



VAIOT

AI Legal Assistant

Lightpaper

March 2023

www.vaiot.ai



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INTRODUCTION

VAIOT AI Legal Assistant is a product concept that aims to provide legal and public administration information and services to various audiences using artificial intelligence (AI) as well as blockchain technology. This document is a high-level overview of that explores the basic assumptions, functionalities, potential use cases, business models of VAIOT AI Legal Assistant. The purpose of this analysis is to present the opportunities and capabilities of developing and marketing the product.

The concept of VAIOT AI Legal Assistant is based on the premise that legal services are often inaccessible, expensive, or complex for many people who need them, and that certain public administration processes or legal knowledge are not consumer friendly. By using AI, VAIOT AI Legal Assistant can offer a user-friendly, affordable, and efficient way to access legal information and assistance on various topics and tasks. The product can also help businesses, lawyers and law firms improve their productivity, quality, and profitability by automating or augmenting some of their legal work. Uniquely among comparable solutions, VAIOT AI Legal Assistant also offers the advantages and opportunities that blockchain technology may bring to the practice of law.

TECHNOLOGICAL LANDSCAPE

The development and adoption of large language models (LLMs) have been one of the most remarkable trends in artificial intelligence in recent years. LLMs are artificial intelligence systems that can process natural language at a massive scale, generating coherent and fluent texts on various topics and tasks. LLMs can perform various language-related tasks, such as translation, summarization of texts, text classification, question-and-answer conversations, and text conversion into other content. LLMs can also learn from a few examples or even without any examples, which is called few-shot or zero-shot learning. This means that LLMs can adapt to new tasks and domains that were not included in their training data.

One of the most prominent examples of LLMs is GPT-4, the latest iteration of the Generative Pre-trained Transformer model developed by OpenAI, released in March 2023. GPT-4 represents the state-of-the-art in AI technology, with developer

tests indicating its stunning performance in a whole range of cognitive tasks. This includes the ability of GPT-4 to pass many popular aptitude tests and exams at a human, or in most cases above average human level. Significantly for this analysis, GPT-4 also proved able to pass the Uniform Bar Exam, which is the official qualification exam for legal professionals practicing law in the United States. GPT-4 scored 298/400 on the exam, landing in the 90th percentile of students. This is a truly remarkable achievement which highlights the enormous potential of this technology in the domain of law.

Among its other capabilities, GPT-4 can also competently analyze or generate high-quality texts on almost any topic, given a few words or sentences as input. It can suggest and implements intelligent improvements to a document of any nature. It can also converse with humans through a chatbot interface, providing relevant and engaging responses. GPT-4 in its generic form has been trained on a huge corpus of text data from various sources, such as books, news articles, social media posts, and legal documents, making it a general knowledge expert far above the capabilities of any single human. Importantly, however, the model can be further improved and specialized by being trained on datasets prepared for a specific task or domain. This sacrifices some of the general-application functionalities of the model, whilst greatly increasing its domain-specific abilities.

The capabilities of LLMs such as GPT-4 have significant implications for the practice of law, as they can offer novel and powerful solutions for various legal tasks and challenges. The current iteration of LLMs can be said to genuinely display cognitive capabilities that allow for the automation and incredible improvements in efficiency in a whole range of legal tasks, such as drafting contracts, writing legal briefs, conducting research, answering legal queries, and generating advice.

Because of these features, the appearance of GPT-4 levels the playing field between businesses that are well-established in this niche and newcomers. Since even the generic capabilities of GPT-4, without training the model specifically for legal tasks, seem to far exceed any previous models used by other AI legal tools, all established actors in this space must develop their solutions effectively from scratch if they wish to stay competitive. This opens up the possibility for market disruption by newcomers such as VAIOT, which aims to leverage the full untapped potential of the next-generation LLMs for law.

The general aim of VAIOT AI Legal Assistant is to harness the power of LLMs for law while addressing their limitations and risks. VAIOT AI Legal Assistant will use

state-of-the-art LLMs such as GPT-4 as well as custom-trained models that are fine-tuned for specific legal domains and tasks. VAIOT AI Legal Assistant will also implement various proprietary mechanisms, including blockchain solutions, to ensure the quality, reliability, security, privacy, and accountability of its outputs.

However, VAIOT should not rely solely on GPT-4 for its competitive advantage, as other players will also use similar or better LLMs. Rather, VAIOT should focus on developing its own unique value proposition and differentiation strategy in the legal space. This unique value proposition will likely come from the convergence between AI legal services and blockchain legal services, as VAIOT is uniquely placed to develop and offer solutions at the intersection of these two technologies.

