

Hackwave Laboratories

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Action Plan

⚖️ Law Firm Online Marketing Strategy



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Using a full web application to provide a question-and-answer style forum, a rich multi-faceted strategy, to immediately populate the application with content, establishing the law firm as not just an expert in their field but function as a long term marketing strategy through the cultivation of an internet community nucleating around the topic of debt law.

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An Online Presence Strategy For A Consumer Protection Law Firm

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STEP1 Setup Web Application

Stand out from other lawyer business card websites with a full web application

Using a full web application to provide a question-and-answer style forum, a rich multi-faceted strategy, to immediately populate the application with content, establishing the law firm as

not just an expert in their field but function as a long term marketing strategy through the cultivation of an internet community nucleating around the topic of debt law.



The most common online presence for a law firm, would be to build a static website; a website built primarily with the traditional HTML, and CSS. Often the only interactive component being a simple contact.

But being one of potentially tens possibly hundreds of other law firms, then your interaction with clients will be primarily limited the limited contact form, or email; so traffic will be generated primarily from word of mouth, and people in distress who are mass emailing lawyers in their region.

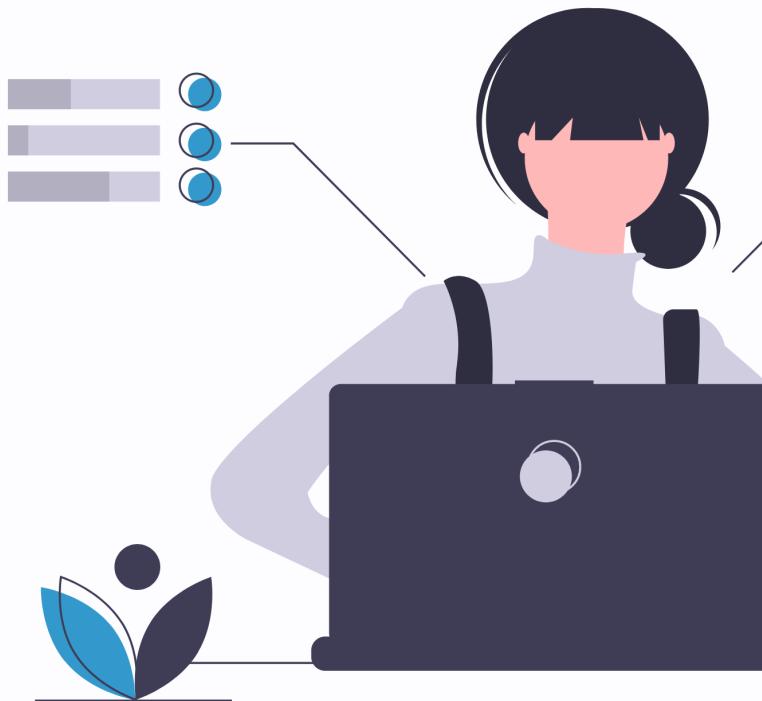
And this is why following marketing convention for law firm internet presence, will lead to little to no additional business generated.

Building a community

Moving beyond static pages

We propose, in contrast to the conventional internet presence of a law firm of a static website; build a web application, an open forum that is presented like an interactive frequently asked questions (FAQ) portion of site. Using these forums, designed specifically with a low barrier of entry, and the ability to post pseudo-anonymously under randomly generated names, that can be customized for maximum discretion, with the ultimate goal of cultivating a community around the topic of consumer protection law.

Creating a interactive FAQ-type forum, could be a nucleating point for a community, the specific style would be a modified version of [Stack Overflow: Law](#) forums.



By creating more than just a business card, but an interactive experience, which overtime can become an important knowledge-base for consumer protection law; traffic will be not just from potential clients interested in asking specific questions, but an ideally growing number of visitors will be interested in using the knowledge-base that the forums would become.

As the knowledge-base and potentially the community grows, you could even decide to allow other lawyers to post answers to questions. This optional choice could reduce the amount of work you need to invest in answering questions, and have them lend assistance in growing an open knowledge base with your firm's name on it, and the people receiving answers would still be creating an account on your service.

