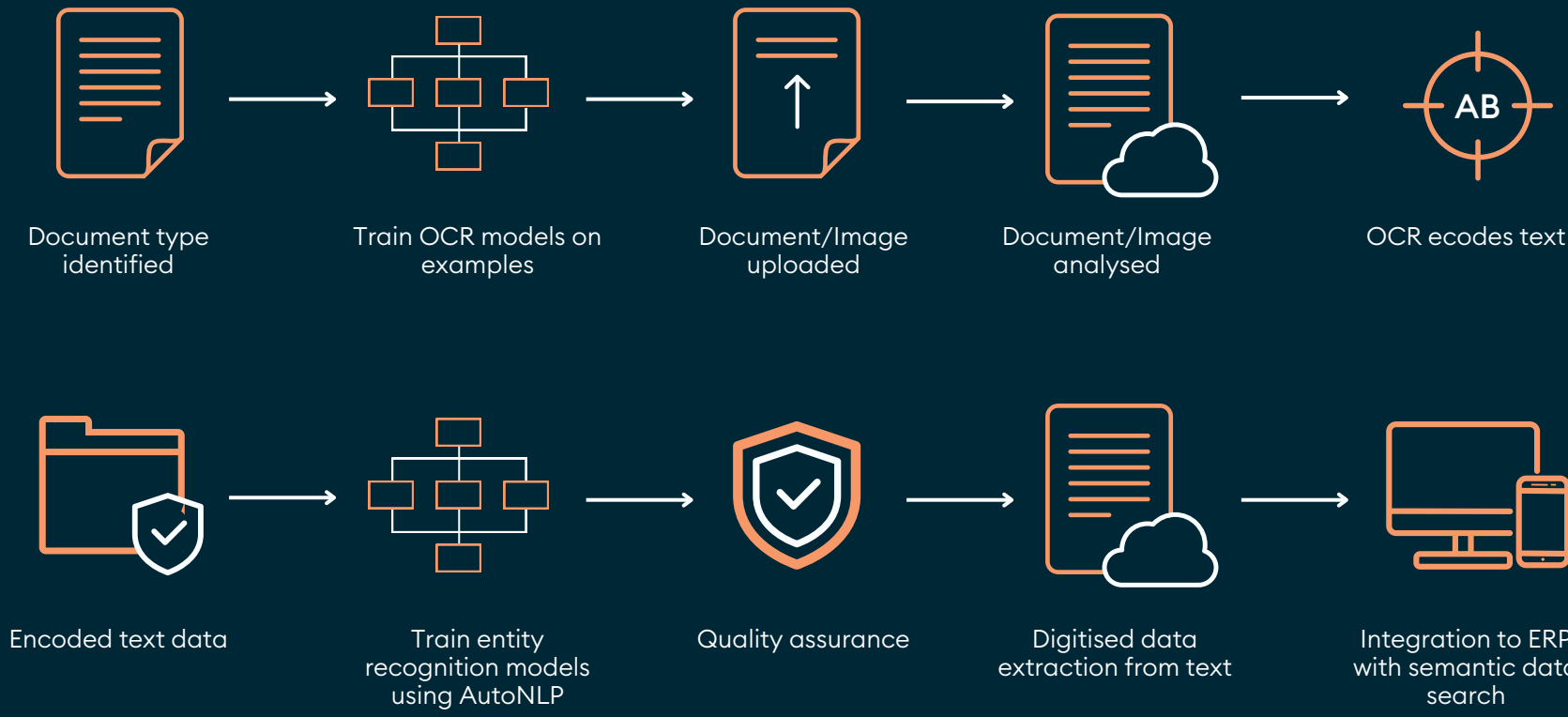
Analysing the resulting data to identify trends and other important information contained within documents will typically require technical expertise.

ML SOLUTION

NeuralSpace uses machine learning (Optical Character Recognition + Named Entity Recognition) to codify scanned documents, in order to detect words, and other entities. Semantic, natural language queries can then be used to extract specific information. For example, we can scan court documents and quickly find the presiding judge, the verdict, and the nature of the crime. A non-technical user could then query this data with a question such as “How many times has <a judge> ruled in favour of <a crime>.”

> **Automatically extract relevant information from any scanned document in 100+ languages.**

How it works



The semantic search capabilities which can then be utilised on the document repository also incorporate ML in the form of: Entity Recognition and Natural Language Generation with search results being generated into a human readable answer.

BENEFITS

Increased efficiency
Automated document processing can significantly speed up the processing, review, search and analysis of large volumes of documents, allowing lawyers to save time and focus on other tasks.

Improved accuracy
AI-powered document processing tools can be trained to identify and extract information from documents, reducing the risk of human error. Our models can achieve up to 99.8% accuracy and highlight instances that might require a human check.

Reduced costs
Automating document review and analysis reduces the amount of time lawyers spend on routine processes.

Better insights
By using advanced analytics and natural language processing, the solution helps lawyers to gain deeper insights into the information contained in documents, such as identifying key concepts, relationships, and patterns.

RISKS

Mis-classification of entities or mis-identification of information from a scanned document could lead to unreliable aggregation and reduce the value of the extracted information. Risk level is low as the solution is being used for information only and achieves high levels of accuracy across handwritten and typed documents.

RISK MANAGEMENT AND ASSURANCE TECHNIQUES

To resolve potential mis-classification and mis-identification, extractions that the ML solution is not confident about can be flagged for human review. Any risk of mis-classification can be mitigated by the ability to set custom parameters around the confidence score depending on the threshold required. So, the solution can be set to flag anything for human verification that scores <99% confidence (where required). The solution can be deployed on-premise or directly in a company's private cloud to remove any data sharing risks that might be associated with public cloud usage.

> **The solution can be set to flag anything for human verification that scores <99% confidence**

BENEFITS

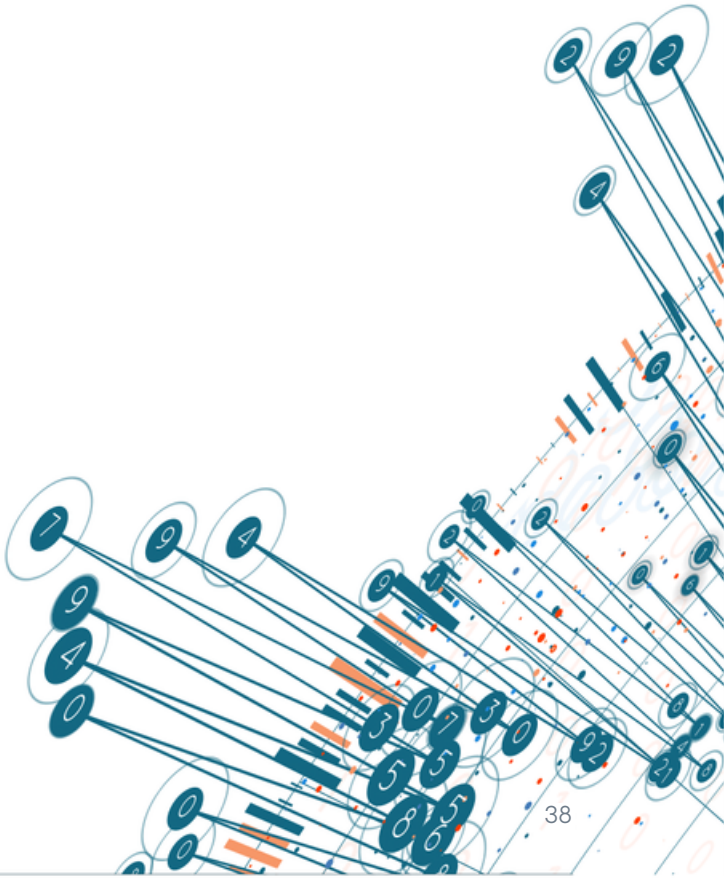
IDP has been deployed across several industry use-cases including KYC(know your customer) for business banking (passport, trade licence and ID card information extraction) and court ruling information (dates, judges, courtrooms and fine amounts).

Customers include a number of global law firms, and the largest bank in the Middle East who currently pass 30,000 documents through the NeuralSpaceIDP solution each month

RESOURCES

- NeuralSpace website
- Technical documentation
- Legal data extraction and possible applications: K Stoykov and S Chelebieva 2019 IOP Conf. Ser.: Mater. Sci. Eng. 618 012037
- The Future of Law Firms (and Lawyers) in the Age of Artificial Intelligence (Anthony E. Davis 2020, American Bar Association.
- AI Will Transform The Field Of Law (Rob Toews 2019, Forbes.)