POSSIBLE USE CASES

The potential use cases for VAIOT AI Legal Assistant can be broadly divided into three categories: consumer legal services, aimed primarily at individual customers; professional legal services, aimed primarily at businesses, lawyers, and law firms; and blockchain legal services, which leverage the unique characteristics of blockchain technology and digital assets in the context of the practice of law.

Consumer Legal Services

The VAIOT AI Legal Assistant can make legal information and services more accessible and affordable for everyday customers who may not have the time, money, or expertise to consult a lawyer. This includes a vast variety of public administration services and processes as well as increased access to knowledge in this domain. Some of the consumer use cases include:

- **Legal Advice**

Providing legal advice and guidance on various topics, thus empowering and educating users about the law while providing them with guidance on specific legal or regulatory matters. VAIOT AI legal assistant can answer users' questions about their rights, obligations, options, and consequences in different scenarios, such as divorce, employment, immigration, consumer protection, civil disputes, etc. It can also suggest relevant resources for further assistance if needed and help users learn how to protect themselves from legal issues and how to resolve them effectively.

- **Automating Legal and Public Administration Tasks**

VAIOT AI legal assistant can help users complete and submit forms, applications, claims, or complaints to the appropriate authorities. It can also handle the paperwork, communication, negotiation, mediation, arbitration, or litigation on behalf of the users or assist them throughout the process. The AI legal assistant can also track the status and progress of users' legal and public administration cases and notify them of any updates or actions required.

- **Document Drafting**

VAIOT AI legal assistant can help users create customized and legally binding documents that suit their needs and preferences, including personal contracts, legal letters, formal appeals, powers of attorney, wills, contract cancellations, etc. The AI can provide guidance on what clauses to include and what legal language to use in specific circumstances.

- **Agreement Analysis**

VAIOT AI Legal Assistant can help consumers review contracts and other legal documents before signing them, as well as check for errors, inconsistencies, or potential risks in existing documents. This can include loan and rental agreements, employee contracts, insurance contracts (including health insurance), property deeds, sales agreements, prenuptial agreements, etc. In addition to identifying potential legal issues, the AI can provide recommendations on how to negotiate or renegotiate the contract terms. The AI can also provide real-time analysis of software user agreements, for example during app installation, flagging up potential risks.

- **Public administration process guidance and access to related information**

VAIOT AI Legal Assistant can guide consumers through public administration processes and provide necessary information required to comply with legal requirements in each jurisdiction. This allows VAIOT to integrate with a set of public services and support citizen services in different areas. Some examples being a support in formal processes such as applying for a business license, registering a car, applying for citizenship, a visa as well as providing information on obligations coming from various real-life situations.

Professional legal and administrative services

VAIOT AI Legal Assistant can offer a range of services targeted specifically at audiences requiring professional and comprehensive legal services, including corporate businesses, lawyers, and law firms. Such professional use cases include:

- **Document Review**

VAIOT AI Legal Assistant can help lawyers and law firms review and analyze large volumes of legal documents, such as contracts, pleadings, discovery materials, etc. The AI can extract relevant information, identify key clauses and terms, flag potential issues and risks, summarize important facts, and suggest edits or revisions based on best practices and precedents.

- **Legal Research**

VAIOT AI Legal Assistant can help lawyers and law firms conduct comprehensive and efficient legal research on various topics and jurisdictions. The AI can search through multiple sources of law, such as statutes, regulations, case law, etc., and provide relevant results with summaries and citations. AI-powered legal research tools can help lawyers find relevant legal precedents and identify emerging legal trends more quickly and accurately than traditional legal research methods. The AI Legal Assistant can also answer specific questions or queries based on natural language processing and reasoning.

- **Drafting and Generation**

The AI assistant can help businesses, lawyers and law firms draft and generate high-quality legal documents, such as contracts, agreements, letters, motions, briefs, etc. The AI Legal Assistant can use natural language generation to produce coherent and accurate texts based on the input data and parameters provided by the user. It can also customize the texts according to the user's preferences and style.

- **Predictive Analytics**

AI can help lawyers predict the outcome of legal cases based on data analysis of past cases. This can help lawyers make more informed decisions about legal strategy and settlement negotiations.

- **Compliance and Risk Management**

VAIOT AI Legal Assistant can help businesses, lawyers and law firms monitor and ensure compliance with various laws and regulations that apply to their clients or their operations, such as data protection laws or labor laws. It can track changes in the regulatory landscape, alert users of any updates or obligations that affect them or their clients, provide guidance on how to comply with the requirements or mitigate the risks involved.