Even if other lawyers answer questions, with your firm's name on the open knowledge base, it will be the firm's name associated with expertise in this field, and you can establish a place where information about this subject can be found.

This allows you ensure this information is accessible, and making it conversational, ensures that it is understandable, and forums allow people who understand to help others, in a way crowdsourcing answers reducing your workload. In addition, you are able to control the way the information is presented, for example, ensure that debt law problems are presented in a way where there is absolutely no shame present.

One of the key concepts to this plan is using OAuth2 account system, which uses people's existing Facebook, Google, Twitter, and several others accounts to initialize their account. This lowers the barrier to ask a question significantly. Often users are already logged into one of these and can create an account in seconds. And while our account system will have information about the users and their pre-verified contract information, they will have the ability to post psuedo-anonymously to protect themselves when asking a question.

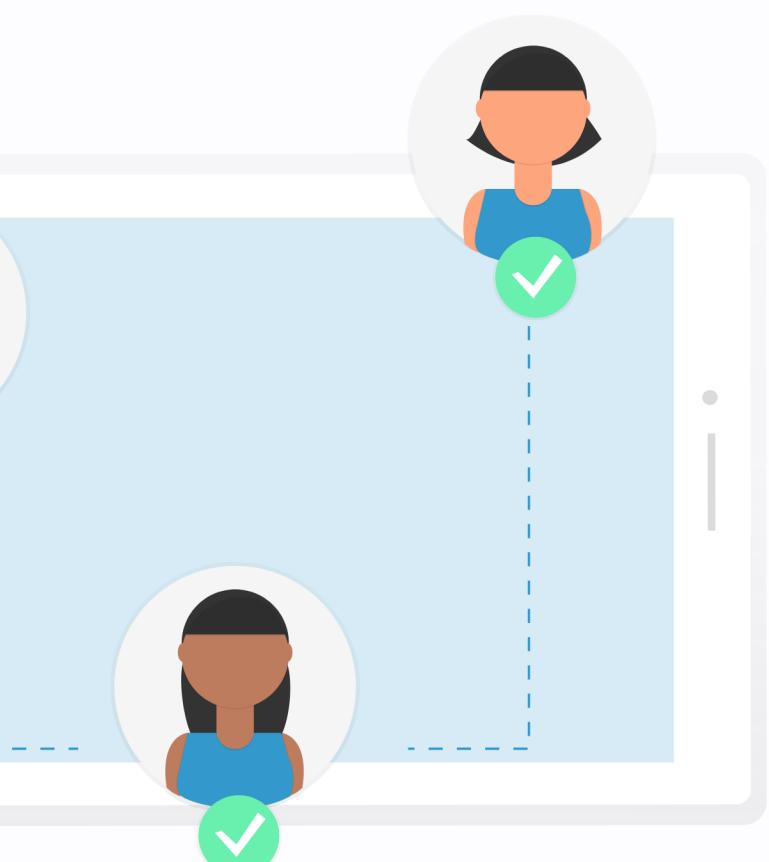
Lowering the complexity to ask questions, and cultivating an open knowledge-base for legal help, there is something of cause traffic to flow to the law firms site, far greater than if the site was only a conventional business-card website.



Building with Go

One of the best tools for the job

We would build the site with Go, a language that is not a scripting language. It is a language which compiles like C. Compiling results in a single executable, which is why creating a phone app is easy. Most importantly, this method is very resource efficient. Which unlike other very popular options like Javascript is resource efficient, which translates directly and significantly to lower hosting costs.



STEP2 Populate With Questions

We would never consider a launch of an empty website; we focus on populating the database before launch.

Launching with an empty site with no questions will not generate traffic, because there is nothing for search engine crawlers to add to their indexes. So the web application will be seeded with questions, using

multiple strategies to maximize presence on search engines; our goal will be to have your web application be an alternative search result for every important question already existing on QnA sites, and forums.



To achieve a successful launch of a knowledge-base for consumer protection law based on an open forum.

We need to launch the forums with enough questions and answers already present to drive the initial users to the forums. Without this, we have an empty forum with little reason for people to arrive at this web application; especially when already existing services like Stack Overflow's Law forum and reddit exist.