For any questions regarding this case study please email lawtechuk@technation.io



9.
Luminance



LAWTECH UK

Case study: Luminance

Luminance AI technology for processing legal contracts and documents. Founded by mathematicians from the University of Cambridge, Luminance's AI reads and forms a conceptual understanding of documents in any language. Luminance uses this understanding to augment legal matters, from AI-powered contract drafting, negotiation and review to investigations and eDiscovery.

INDUSTRY PROBLEM

Every business function interacts with contracts, whether by reviewing contractual terms or generating new agreements. Contract wording is often highly repetitive, yet small errors can have huge business implications, which are compounded by an increasingly complex regulatory landscape. With legal resources often focused on contract drafting and review, bottlenecks and inefficiencies can quickly build up. This is increasingly problematic, with legal teams under pressure to deliver 'more for less' despite hiring freezes and budget constraints.

ML SOLUTION

Luminance transforms how lawyers read, understand, and review their contracts. Its proprietary AI is underpinned by state-of-the-art language models. This allows Luminance to understand individual words, concepts, and context, providing granular and sophisticated analysis of contractual risk.

Luminance's advanced machine learning model can take a first pass review of any contract under negotiation. It can instantly highlight which words, clauses or paragraphs are acceptable (green), need reviewing (amber) or non-compliant or non-standard (red). It will also identify key information, such as parties and terms, and surface key legal concepts. Luminance can flag clauses in previous similar agreements that are not included in the latest version. .



Luminance transforms how lawyers read, understand, and review their contracts.

OUTCOMES

If Luminance flags contractual wording as ‘red’, it will automatically suggest language that the business has drafted and agreed to in the past, and lawyers can insert suggestions into the contract with just one click.

Furthermore, Luminance’s supervised machine learning means the technology will actively learn from every interaction. When the in-house legal team at Colombian flagship airline, Avianca, highlighted an important ‘Proveedor’ (provider) party clause in Spanish, Luminance could then instantly flag all other examples of this.

Luminance’s AI includes unsupervised machine learning – this method analyses patterns within a dataset, and identifies statistical outliers. This allows Luminance to flag to lawyers the ‘unknown unknowns’ - hidden risks they didn’t actively search for, such as a missing page in a contract or a clause deviation.

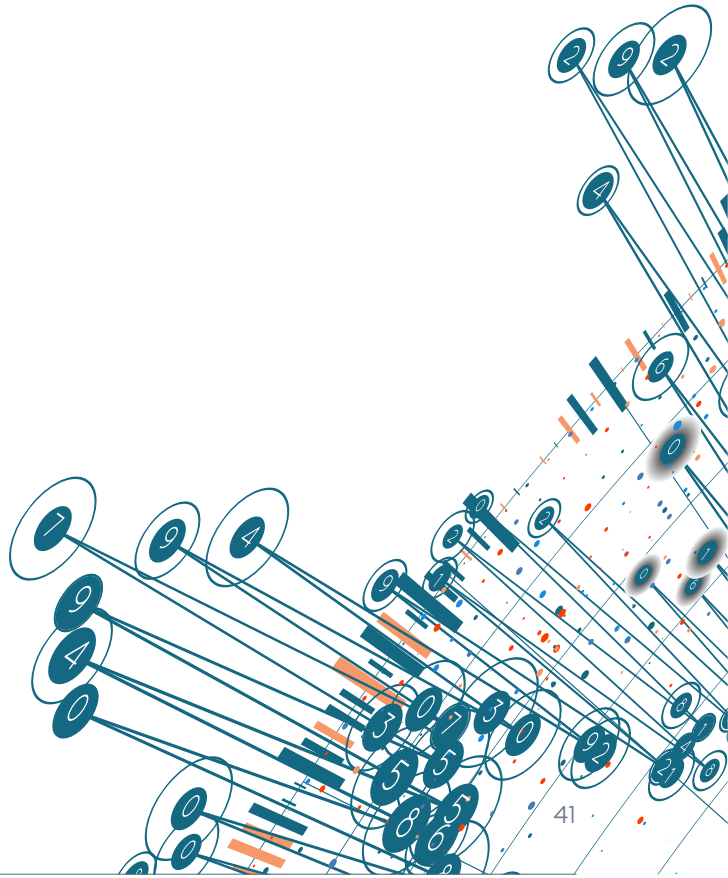
Luminance also uses AI to analyse all post-signature contracts, as well as those under negotiation. For instance, following the introduction of Russian sanctions, world-leading biotechnology company, IDEXX Laboratories, used Luminance’s AI to instantly identify all legal language referencing Russian places or legal structures. Instead of the projected 2 weeks, IDEXX completed their review in just 20 minutes.

Luminance produces time and cost-savings. For example, Luminance provided 80% time savings for the world’s largest law firm, Dentons, in an arbitration project involving 180,000 documents.

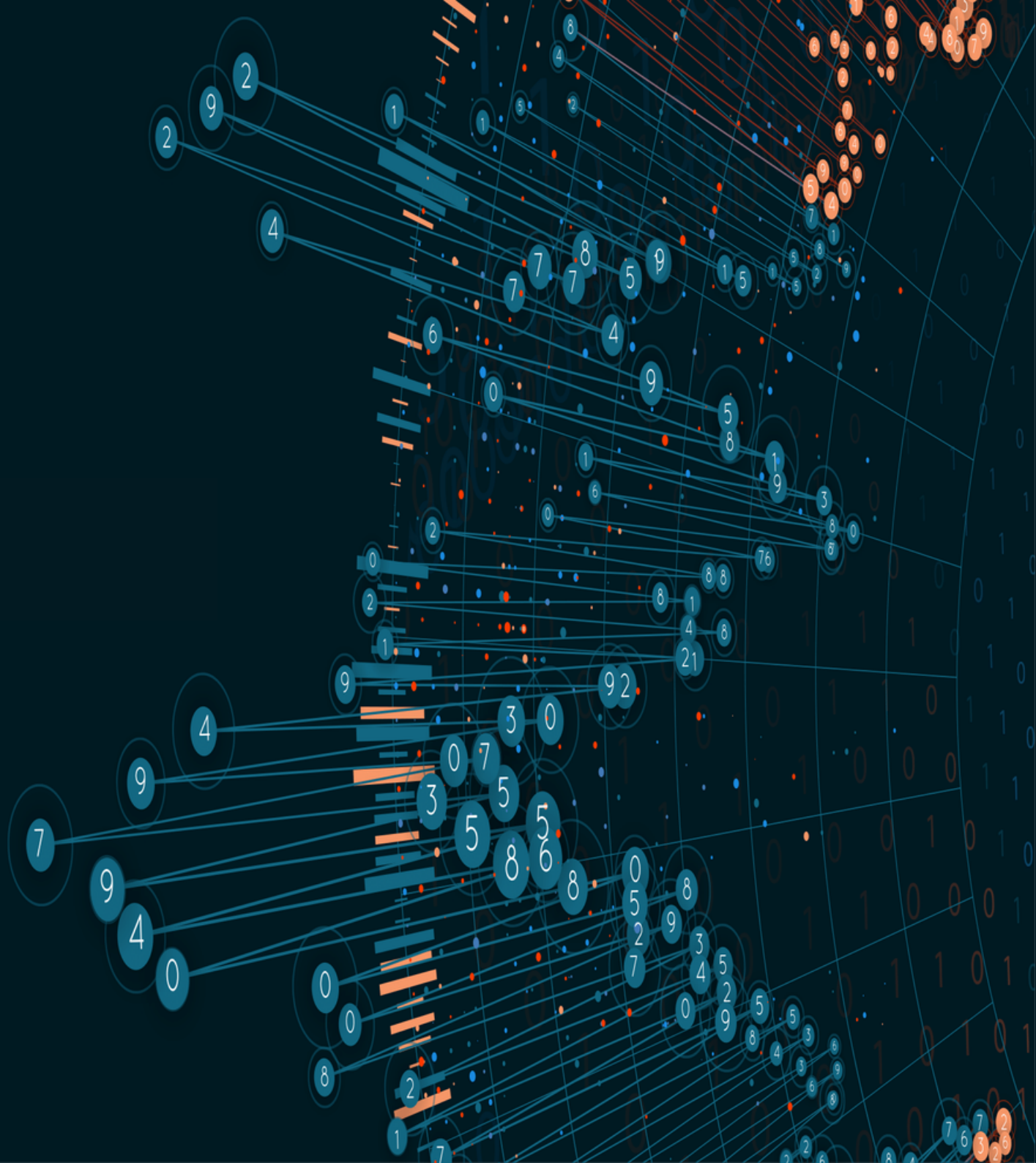
London barristers’ chambers, The 36 Group used Luminance to analyse over 10,000 documents and other evidentiary material in relation to a high-profile murder case at the Old Bailey, saving four working weeks and an estimated £50,000 in costs during the disclosure phase.