- **Client Interaction and Communication**

AI can help businesses and lawyers interact with clients more efficiently by automating routine tasks, such as appointment scheduling and document sharing. It can help communicate more effectively through various channels such as email, chatbot or voice. The AI legal assistant can also provide clients with timely updates on the status of their cases, answer common questions or requests, collect feedback or satisfaction ratings, etc.

- **“Outsourcing” of Legal Services and Support to Legal Departments**

VAIOT AI Legal Assistant can be integrated into existing legal departments of companies from various sectors to support or automate more mundane legal tasks, allowing the legal workforce to move to more advanced cases. HR departments can be using AI Legal Assistant to draft and automate signing of employment contracts. It can also allow to fully “outsource” legal services for smaller businesses that cannot afford their own legal department or a support of a law firm.

Blockchain Legal Services

Blockchain legal services are services that combine the unique characteristics of blockchain technology and digital assets with practice of law, allowing for completely novel solutions and providing new contexts for legal interventions. Some possible use cases for such services include:

- **Smart Contracts**

These are self-executing contracts that are encoded on a blockchain and can automatically perform transactions or actions based on predefined conditions. VAIOT AI Legal Assistant can help users create, review, and execute smart contracts for various purposes, such as escrow, insurance, supply chain, etc.

VAIOT AI Legal Assistant will utilize smart contracts to record contractual data on the blockchain to ensure undeniability and provide supporting evidence of contractual arrangements and terms in case of a dispute. VAIOT AI Legal Assistant will offer a subservice allowing users to easily read the smart contract code to be able to access contractual terms at any point in time. The end goal is to allow for contract execution tracking, monitoring and contract updates up to confirming the execution on the blockchain through the use of oracles and trusted third parties.

- **Decentralized Dispute Resolution**

This is a process that uses blockchain-based platforms or protocols to resolve disputes without relying on traditional courts or intermediaries. VAIOT AI Legal Assistant can help users access and participate in decentralized dispute resolution mechanisms, such as arbitration or mediation, that are faster, cheaper, and more transparent than conventional methods.

- **Digital Identity and Verification**

This is a system that uses blockchain technology to create and manage digital identities and credentials that can be used to prove one's identity, attributes, or qualifications. VAIOT AI Legal Assistant can help users create and verify their digital identities and credentials using blockchain technology, as well as use them for various legal purposes, such as signing documents, accessing services, or claiming rights. VAIOT's plan to integrate with Polygon ID is to support this use case.

- **Asset Tokenization and Management**

This is a process that uses blockchain technology to convert physical or intangible assets into digital tokens that can be easily traded, transferred, or managed on a blockchain. VAIOT AI Legal Assistant can help users tokenize and manage their assets using blockchain technology, such as real estate, art, intellectual property, etc., as well as provide legal guidance on the implications and regulations of asset tokenization. This allows the AI Legal Assistant to take care of the full process, not only support tokenization of assets but also protect users rights in regards to the asset on the traditional, legal level.

CURRENT VAIOT AI LEGAL ASSISTANT SETUP

Current Scope of Work

- **Drafting and Signing of Traditional Contracts**

Initial iterations of AI Legal Assistant include the core functionality to draft a traditional legal contract for a given purpose through AI-driven conversational flows. Such contract may then be downloaded and printed-out or signed digitally by both parties to the agreement.

- **Contract Negotiation Flow**

VAIOT AI Legal Assistant allows two or more parties to negotiate the terms of a deal/contract through the AI Assistant interface and have such terms backed up by a traditional and blockchain-based contract.

- **Access to Legal and Public Administration Information and Guidance**

Initial iterations of AI Legal Assistant will allow users to obtain basic legal and public administration information on specific use cases with the database expanding in every product iteration.

- **Smart Contracts Generation**

VAIOT AI Legal Assistant, connected to a proprietary blockchain based on Polygon Edge will enable users to record contractual data as part of the smart contract generated through the AI-driven conversational flow.

- **VAI Payback Mechanism**

For the implementation of VAIOT AI Legal Assistant the VAI Token will be used as an incentive mechanism for customers. After each finalized purchase, a part of the transaction value is returned to the user as a bonus in VAI Tokens. It can be used to buy services at a discounted price.

Tech Stack

- Open AI's GPT-3 & GPT-4

VAIOT is using GPT-3 and will integrate GPT-4 for branching the AI conversational flow and covering the unstructured parts of the user flow. GPT proves to be extremely useful while sourcing legal and public administration information to provide guidance due to its broad general knowledge and problem-solving abilities. GPT-4 is also set to revolutionize VAIOT AI Legal Assistance general operative model as described in Technological Landscape section above.