If a forum was launched empty, waiting around for answers to come in would be a failure, and is a naive and amateur approach to initializing an internet forum. Because the model for a forums community is that the forums have content which drives users to view the content, that then creates more content, which starts the process over again.

Where to start? Emails from clients

We start with the questions that you have already received by email; **we recommend that you go through your emails and pull questions asked of you, but we would want to**

rephrase the questions to make them more general and more broadly applicable. This process should be started immediately. And once that is done, we can begin looking at the existing resources for legal answers, for all the questions we will need to properly seed the forums.

Competing with existing services?

Using their questions will put our results next to theirs

We have already started writing software to pull data from resources like Stack Overflow and Reddit. We will filter for consumer protection law questions, and specifically debt law, and generate a list of questions for you to answer to seed the site.

The web application will have the ability for multiple questions to have the same answer, so questions that are phrased in different ways can lead to the web application forums without requiring separate answer pages for questions that are essentially the same. This "has_many" approach, allows a single answer to have many questions associated with it, this will ensure that anytime someone is searching for a question that exists on a competing forum or answer site, your knowledge-base will at least be one of the results.

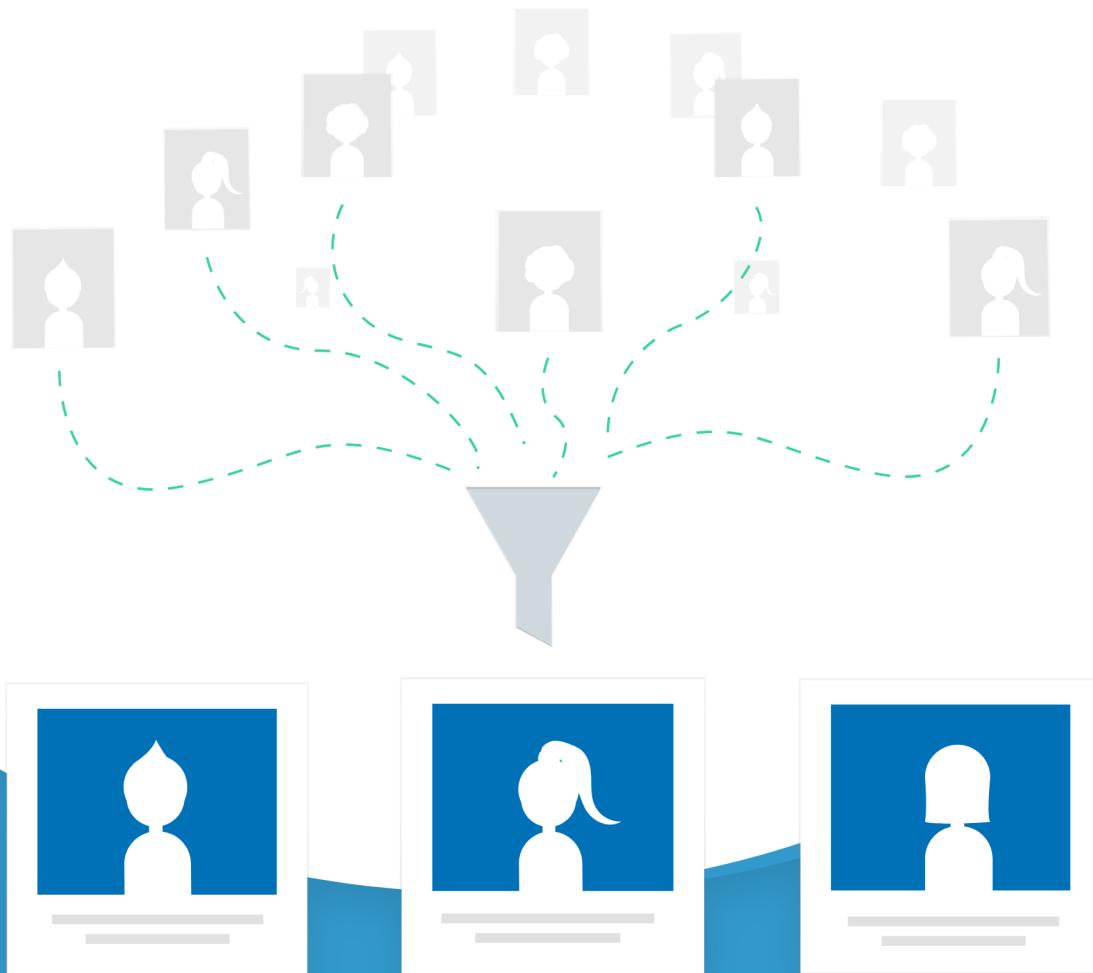
This will also be helpful by reducing associated workload, when new questions are added to the web application, and the question is a different phrasing of an already present question with an answer. These can simply be attached to an existing answer, and the new phrasing will help others find the answer.