At Koch, one of the largest private companies in America, the legal team and employees across the wider business use Luminance to generate contracts with pre-approved wording that complies with internal standards and external regulations. Luminance’s powerful workflow tools allow employees to communicate directly with the legal department via a simple ticketing system, enabling sales and procurement teams to clarify internal legal standards or ask questions.

For any questions regarding this case study please email lawtechuk@technation.io



10.
Avail



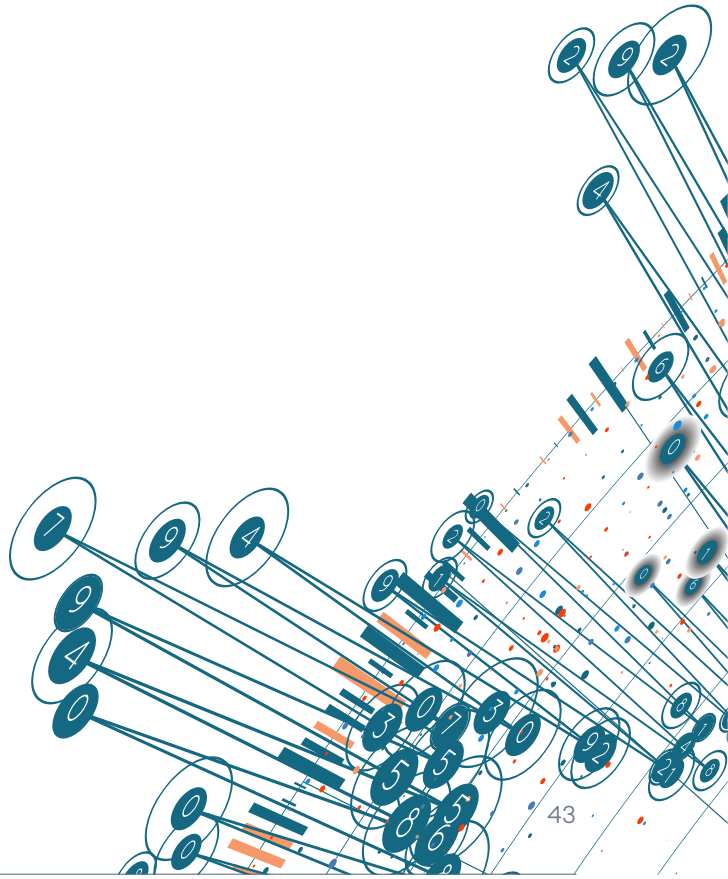
LAWTECH UK

Case study: Avail

Machine Learning models have a role to play in the due diligence process, but their use must be tightly controlled to maximise the benefits and reduce the risks.

In any property transaction, the Land Registry (HMLR) indemnifies property details in the official title register. This is a standardised document and the starting point for the real estate lawyer conducting deal due diligence. In 2022 more than 25 million+ title registers changed hands, representing a huge, recurring opportunity for ML models to make property transactions more efficient on an industrial scale.

Avail has delivered significant benefits totalling over £42M to its law firm clients, from identifying risks to accelerated reporting on property titles.



INDUSTRY PROBLEM

The time taken by a lawyer to identify, buy, read, review, transfer, categorise and report on a property title register and plan can be significant. When a transaction involves several properties or a portfolio of properties, the time this takes becomes prohibitive.

The initial part of a legal title review exercise is generally considered non-chargeable time. For example, identifying the relevant title numbers from a list of addresses is essential, but does not require a law degree. Clients are not willing to pay £400 an hour for these routine tasks.

This initial part of the due diligence process is also governed by an individual's attention to detail, so there are potential mistakes and delays. This is especially true when junior associates are expected to process large volumes of data in short periods of time.

ML SOLUTION

Avail's AI platform carries out two initial steps of the title due diligence process. The first is the extraction of all the information in a title register and title plan, and the second is the categorisation and sorting of this information into helpful, user-friendly legal reports.
Avail's reports save time by covering routine tasks at the beginning of a transaction, allowing lawyers to focus on commercial analysis rather than information gathering. They are also a useful early warning system, highlighting key risks.
In more detail:

- Step 1 Avail's ML model is trained to understand and extract information from title registers, plans and Scottish title sheets. Even though these are (on the whole) standardised documents, there is sufficient variation that this could not be accomplished by pattern recognition alone.
- Step 2 involves more technical legal knowledge. Most of the team at Avail are former commercial real estate lawyers who developed its ML models to understand and categorise the exact wording of the entries in the documents.This involved processing significant volumes of title registers in order to train the models to identify legal risk correctly.
- The reporting stage of Step 2 involves presenting the output of Avail's ML models in a user-friendly way. Knowing how lawyers tend to report to their clients has really helped here (in being able to design a lawyer-friendly user interface and experience, and Avail is focused around driving home these benefits across entire teams.

Additional features include digital maps of properties, planning reports, environmental risks, EPC information, and the ability to draft standardised industry reports instantly (for example, the City of London Law Society's Certificate of Title). These are all underpinned by Avail's core value proposition which is centred around the trained ML models.

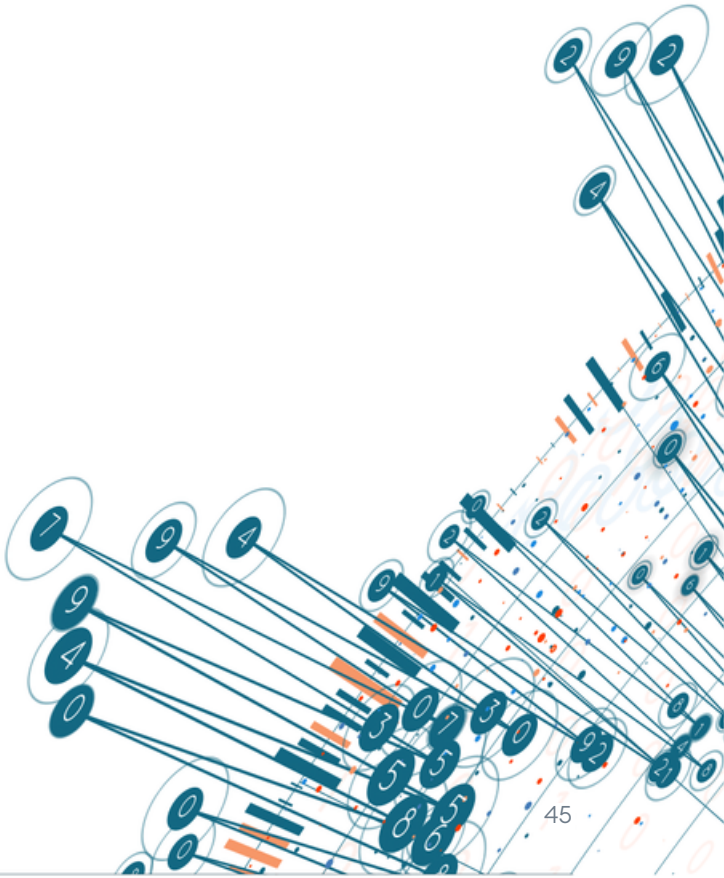
BENEFITS

Avail's ML models deliver significant benefits to lawyers:

- Increased Accuracy – Avail's extraction algorithms and ML models are designed to avoid common errors that occur when humans are employed to extract large volumes of information and replicate them in different formats. Avail is so accurate that it will soon be backed by insurance.. This is a first in legal AI.

- Frontloaded Risk Spotting – By automatically categorising the information in title registers and plans, Avail helps lawyers identify risks earlier in a transaction. They can spot red flag issues on day one, rather than waiting for the inevitable delay associated with the manual review of documents. This not only makes them more efficient, but potentially saves their clients avoidable fees associated with cancelled deals.