- Microsoft Luis

VAIOT is using Microsoft Luis (Language Understanding Intelligent Services), a cloud-based conversational AI service, for the most structured part of its assistant's conversational flows. Luis is governing users core path in VAIOT systems allowing to apply custom ML intelligence to a user's conversational, natural language text to predict overall meaning and pull-out relevant information.

- IBM Watson

IBM Watson is one of the most recognized business solutions, utilizing the latest innovations in machine learning to support automation and optimization of complex processes. VAIOT started building its solutions with a joint development project with IBM back in 2020. Solutions such as IBM Watson Discovery, Orchestrate or Studio as well as Watson Assistant, IBM's conversational AI platform, were part of VAIOT's development processes from the very beginning.

- Proprietary ML Algorithms

VAIOT develops its own proprietary ML algorithms for the purpose of advanced contract drafting and generation, contract analysis (e.g., risk flagging) and legal research. Paired with the capabilities of the solutions described above we receive a highly specialized technology stack allowing to perform specific legal and administrative tasks.

- Polygon blockchain

AI-generated contracts are recorded and stored on the blockchain as digital equivalents of the agreements, ensuring their validity and security, providing another layer of contractual data undeniability. To protect the privacy and confidentiality of the contractual data, we use a private blockchain built with Polygon Edge.

In addition to our private blockchain for contract data processing, we also plan to use a public blockchain for storing some of the contractual data that does not contain sensitive or confidential information. This will enable us to leverage the benefits of public blockchain technology, such as data immutability, transparency, and accessibility. Public blockchain ensures that the data is tamper-proof and verifiable by anyone who has access to the ledger. Public blockchain can also facilitate data sharing and collaboration among different parties who may not trust each other or have a central authority to coordinate them. We will use Polygon network for our public contractual data storage which offer our users several advantages.

Building a trusted and secure relationship between users and our solutions, especially the AI Legal Assistant, will be essential for the proper functioning of VAIOT's ecosystem. Privacy by default and self-sovereign identity is at the root of our thinking about decentralized law solutions. Polygon ID meets "Verifiable Credentials" (VC) and "Decentralized identifiers" (DID) W3C standards allowing to increase the interoperability of VAIOT's solutions. Utilization of Polygon ID will support security, user experience, allow for easier user onboarding and building up a user reputation across the ecosystem. Utilization of Polygon ID will strengthen VAIOT's efforts for full compliance with all necessary laws, especially those concerning privacy and personal data protection.

POSSIBLE BUSINESS MODELS

The best business model for VAIOT AI Legal Assistant will depend on the range of services ultimately offered and thus the target audience of the company. Possible business models, many of which are not mutually exclusive and may be implemented side-by-side, are listed below. In the first iterations of the AI Legal Assistant VAIOT will use the one-off payment model (or pay-per-use), with subscription-based model to come further while considering other options as described below depending on market opportunities.

- **Subscription-based Model**

Users pay a monthly or annual fee to access the AI Legal Assistant. This could be a good option for individuals who need occasional legal assistance or small businesses that need ongoing legal support.

Pros: Provides a steady and predictable revenue stream for the business and increases customer loyalty and retention.

Cons: Requires a high initial investment in customer acquisition and retention, and may face competition from cheaper or free alternatives.

- **Pay-per-use Model**

Users pay for specific services, such as contract drafting or legal research, on a per-use basis. This could be a good option for individuals or businesses that need occasional legal assistance but do not want to commit to a subscription.

Pros: Allows users to pay only for what they need and use, and provides flexibility and convenience.

Cons: May generate inconsistent and uncertain revenue for the business, and may face price sensitivity from customers.

- **Freemium Model**

Users can access basic AI Legal Assistant services for free but pay for additional features or services. This could be a good option for individuals or businesses that are just starting and need basic legal assistance but may require more advanced features as they grow.

Pros: Can attract a large user base and generate word-of-mouth marketing. It can also create a value perception and encourage users to upgrade to premium services.

Cons: May incur high costs for providing free services and may face difficulty in converting free users to paying customers.

- **Ad-based model**

Users can access the AI legal assistant in exchange for viewing ads displayed inside the service. This model generates revenue from advertisers who want to reach a targeted audience based on their legal needs and interests. It can also leverage the data collected from users to improve the AI Legal Assistant and offer relevant ads.