STEP3 Answer Populated Questions

Begin collecting, and answering questions immediately, so that when the site launches, they can be added!

After populating the web application, unique, thoughtful answers need to be added before the application is turned on, and

these can answers can be drafted while web application development occurs; these answers are what a community will nucleate around.



Gather and answer questions immediately to maximize the speed at which the project can be launched.

Once finished, send all of these questions and answers to Hackwave Laboratories contact@hackwave.org

We will supply you with questions scraped from the competitor sites: Stack Overflow, and Reddit legal question related subreddits.

These will be in YAML document format, which is an easy to understand format, this will make it easier to insert them into the database.

Try to define broad categories as early as possible; these can change but defining them early helps give structure for development, even if it changes later.

For example, we currently recommend the following forum sections:

- Consumer Protection Legal Questions
 - Debt Questions
 - Collection Harassment Questions
 - Rent & Housing Questions
 - Online Security Breach Questions
 - Workplace Discrimination Questions
 - Misleading Marketing & Advertising Questions
- Police Misconduct & Brutality Questions
- General Questions
- Misc Questions

We are not at all experts, or even vaguely competent in this field; above was purely meant to stimulate ideas of potential sections. **You will be required to develop the categories**, and there can be subcategories, but we should avoid nesting deeper than that. And we will do our best to help you throughout this decision making process.

When working question questions, we want to keep to a standardized YAML format. When we collect questions from scraping the other sites, and the internet in general, we will provide them in this format, and you should provide your questions and answers in the following format.

If its not perfect, its okay, but trying to adhere to this format guideline will save us time.

You will receive [YAML document](#) that looks like the below text:

```
forums:
  general:
    debt:
      - question: "This is the text of a question"
        answer: "And this would be the answer and it can span across multiple lines without issue."
      - question: "the next question?"
        answer: "the next answer"
      - question: "and it just goes like this"
        answer: "until the next section"
    housing:
      - question: "A question about housing"
        answer: "the response"
```

STEP4 Open to public questions

With questions, the site feels alive, now we can begin promoting, open it and cultivate community!

After populating the web application, unique, thoughtful answers need to be added before the application is turned on, and

these can answers can be drafted while web application development occurs; these answers are what a community will nucleate around.



One major feature we can provide is using the deep-dream backed algorithm and rich dataset auto-translation tool [DeepL](#) provides better auto-translation than Google. We can auto-translate the entire site automatically to Espanol, and possibly other languages if your firm decides to operate in Northern California.

Another key feature is that the QnA forum will support allowing multiple questions to be assigned to the same answer. This will allow a reduction in the work load, and will allow all different variations to appear in searches.

When a new question is posted but an answer already exist for it, or an answer almost satisfies it. The account (like Lawyer) with the answering ability enabled, can select to copy a previous answer.

With the copy of the previous answer, it can be posted exactly as is, or it can be slightly modified. Unlike what other forums may believe, for this situation, it is better to have as many different wording for the same questions as possible.

To ensure we get alternate questions, strict moderation rules disallowing posting responses like "search the forums", or "its answered here, {link}" when a question is repeated. These alienate new users, and make them feel unwelcomed.

Will users be allowed to answer?

these posts less prominence. They would very clearly be marked as someone without legal expertise.

Our reasoning is sometimes the questions asked are very generic, and users can answer these just as well as anyone

One option is a "Legal Question" checkbox which would be exclusively for lawyers to response.