- Accelerated Reporting – Avail reports are created to help facilitate faster, more effective reporting. Our reports are often used as first draft reports on title, shortcutting manual data extraction and initial processing, and saving time and costs.



The following audit results show how using Avail can impact on a lawyer's reporting timescales:

Avail's Audit Results		
Results	**Method of Analysis**	
	Manually	**Avail Title**
Average time taken to review and report on each title	35 minutes*	10 minutes
Fee earner cost** to review and report on 10 titles	£2,333	£667
Fee earner cost** to review and report on 2,000 titles	£466,667	£133,333
Fee earner cost** to review and report on 10,000 titles***	£2,333,333	£666,667
Saving Calculation	71%	
* This figure was calculated by an Avail client	** Assuming a blended hourly charge out rate of £400 per hour	*** The majority of Top 50 real estate law firms in the UK deal with more than 10,000 titles per annum

RISKS

No two deals are the same, neither are the people involved in them. The idea that current AI technology can entirely replicate a lawyer's risk evaluation is incorrect and potentially damaging. Furthermore, the incorrect use of products derived from ML models is a significant risk factor.

Legal services are as much about managing the commercial risk as legal risk. When ML models are trained to answer queries with objectively true or false answers (like the risk categories that Avail flags), it plays to its strengths. If it tries to answer subjective questions (for example, what is the commercial risk of a transaction taking into account all extraneous information and factors) it will fail and damage the efficacy and reputation of ML by an already sceptical market.

For example, expecting a ML model to provide a risk score over a property based on its analysis is somewhat risky from a reputational perspective because the question remains: if no two deals are the same, what data are you basing this risk score on?

It is a classic case of over-promising and under-delivering on a ML model's strengths with misleading product design. Unfortunately, the risk is that this becomes what lawyers expect from products in this space, and so ignore the more obvious benefits that ML models can delivery to an exceptionally high level of accuracy and effectiveness.



No two deals are the same, neither are the people involved in them.

RISK MANAGEMENT AND ASSURANCE TECHNIQUES

There are three key ways that Avail mitigates over-promising on the ability of ML models:

- **Sensible AI**

Ensuring that a ML product does exactly, and only, what it sets out to do is key. This means that Avail only asks our ML models questions which can be answered objectively to an acceptable degree of accuracy.

- **Indemnified Input Documents**

Avail retains significant control over the type of documents that lawyers can upload for analysis by its ML models. Avail does not rely on third-party information or categorisation. It is the only platform that independently analyses title registers and plans, whose accuracy is guaranteed by the government.

This ensures that Avail's extraction is best-in-class, and its categorisation and sorting of objective legal risk is supported and designed by the technical experience of former real estate lawyers.

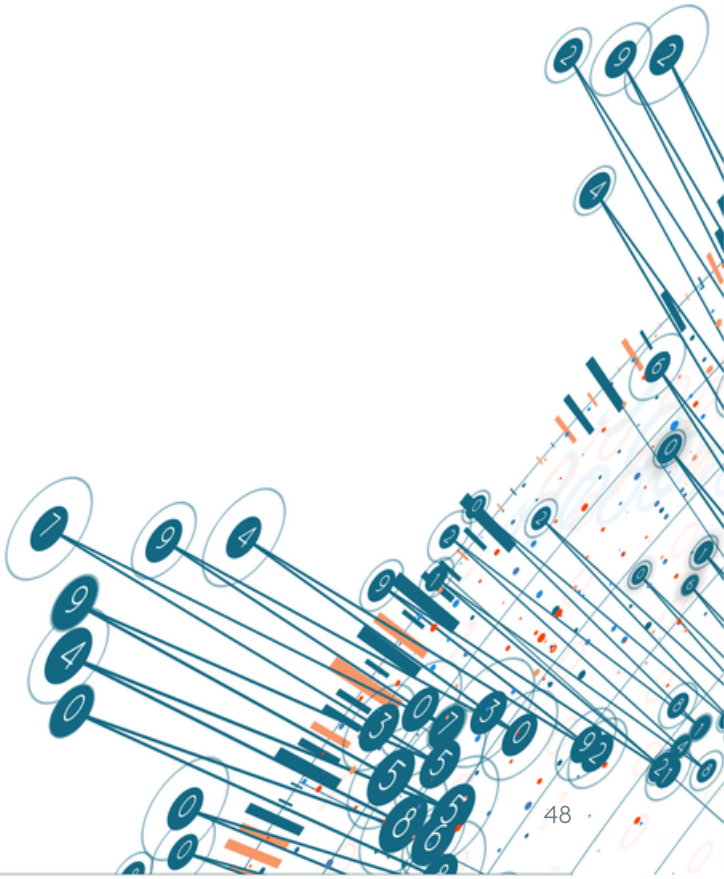
Avail has the flexibility and speed to react to developments (regulatory, market and statutory) which is impossible when relying on third parties.

- **Messaging & Training**

When delivering training, highlighting when and where Avail should be used is essential, to address the fear of ML models making mistakes that increase, rather than decrease, the workload of an already busy lawyer.

These fears are unfounded if we accept that ML models cannot replicate the intuition of a legal professional. All ML models can and should do is collate and condense information more quickly and accurately than is humanly possible.

When lawyers and firms start using Avail, they need to understand exactly where in the transaction pipeline Avail's reports should be used, and that they cannot be used as replacement reports on title. Avail's AI - generated legal risk reports are a starting point, not an end.



OUTCOMES

Over 20,000 titles are put through Avail each month.

- Avail's unique extraction and categorisation algorithms and ML models mean that lawyers can analyse title documents without having to buy digital versions from HM Land Registry. When new clients come on board at Avail, an initial exercise is to upload existing client portfolios and ongoing deals to generate the Avail Reports - meaning law firms can benefit from AI-enhanced services without incurring unnecessary duplicated costs.

- To date, Avail has saved law firms over 106,351 fee-earning hours. At £400 per hour, it has generated a potential £42,540,400 additional profit.

- Avail was used on a large transaction containing over 1,600 property titles and generated an overarching risk report in around two minutes. This report contained key risks for the portfolio, driving down the reporting time required by the client law firm by around 40%.

- Avail was recently used by a silver circle law firm to generate a 2,500-page Certificate of Title report in a few minutes. This would have taken a lawyer several days and thousands of pounds in time

- Avail was used by a law firm to help The Arch Co purchase over 5,000 separate titles in one transaction. This £1.46 billion transaction was only possible in the tight timescales imposed by using Avail's ML models to increase reporting speed and issue spotting.

RESOURCES

Explainer Video:
https://www.youtube.com/watch?v=dKF46Ycddn8

For any questions regarding this case study please email lawtechuk@technation.io

To learn more please visit www.avail.ai.

11.
Shoosmiths



LAWTECH UK

Case study: Shoosmiths

Shoosmiths' Cia® (Contract: Intelligent Analysis), developed in collaboration with ThoughtRiver, is an AI-powered, contract review and analysis tool which helps the firm's commercial clients manage large volumes of contracts, saving them time, money and resource. Its ML capabilities enable it to improve efficiency and accuracy the more it is used.

INDUSTRY PROBLEM

A typical expectation of an in-house legal team in a business is to mitigate risk while avoiding disruption to the provision or acquisition of goods and services. These priorities often conflict with each other.

Every in-house legal team will have finite budget and resource for all the work they are tasked with covering. In-house legal teams are frequently given more contractual work on ever shorter timescales: an often impossible combination. Budgets and resource will rarely allow an expedited yet full review of every contract to mitigate risk. The typical upshot of this is for businesses to 'take a view' on many contracts and conduct either a cursory review (or often no review at all) of many contracts their businesses are entering into. This allows risk to accumulate unchecked.

ML SOLUTION

Cia® is a tool that Shoosmiths' clients use to review standard contracts for the provision or acquisition of goods and services (including software and IT services).

Cia® reviews such contracts for deviations from market norms (based on Shoosmiths' market experience) and generates corrective drafting with supporting comments explaining any changes and questions for the business where relevant.

Cia® can also produce short contract summaries to be used as part of internal sign off processes.

Cia® typically saves businesses three to five hours of human contract review time.

