



## LEGAL SOFTWARE AS A SERVICE

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As the adoption of legal tech among law firms shows no sign of slowing down, a new business model is on the rise. This new model makes legal software applications directly available to clients over the internet. The business model shares many similarities with the Software as a Service (SaaS) software licensing and delivery model, which we will therefore label Legal Software as a Service (LSaaS). In this post, we will explore LSaaS applications in more detail.

### What are LSaaS applications?

LSaaS applications are applications with which law firms or tech firms make available legal information or legal documentation to an end-user, which can (to some degree) be tailored to the objectives or circumstances of the end-user. Popular categories of LSaaS applications are:

1. **Rule Finders:** applications which provide information on the rules of a specific area of regulation (e.g. shareholding disclosure).
2. **Compliance Programs:** applications which help organizations to comply with regulation automate the reporting to the relevant authorities (e.g. capital markets trades).
3. **Document Assembly:** applications which allow clients to create legal documents for specific transactions or administrative proceedings (e.g. share purchase contract).
4. **Expert Systems:** applications that provide answers to questions of users, formulate hypotheses, monitor legal developments, or predict outcomes of court cases.

In general, LSaaS applications are based on one or more three technologies: machine learning, robotic process automation, and big legal data ("cognitive technologies"). Machine learning is a set of algorithms computers use to "learn" from experience (data) in order to perform a certain task, such as natural language processing or image recognition. Robotic process automation is the automation of a routine, rules-based process that consists of actions performed by a human by using a software agent to perform those actions. Big data is the collection, storage, and management of large, diverse sets of structured and unstructured data relevant for legal services.

Like other software we interact with, LSaaS applications communicate through a Graphical User Interface (GUI). The GUI is what you see on your screen when you use the application; the layer on top of the technology, so to speak. The GUI can be a website or an app on a mobile device. It can be static, such as a website's download area, or dynamic. A popular dynamic GUI is a chat robot or "chatbot." These are software agents which engage in a conversation with the user using natural language in written or spoken form. Because chatbots generate information in response to the user's questions, they are automated and able to present legal information tailored to the user's circumstances and objectives.

### Who designs and uses LSaaS applications?

Initially, LSaaS applications were only designed by tech firms and mostly used by alternative legal service providers. Now, they are also developed by partnerships between tech firms and law firms and law firms' in-house technology teams. This development shows that law firms need not necessarily be substituted by technology, but can also use it to leverage their own business model.

## LSaaS applications bring important benefits, but firms must calculate specific costs and manage key risks.

LSaaS applications allow law firms to render legal services through new channels. By offering these applications on a subscription or pay-per-use basis, they diversify their offerings and can grow their business. Law firms can now offer bespoke services in person while simultaneously offering commoditized services at a (relatively) lower price point. This allows them to increase productivity per unit of time and cater to multiple markets at the same time.

At the same time, the commercialization of LSaaS applications requires the management of unique LSaaS-related costs and risks, a few of which I address below:

1. **Offering LSaaS applications could be considered "practice of law":** According to the ABA, there is no exact line between legal information and legal advice, both context and content of the information can aid to distinguish between the two (see Formal Opinion 10-457). Information of a general nature not tailored to the user's individual circumstances or fact-specific, accompanied by an express statement that it does not substitute legal advice, is less likely to be considered legal advice than applying legal judgment and knowledge to the client's circumstances and objectives. Therefore, if the LSaaS application provides erroneous information, there is a risk of malpractice.
2. **LSaaS applications are vulnerable to cybersecurity risks:** Internet-based services are inherently vulnerable to cybersecurity threats. Recent events involving Uber, Equifax, DLA Piper, and some major law firm hacks remind us that security incidents can have a devastating impact on the law firm's business. For example, interception of client data could lead to a breach of confidentiality and tampering with chatbots could lead to misrepresentation of legal information to clients, which in turn affects the firm's reputation and exposes it to litigation.
3. **Business continuity risks:** LSaaS applications which depend on other programs (e.g. word processing software), are subject to the risk of malfunctioning in case those programs are interrupted, while a human lawyer may still be able to provide his or her services, for example during a meeting in person.

Law firms must be aware of these risks and the costs to manage them. These issues are not only important for the law firms and software providers which develop LSaaS applications, but also for lawyers who use white-label LSaaS applications which they customize and make available to *their* clients, as they are dependent on the same.

## LSaaS applications will become more advanced in the near future.

The tech industry is constantly innovating these cognitive technologies. We can expect that these innovations will find their way into LSaaS applications. For example, machine learning now allows chatbots to incorporate visual information to enhance text understanding (Image-To-Text) and to learn negotiation strategies from human-to-human dialogues. Another example, in the area of robotic process automation this time, are smart contracts. Loosely speaking, a smart contract is an application which stores a contractual agreement in digital form, software scripts, and information about the agreement (e.g. its status). The contract is "smart," because upon receipt of the right information, the software script will run and modify the status of the agreement, thus executing it. It is imaginable the next generation legal chatbots uses these new machine learning techniques and interacts with smart contracts. In other words, it is quite possible that chatbots will not merely be able provide information or documentation, but also negotiate contractual provisions that automatically execute!

## Going forward.

LSaaS applications can bring great benefits: they allow law firms to scale up their business and diversify their offerings. To harness their potential and reap the benefits, it is important for law firms, software providers and bar associations to manage the unique risks of this business model.