The QnA should also have open follow-up questions, able to be created by anyone.

Beyond the questions there should be a portion that functions like reddit or a traditional forum. A place to post reviews, debt collector experiences, relevant news, and their personal stories.

Knowing there are others fighting debt collectors could also provide comfort. And you know that debt is stressful, as long as we cultivate an environment where shame about debt is actively rejected.



So who moderates?

All of us

To begin with, we will help with moderation, and you will always have the ability to moderate, and be able to assign exclusively moderator privileges.

As long as the rules of moderation are laid out very clearly when they are added in, and its made clear its a volunteer position (unless you do decide to pay them), you can get high quality moderation from

STEP5 Answer Utilize accounts or customer management & payments

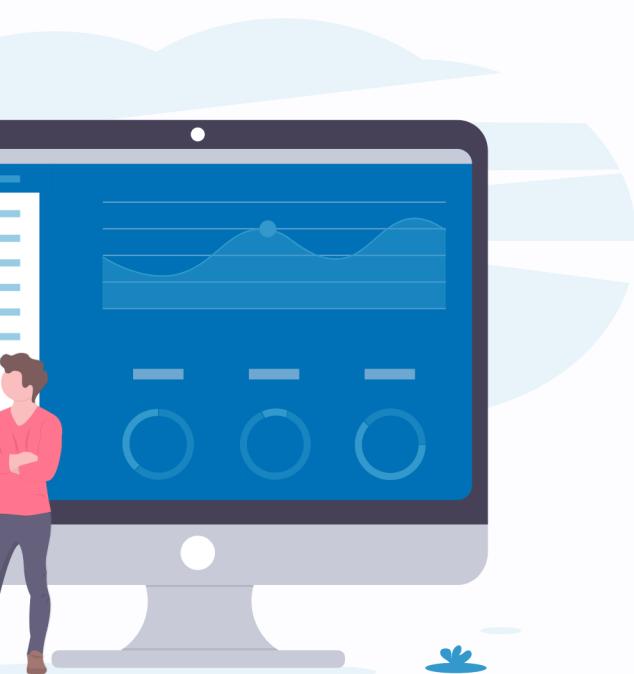
With a full web application, we can build out client services, add the ability take payments, and both active and potential clients.

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strategies to maximize presence on search engines; our goal will be to have your web application be an alternative search result for every important question already existing on QnA sites, and forums.



The forums functioning as both as a knowledge-base, and a way to drive traffic, and market your law firm through a internet presence that offers more than a business-card, are the foundation.



The web application account system will be using OAuth2 which uses Google, Facebook, Twitter, (and others) accounts, they just login and their account is created. Often they are already logged in, and so within a few clicks, under 10 seconds they have an account.

We will get basic information about the user for building our accounts: name, email, phone, and we don't need to have them confirm.

So this goes beyond simply lowering the barrier of entry to posting a question, avoiding long and annoying account creation with email confirmation for every site

Using this method, we can ensure the accounts are not likely to be throw-aways. This means that the accounts in our database will be high quality accounts, that could lead to potential clients, and could easily be incorporated into a [customer relationship management \(CRM\)](#) system.

Customer Relationship Management (CRM)

A new way to organize your business

A further benefit over the static web page, is the account system we need for forums, can be used for clients. With very little effort, we can turn it into a [customer relationship management \(CRM\)](#) system.

"Customer relationship management (CRM) is an approach to managing a company's interaction with current and potential customers. It uses data analysis about customers' history with a company to improve business relationships with customers, specifically focusing on customer retention and ultimately driving sales growth."

[Wikipedia CRM Article](#)

And this means we can also reliably use this information to attach a payment system, and ability for users of the forums to become clients by purchasing services from the law firm.

Beyond just forums, the web application could have a store selling services for sale, depending if you have a standard package.

It would not look exactly like a store, it could be an index of services anyone can put down an initial payment on, or it could start as a contact form and you send a product for the person specifically, which could have an initial payment.

And of course with the ability to issue the client further invoices as situation changes.

Perhaps very importantly, this payment system could also function as your point-of-sale (POS) system.