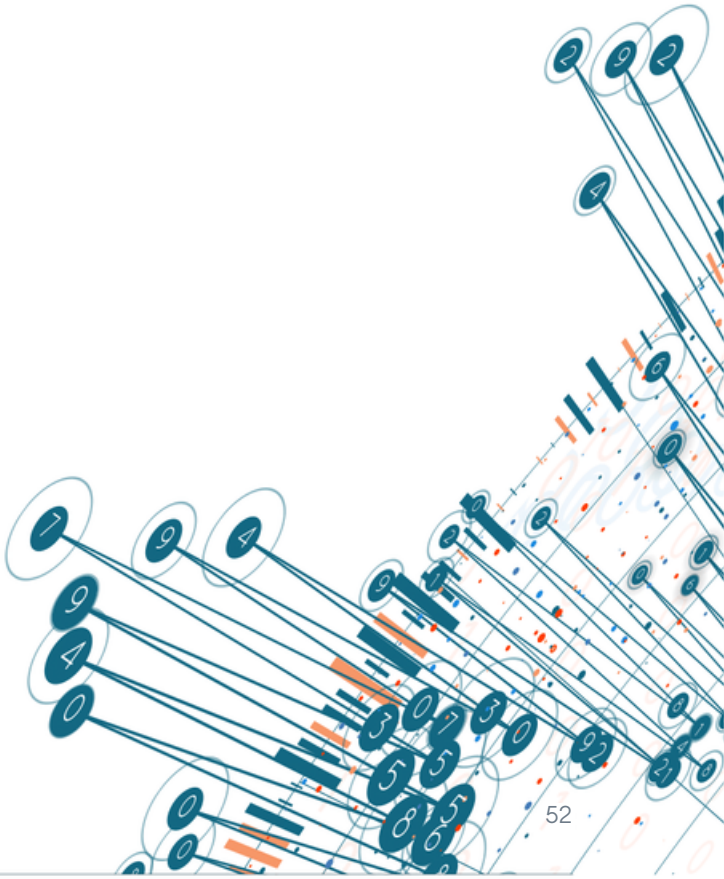
> **A typical expectation of an in-house legal team in a business is to mitigate risk while avoiding disruption to the provision or acquisition of goods and services.**

BENEFITS

Cia® helps legal teams manage peaks in demand, saving them time and money. Because of its speed, businesses can manage many straightforward contracts without incurring external legal spend or requiring internal legal resources. This frees up in-house teams to focus on urgent, high-value, and complex work. Clients report that using Cia® is saving them three to five hours per contract.

Clients can also interact with their portfolio of contracts and ask specific questions (e.g. how many contracts include “pandemic” in the force majeure clause) which provides a significant ongoing benefit, saving even more time and cost.

“Clients can also interact with their portfolio of contracts and ask specific questions



RISKS

Shoosmiths assesses the risk of machine learning (ML) solutions before and during development, working in partnership with the firm's Compliance, Quality and Risk (CQR) team, while recognising that the responsibility for risk rests with everyone involved in a project.

This enables Shoosmiths to develop products which are compliant by design. It is equally important to keep up with legal developments, so that, where possible, they can future-proof ML compliance to an appropriate level, and with commercial developments so that they can anticipate client expectations.

Shoosmiths understands what Cia® can do (and how accurately) and, equally, what it cannot do, and can therefore effectively assess and manage the risks associated with its use, including accuracy, professional indemnity, regulation, and, where appropriate, professional confidentiality.

Accuracy
It took two years to develop and train Cia® to an acceptable level of accuracy:

- Cia® was only launched when it had achieved an acceptable and appropriate level of accuracy and its accuracy is continually monitored.
- Shoosmiths selected the underlying AI platform provider (ThoughtRiver) for Cia® using a rigorous procurement strategy, including extensive sample testing.
- Although the data which Cia® processes doesn't include any material personal data, Shoosmiths was conscious of the need to build a system that was not biased or discriminatory.
- Cia® is deployed carefully. It can review commercial contracts for purchasing services, goods, and IT systems, and non-disclosure agreements (NDAs).
- Shoosmiths makes it clear that Cia® is just the first sweep through a contract. A lawyer needs to make the final call, so there is a human overlay.

Professional Indemnity
Professional Indemnity Insurance (PII) is another core consideration for Shoosmiths when developing Cia® or any ML solution. The CQR team has developed strong relationships within the business, to discuss and manage matters so that any PII issues that arise can be resolved as early as possible, considering new laws and guidance around the use of technology and making informed representations to law makers and regulators. Externally, the CQR team will explain the ML solution and its use case, and its risk profile to the firm's insurers.

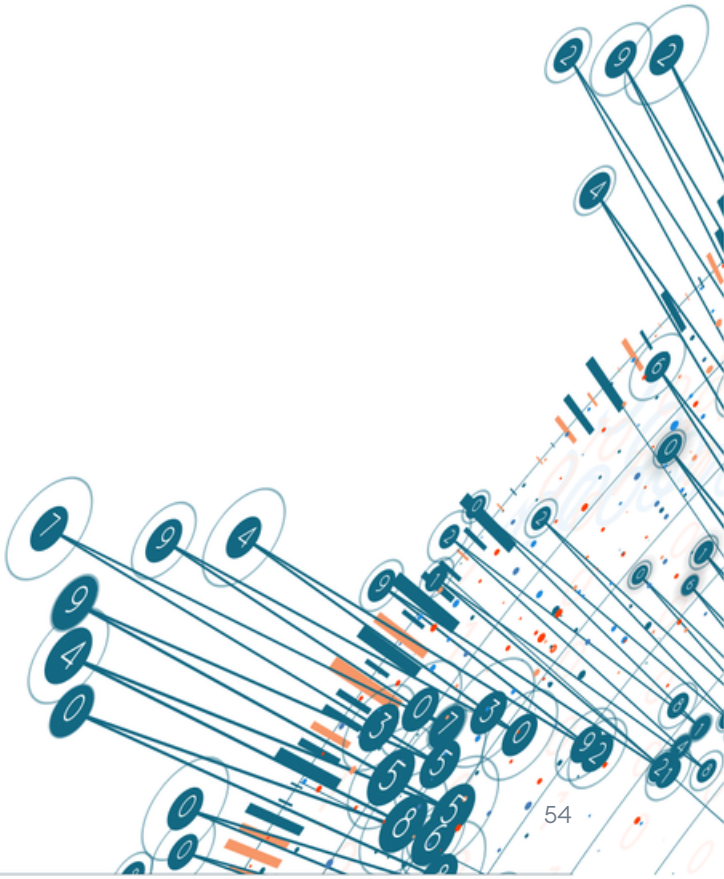
When developing ML solutions and offering them to customers and potential customers, their expectations need to be managed carefully on many issues, including the scope of our liability considering ML as a software tool rather than a legal service per se.

Regulation
Regulation and its impact on innovation is another important consideration:

- In December 2020, the Competition and Markets Authority (CMA) noted a gap in regulation for unreserved legal services. The CMA noted that, "this leads to risks of different standards and levels of protection depending on who the provider is".
- In June 2022, however, the Legal Services Board rejected the creation of new rules for the unregulated sector.

This puts the unregulated sector at a potential advantage over the regulated sector for many legaltech (and ML) solutions. Legal businesses (including law firms) are well placed to develop ML solutions, but may become reluctant to do so if the lack of a level playing field becomes a material disincentive.

This puts the unregulated sector at a potential advantage over the regulated sector for many legaltech (and ML) solutions.



OUTCOMES

Cia® can save up to three to five hours of human contract review time and represents over 80% savings against typical external legal costs.