We could even make this conventional looking by adding a web application and setup a tablet with a card reader. Giving it a standard POS look.

This system could even allow customers to pay over time, setting up a payment plan. There is a lot of flexibility, and we can make it suited to your needs; as the forums grow.

But the system can very easily with the foundation of a good user account system that have verified information since its tied to their social media be a solid client management system. Tracking all the following:

- **Potential clients** tracking ongoing conversation, all in one place, storing all their contact details

(phone, email, etc), and other generic notes that could be accessible in a dashboard, when you make contact over the phone.

- **Active clients** tracking state of their case, a task list showing what needs to be done, and ability to close out the case and issue their bill or even notify them how much they won. Optionally, the amount won could be visible on the forums which would greater influence others to use your services (optional, and with the user's permission).
- **Past clients** who may become clients again, a referral system, where you could compensate them but more importantly you can track who referred the client, which could help with small talk or getting in touch with the client.



Is your system impossible to hack?

As scientists, we exclusively talk in probabilities

We do everything to reduce the attack surface, lower the probability attack, and obtaining anything useful if in the rare event an attack occurs.

Hackwave Laboratories focuses on security when designing, and developing hardware and software.

You won't ever hear us preaching about "agile development", or "waterfall", or any other fad style. We treat software engineering as it should be: a computer science.

We maintain a secure development process; developing in secure environments, and communicating using cryptographically signed messages. This prevents spoofing, and other attacks.

We stand apart from other IT companies; racing to the finish lines, fixing bugs as they see them, or as they get exploited, or never and like Microsoft let bugs sit for more than a decade.

We don't treat software engineering as a trade, but as a science, which we feel all IT companies should have learned to do by now. With the lesson from Boeing outsourcing key software: when you treat software engineering as a trade, planes literally fall out of the sky.

We go well beyond test driven development (TDD); we fuzz, and validate every input, use as little Javascript as possible due, and our sites always support Javascript disabled. Lacking this with the number of XSS attacks increasing, shows a lack of understanding of the security problems we face. And this is now becoming incredibly rare to find a site that works without Javascript.

Hackwave Laboratories practices [defense-in-depth approach](#) in combination with clean-room software engineering model (A model for security development from the 70's developed by IBM, as opposed to Agile and other similar strategies commonly used now).

Our developers are always determining the attack surface, and developing to ensure the entire attack surface is protected; and has plans even for when those defenses fail.

Cryptography is not a buzzword for us, it's a core component of computer science, and advances in cryptography have been behind a lot of the major advances in computer science in the past decades, from e-commerce, to BitTorrent.

A law firm should definitely know the basics of cryptography.

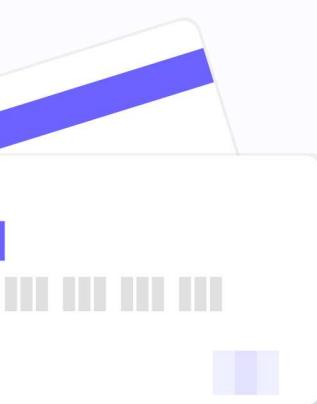
We will teach you cryptography; not just encryption of messages containing secrets but more important use-case for cryptography: signing and validation.

Cryptography allows verifying our identity, and the validity of our messages and documents.

For example, a founding member of Hackwave Labs, was invited to use a Bitcoin ATM, and hacked it in under under 5 minutes of first interacting with it, with no prior knowledge about the system at all.

The exploit found, allowed the attacker to issue double payouts. This information was responsibly disclosed to the Bitcoin ATM company; resulting in a bug bounty reward of 20,000 USD, received the same day. And extra compensation from the owner of the Bitcoin ATM.

We are in a very small and rare group of people who can honestly say they have been developing on, and with cryptocurrency for over a decade.



We don't have any particular preference at the moment, and if you already use one, like Quickbooks, it may be easier to intergrate with that system, or abandon it.

Using a simple service like

setup, and well-known now.

Hackwave is working directly with [Visa APIs](#) to try to implement a low-level payment gateway service, that may be an alternative in the future. We are applying to become operate a cooperative bank in Uruguay.

One consideration, is stripe only works within the

US; so a switch would be required for expanding into latin america. For more international options there is [Braintree Payments](#).



In addition to credit card payments, we recommend accepting [Venmo Payments](#), a service that is growing in popularity, and so it would be worth adding support for how easy it is. And we can add support [Paypal payments](#) despite its clearly diminishing popularity and high fees.

Should you accept Bitcoin?

Yes, because accepting it still attracts customers

You should state you accept them but for now just work out transactions by email until it is clear you are getting regular Bitcoin payments. And if this the case, we can very easily and quickly implement a self-hosted payment gateway service for taking Bitcoin payments for 0 fee payment processing.

Payment Gateways & Options

The diversity needed to reach every potential client

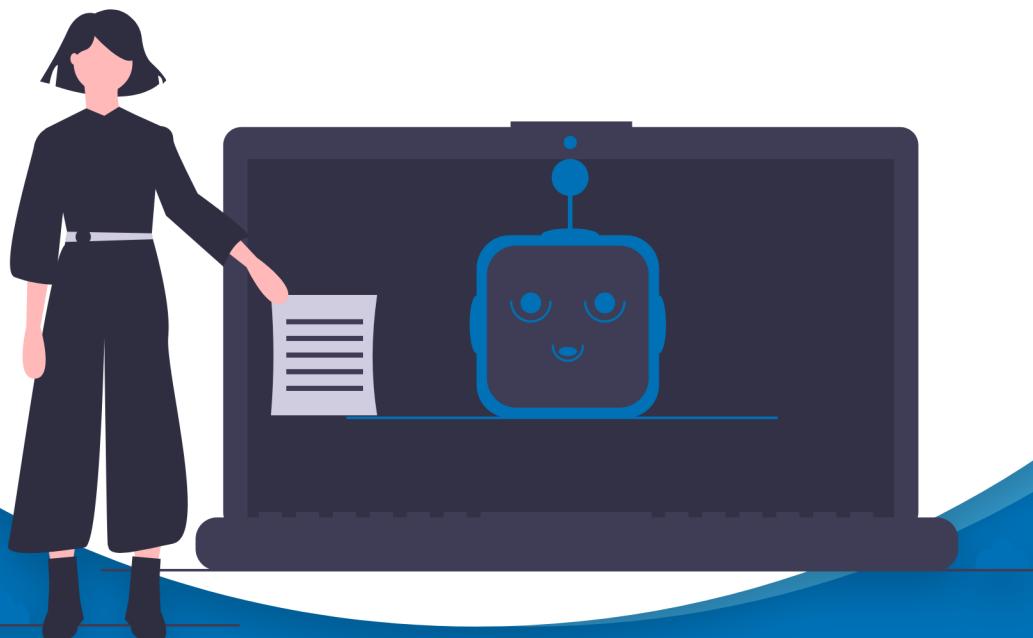
[Stripe Payments](#) you can take credit cards for roughly 3% fees, which is roughly average, and the main advantages being simple interface, quick

STEP6 Identify Automatable tasks with Analytics, and User feedback

As you begin to take customers, and assist them; we can use the analytics, and general system to identify patterns and automate them

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multiple strategies to maximize presence on search engines; our goal will be to have your web application be an alternative search result for every important question already existing on QnA sites, and forums.



After the site is running, we will setup analytics, not Google, or any other third party analytics, but a built-in analytics system.

These are trivial to implement, and using Google, gives up your user privacy data, and finnaly they simply are not as good.



Because if an analytics system is implemented within the web application, then website activity can be associated with a specific user account, which will help us identify potential bots, or indicate specific interests, and other information.

Afer some time, with the analytic data, the frequency of questions, the flow of traffic to specific topics, we can make estimates at what issues are wide spread and the business plan can be adjusted

to fit these needs.

Can we get software to answer the questions?

Maybe, we can train software and guage its ability overtime

Using the question data set, we could have machine learning algorithms guess at answer after feeding it datasets related to the law.

Then we can correct its guesses, and overtime, it may prove to capable of providing basic assistance. This may be useful in the future for helping customers find the service they need, by having the automated support system talk to them and determine their problem. But obviously this is not a priority, its just one possible use of the dataset as it grows.