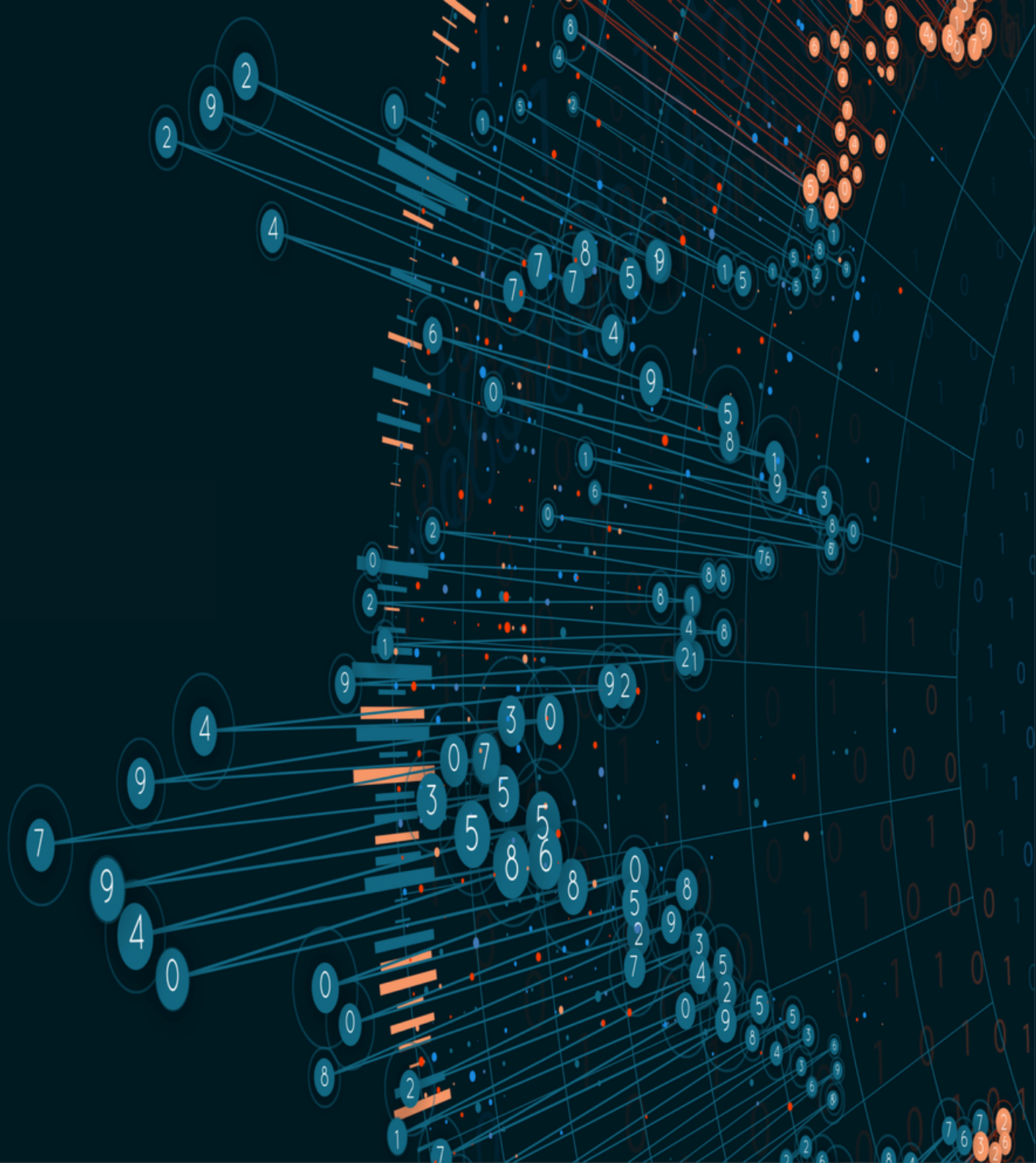
Cia®'s deliverables are carefully calibrated to make its analysis as transparent as possible: a new drafting is proposed, along with detailed explanations. All Cia® outputs are written in plain English, so they can also be provided directly to a business.

This means that Cia® users have the tools they need to amend the contract as they see fit. Using ML isn't about removing the lawyer's input from the contract, rather it is about augmenting what they do. Shoosmiths also encourage client feedback.

For any questions regarding this case study please email lawtechuk@technation.io

Cia® can save up to three to five hours of human contract review time and represents over 80% savings against typical external legal costs.

12.
Genie AI



LAWTECH UK

Case study: Genie AI

Genie's AI assistant helps SMEs understand, create & negotiate legal contracts, by using a large-scale language model to explain and review legal clauses and provide market standard terms. This platform also includes a feedback loop to ensure accuracy and data security, as well as insurance for users.

INDUSTRY PROBLEM

ASMEs make up 99.2% of UK businesses (ONS), yet only 24% can find an affordable legal services provider (LSB 2017). YouGov and CEBR found that SMEs often completely fail to resolve their legal issues, resulting in legal costs worth £13.6bn a year.

Genie's online contracting platform is used by more than 3,000 companies, over 50% of which are professional services and finance companies. These service-based businesses have greater contractual needs and obligations due to their variety of clients and partners. Despite this, a survey of 43 users on the Genie platform revealed that understanding legal documents was their biggest challenge.

This lack of understanding relates to two primary areas: not understanding long and complex legalese, and not having the know-how of what legal and commercial terms are market standard.

ML SOLUTION

Genie AI is a state of the art, large-scale language model (similar to GPT-4) that can explain and summarise legal clauses. Its retrieval function includes the capability to explain market standard terms, such as a liability cap in a service agreement or a salary in an employment contract.

By open-sourcing over 1,500 legal templates, Genie AI accumulated usage data from thousands of companies editing and negotiating clauses (using these templates). This provided Genie's developers with proprietary access to data on market standards, giving them a unique ability to provide original, in-depth AI explanations to SMEs who use the platform to draft and review legal contracts.



YouGov and CEBR found that SMEs often completely fail to resolve their legal issues, resulting in legal costs worth £13.6bn a year.

RISKS

High Severity/Risk:
1. Loss of business
If legal services are sub-standard, business owners can suffer reputational damage to their business throughout legal negotiation. Genie's open-source templates and market-standardisation seek to mitigate these risks by substantially raising the standards of free online legal resources for businesses.

2. Financial risk
Guarantees, warranties and indemnities can present real financial risks when one business signs up to do business with another. These are frequently and painstakingly negotiated, despite the low likelihood they'll be required. Such infrequent yet high severity instruments can bankrupt a business, so they also represent ample opportunity for both sides to incur expensive legal fees. Genie's models can identify market standard terms and share with all parties whether such terms are fair, or leaning in favour of one party.

Low Severity/Risk:
1. Time lost
We often hear about waiting weeks or months for bespoke contracts to be drafted, which hold up business activities. Genie can instantly draft bespoke contracts built on market standards and provide instant feedback to legal queries. This reduces the risk of business being delayed by legal processes.

2. Unclear advice
Rather than a week-by-week email thread which is the current experience of SMEs dealing with lawyers, Genie users can say whether the advice is clear or not, and it can instantly be reconfigured or reworded to ensure that it is understandable and usable.

3. Inadequate representation
Undoubtedly it takes a lawyer time to get to grips with the business of a new client. Failing to take this time (perhaps due to the SME having a limited budget) may result in a lawyer providing inadequate advice based on a lack of context. Genie's models can interpret the entire legal library of prior signed agreements for any company choosing to share this information. Not only does this help companies organise their legal documents, but it enables Genie to provide tailored advice based on a company's internal precedents and wording.

Genie can match a company's internal standards with market standards and advise on potential improvements and clarifications.

Genie envisages future versions of its models to be trained on publicly available case law information, which can be retrieved and delivered to users at the right place and the right time in their workflow, e.g. if they have a question on whether a specific clause wording is enforceable, Genie can check the case law, and provide a summary of the outcome.

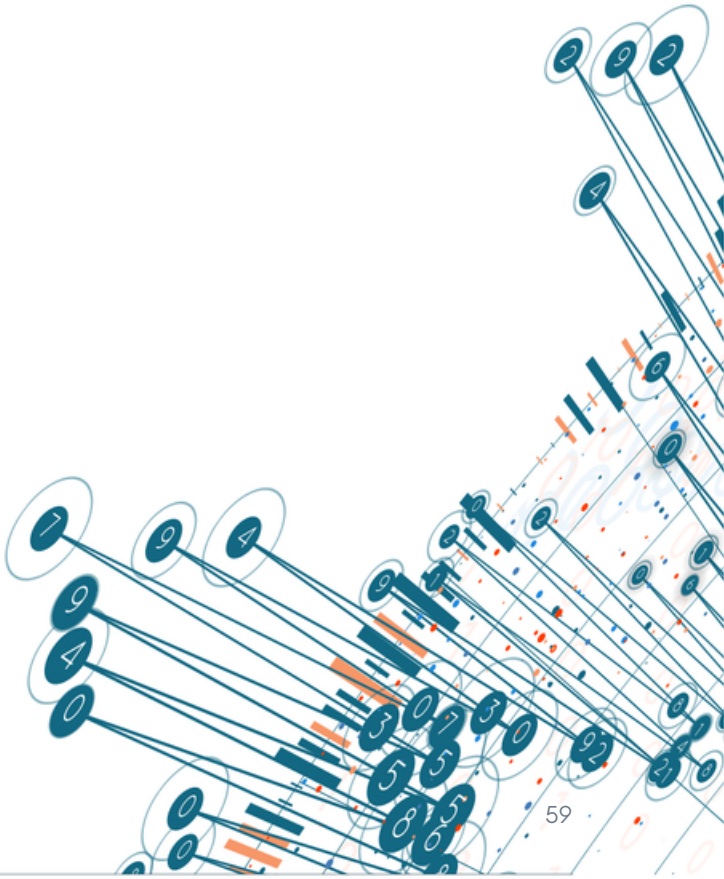
Beyond the end consumer, considerable thought has been put into the social, cultural and regulatory aspects of our application. In our app, we interrogate the trust issues customers have with AI, and how we can mitigate that with increasing accuracy through our proprietary dataset. Contracts are sensitive data, so data security is important, and there are both headwinds and tailwinds with regulation. These include data protection laws, potential AI regulation, legal liability and potential changes in the way "data objects" are treated in the law according to a recent proposal from the Law Policy Commission. For these reasons open sourcing legal contracts to gain a massive amount of rich, structured data is a critical aspect of our strategy.

RISK MANAGEMENT AND ASSURANCE TECHNIQUES

Note: This answer is a partial summary based on the answer above:

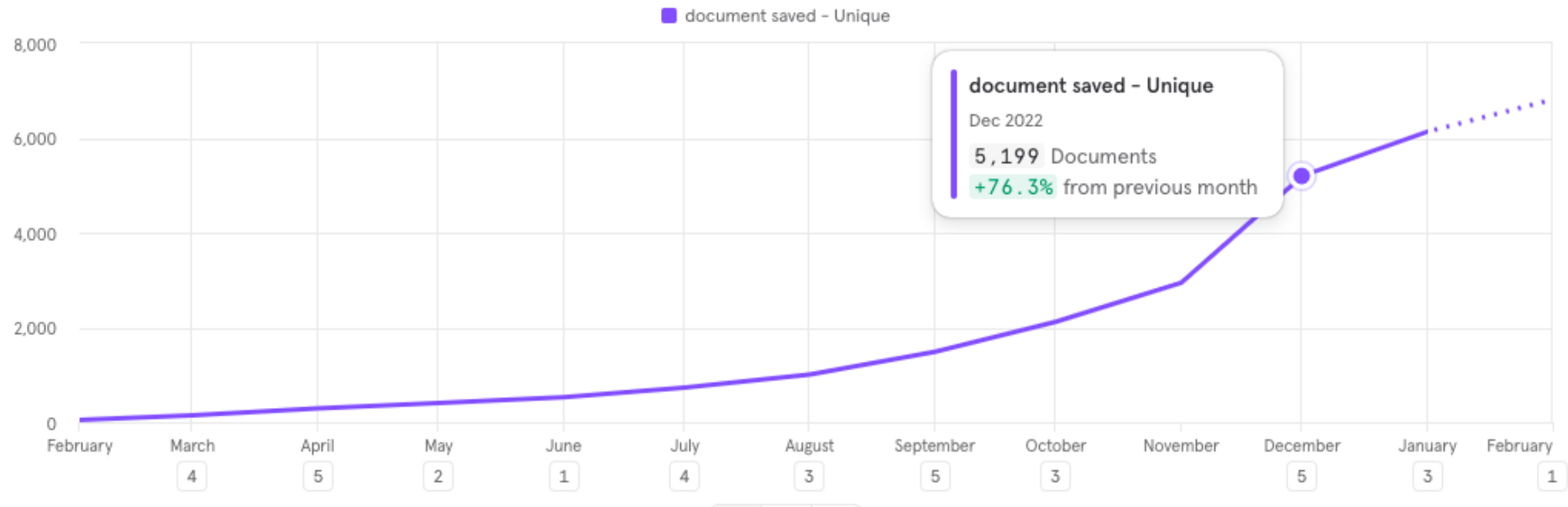
1. Creating an ever-improving boilerplate contracts across myriad business activities.
2. Insurance provided to our paying users when following our guidance
3. A feedback loop so whenever poor advice is generated, we can understand that and feed that back into the model
4. Encouraging users to upload and organize their current signed legal agreements with Genie to provide our model with greater clarity and context around their needs.

> **Beyond the end consumer, considerable thought has been put into the social, cultural and regulatory aspects of our application.**

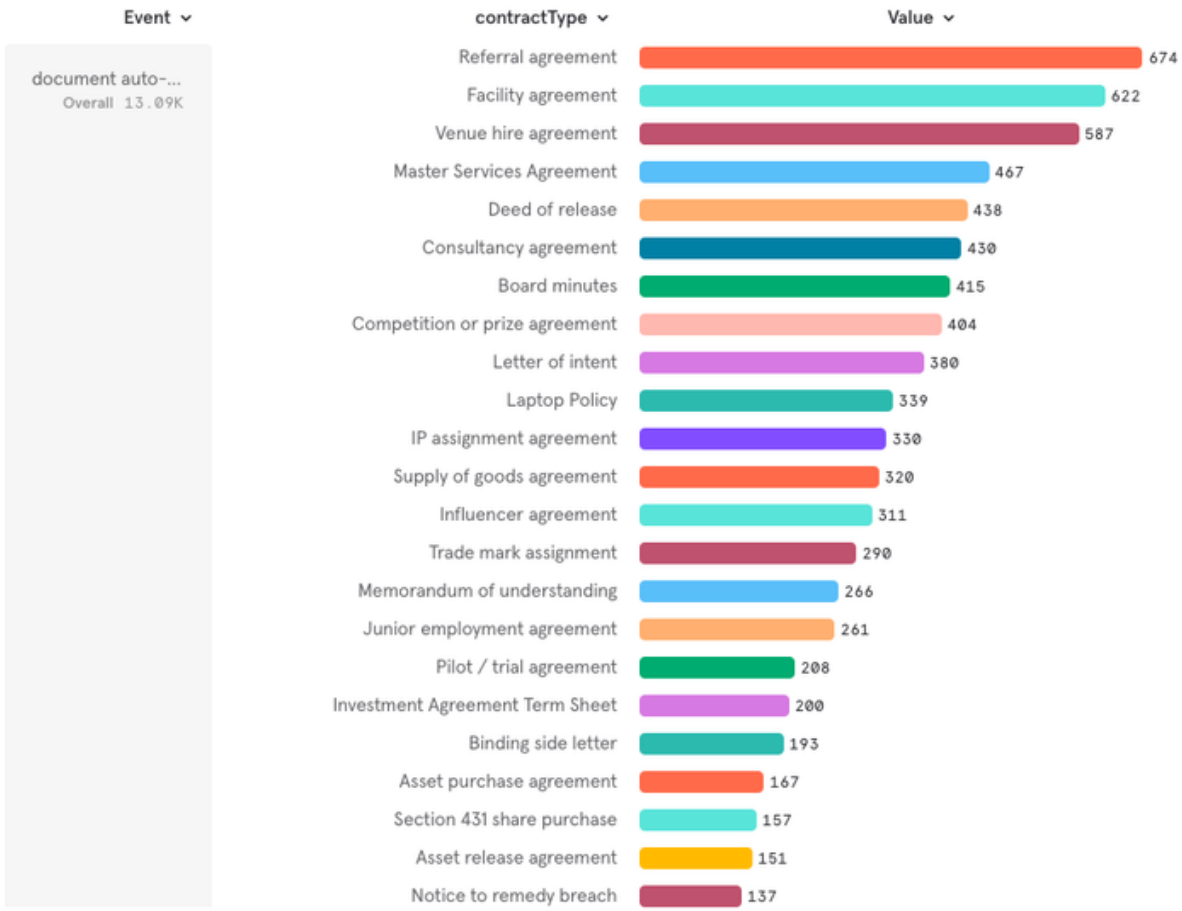


OUTCOMES

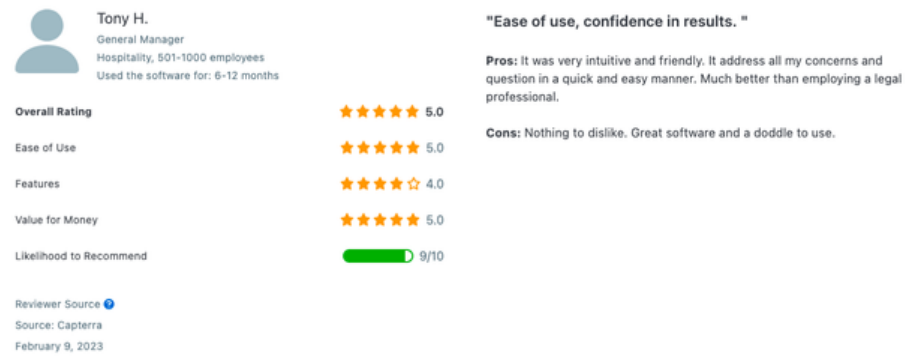
IUnique documents saved on our platform (Monthly) over the past 12 months:



Actual data from the past 12 months showing the number of documents saved broken down by our proprietary ‘contract type’ categories. There are another 100+ categories not shown here. Each one of these represents a business being able to instantly self-serve their needs with high quality AI-improved precedents which previously they would have had to source expensive legal advice for.