But we can automate tasks sooner Using the CRM data

Using the CRM data, and the law firm's interaction with customers, the frequency of the generation of specific kind of documents and with the data about the user on the site.

We should be able to automate some of your tasks; automatically generating documents you need for some specific filings (did I use that word right?).

This document you are reading is software defined, it was generated using data defined in a YAML configuration.

If we can find processes you repeat and documents you regularly generate in a manual way; we can definitely generate them programatically in the same way this document was generated. And this has a lot of potential for reducing your work load, allowing you to take on more cases, and help more people.

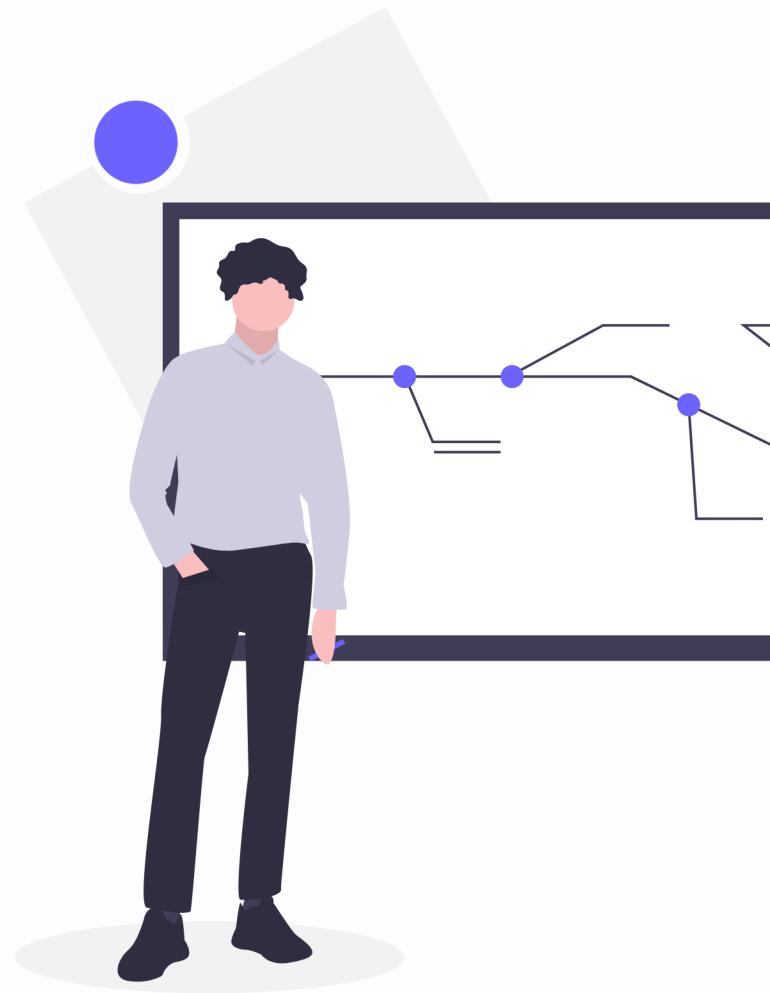
Especially with tools like the CRM, ensuring you are keeping up with all active clients, and keeping all your notes and information about them; so you can refresh yourself before your next phone call, making it seem like you have super memory.

If organization is a problem now, this should help a lot. And we would be happy in helping you build out these tools.

And with the payment system implemented, keep in mind, this can be used locally in the office as a point-of-sale (POS) system.

We could very quickly build special software you can run on a locked down tablet we setup, and a smartcard / magnetic strip, or QR code reader to accept every type of payment in person.

Allowing you to keep your entire law firm's business



concentrated into a single platform. And special accounts can be created with limited privileges, or just the privileges to the functions you want a specific person to do.

This will allow you to hire and easily train assistants, since their UI for the website will be limited and very simple.

By reducing their access exclusively to their job, there is no way they can mess anything up, delete anything important, and access it from anywhere; but then you will want to ensure the workstation is running a secure operating system.

An IT cooperative for hardware and software engineers, digital artists, and hackers ☀