Actual customer reviews from February 2023 stating time and money saved so far on our AI-summarised and legalese-removed document precedent library:



Tony H.
General Manager
Hospitality, 501-1000 employees
Used the software for: 6-12 months

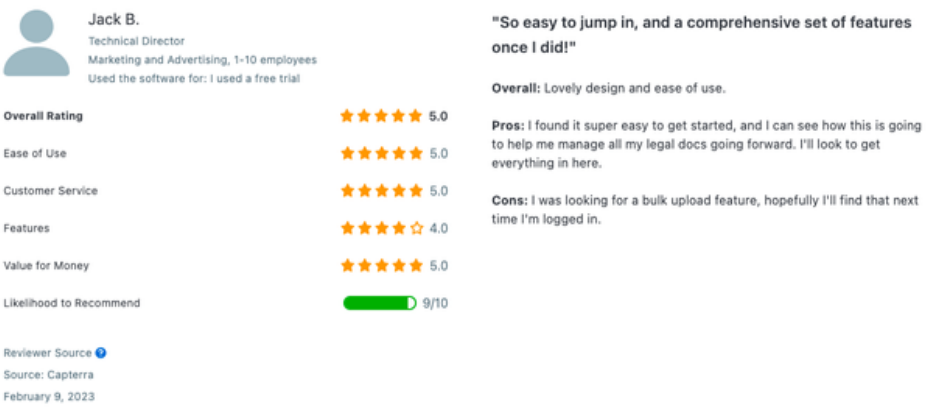
Overall Rating	5.0
Ease of Use	5.0
Features	4.0
Value for Money	5.0
Likelihood to Recommend	9/10

Reviewer Source
Source: Capterra
February 9, 2023

"Ease of use, confidence in results. "

Pros: It was very intuitive and friendly. It address all my concerns and question in a quick and easy manner. Much better than employing a legal professional.

Cons: Nothing to dislike. Great software and a doddle to use.



Jack B.
Technical Director
Marketing and Advertising, 1-10 employees
Used the software for: I used a free trial

Overall Rating	5.0
Ease of Use	5.0
Customer Service	5.0
Features	4.0
Value for Money	5.0
Likelihood to Recommend	9/10

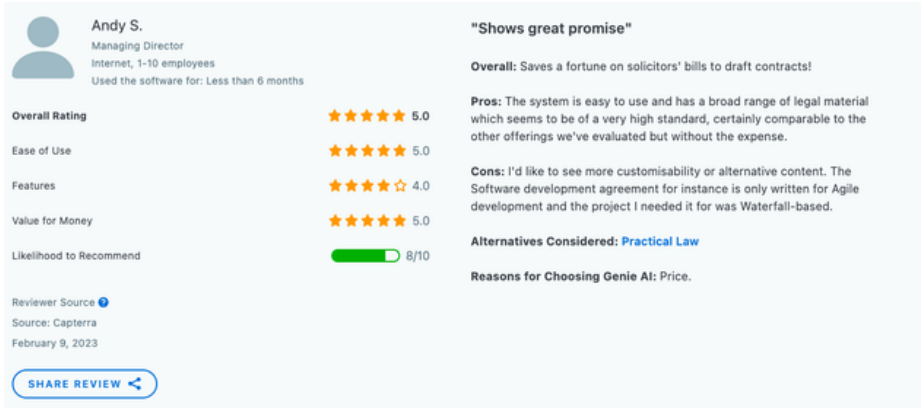
Reviewer Source
Source: Capterra
February 9, 2023

"So easy to jump in, and a comprehensive set of features once I did!"

Overall: Lovely design and ease of use.

Pros: I found it super easy to get started, and I can see how this is going to help me manage all my legal docs going forward. I'll look to get everything in here.

Cons: I was looking for a bulk upload feature, hopefully I'll find that next time I'm logged in.



Andy S.
Managing Director
Internet, 1-10 employees
Used the software for: Less than 6 months

Overall Rating	5.0
Ease of Use	5.0
Features	4.0
Value for Money	5.0
Likelihood to Recommend	8/10

Reviewer Source
Source: Capterra
February 9, 2023

SHARE REVIEW

"Shows great promise"

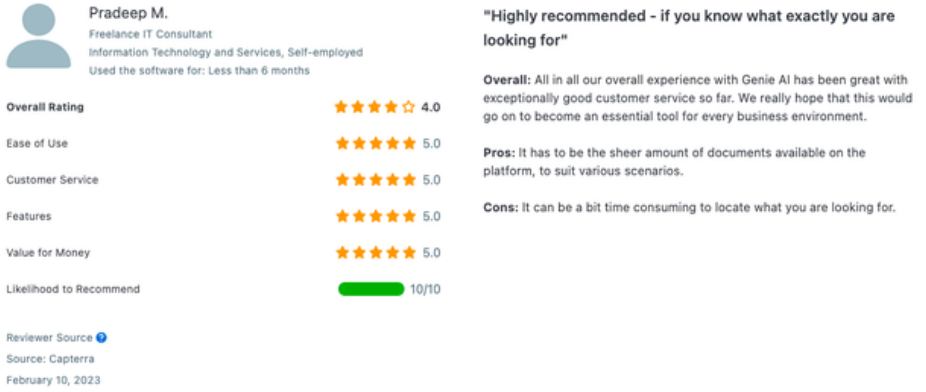
Overall: Saves a fortune on solicitors' bills to draft contracts!

Pros: The system is easy to use and has a broad range of legal material which seems to be of a very high standard, certainly comparable to the other offerings we've evaluated but without the expense.

Cons: I'd like to see more customisability or alternative content. The Software development agreement for instance is only written for Agile development and the project I needed it for was Waterfall-based.

Alternatives Considered: Practical Law

Reasons for Choosing Genie AI: Price.



Pradeep M.
Freelance IT Consultant
Information Technology and Services, Self-employed
Used the software for: Less than 6 months

Overall Rating	4.0
Ease of Use	5.0
Customer Service	5.0
Features	5.0
Value for Money	5.0
Likelihood to Recommend	10/10

Reviewer Source
Source: Capterra
February 10, 2023

"Highly recommended - if you know what exactly you are looking for"

Overall: All in all our overall experience with Genie AI has been great with exceptionally good customer service so far. We really hope that this would go on to become an essential tool for every business environment.

Pros: It has to be the sheer amount of documents available on the platform, to suit various scenarios.

Cons: It can be a bit time consuming to locate what you are looking for.

RESOURCES

App

- App link to our AI-improved precedent document library: All Legal Contract Templates - Genie AI (USA coming soon)
- App link to our AI-powered precedent clause library (at an alpha release phase but new releases coming very soon) https://app.genieai.co/clause-library

Blogs / reports

- Report: Our AI-powered legal gender bias annual report 2022 (the 1st of an ongoing project which sits on top of our ML models) Legal Gender Bias Report 2022
- Blog: Our startup starter pack of precedent legal documents we gave away, worth upwards of £30,000 if procured from a law firm The Genie AI Startup Starter Pack - Legal Templates
- Report: Our 2022 report on the technological progress being made towards automated legal services - AI Lawyers: A Guide To Fully Automated Luxury Lawyers

For any questions regarding this case study please email lawtechuk@technation.io

To learn more please visit
www.genieai.co