Pros: Can provide free or low-cost services to users and create a large user base. It can also create multiple revenue streams from different advertisers.

Cons: May reduce the credibility and trustworthiness of the AI legal assistant if it is perceived as biased or influenced by advertisers. It may also face privacy concerns or regulations regarding user data collection and usage.

- **Partnership model**

VAIOT could partner with law firms, legal service providers, or other businesses to offer the AI Legal Assistant as a value-added service. This could be a good option for businesses that already have an established customer base and want to expand their service offerings.

Pros: Can leverage the existing reputation, network, and resources of the partners and create synergies and cross-selling opportunities. It can also reduce the costs and risks of entering new markets or segments.

Cons: May require sharing revenue or control with the partners and may face conflicts of interest or misalignment of goals. It may also face competition from other partners or similar partnerships.

- **White-label model**

VAIOT could offer the AI Legal Assistant as a white-label product that other businesses can rebrand and offer to their customers. This could be a good option for businesses that want to offer legal assistance as part of their own service offerings but do not want to invest in developing their own AI technology.

Pros: Can generate revenue from licensing fees or royalties and create economies of scale by selling to multiple customers. It can also benefit from the marketing efforts of the customers who rebrand the product.

Cons: May lose direct contact with the end-users and may face difficulty in building brand recognition or loyalty. It may also face quality issues or reputation risks if the customers who rebrand the product do not provide adequate support or service.

- **Sponsored Content Model**

VAIOT could partner with law firms or legal service providers to offer sponsored content, such as legal guides or webinars, that are relevant to the AI Legal Assistant's user base. Law firms or legal service providers could pay to have their content featured on the AI Legal Assistant platform and gain exposure to potential clients.

Pros: Can generate revenue from sponsorship fees and create value for both the sponsors and the users by providing useful and informative content. It can also enhance the credibility and authority of the AI legal assistant by associating with reputable law firms or legal service providers.

Cons: May require creating or curating high-quality content that meets the expectations of both the sponsors and the users. It may also face competition from other platforms that offer similar content.

- **Referral Model**

VAIOT could earn a referral fee for referring users to legal service providers, such as lawyers or law firms, based on the user's legal needs. The AI Legal assistant could analyze user data to identify potential legal needs and connect users with appropriate service providers.

Pros: Can generate revenue from referral fees and create value for both the users and the service providers by facilitating matches and transactions. It can also build trust and loyalty with the users by providing unbiased and personalized recommendations.

Cons: May require establishing and maintaining relationships with a network of reliable and qualified service providers. It may also face legal or ethical issues or regulations regarding referrals or commissions.

OPPORTUNITIES

This section will assess the various factors that may impact the success and competitiveness of VAIOT AI Legal Assistant in the market. It evaluates the opportunities emerging from the internal and external environment of the product.

Opportunities

- **Convergence of AI and Blockchain**

Among its potential competitors, VAIOT is uniquely positioned to integrate the advantages of both AI and blockchain technology, developing novel and powerful solutions for various legal tasks and challenges. By leveraging the combined power of both of these revolutionary technologies, VAIOT can create a competitive edge over other players operating in either market niche.

- **Regulated Status**

Thanks to its regulated status, VAIOT has a unique advantage over its competition, especially in the cryptocurrency space, in terms of the potential trust and credibility among its customers. This margin of trust might be

especially valuable in the domain of legal services, increasing the appeal and adoption of VAIOT's products.

- **European Market**

VAIOT also has a unique opportunity to dominate the market of AI legal services in Europe, as most other companies and startups focus mostly or exclusively on US or UK law. VAIOT can position itself to cater to the diverse and complex legal needs and preferences of European customers, as well as to the emerging legal issues or challenges that arise from new technologies, markets, or regulations in Europe.

CONCLUSION

This document has presented a product analysis of VAIOT AI Legal Assistant, a product that aims to provide legal information and services using artificial intelligence (AI) and blockchain technology. The document has explored the current technological landscape, potential use cases, business models.

VAIOT AI Legal Assistant is a promising product concept that has the potential to disrupt the legal market and create new opportunities for innovation and value creation. By fully leveraging the power of LLMs in the domain of law, VAIOT AI Legal Assistant can make legal information and services more accessible and affordable for everyday customers who may not have the time, money, or expertise to consult a lawyer. It can also help lawyers and law firms improve their productivity, quality, and profitability by automating or augmenting some of their legal work.

VAIOT AI Legal Assistant can offer a unique value proposition and differentiation strategy in the legal space by converging AI legal services and blockchain legal services. It can provide solutions that leverage the unique characteristics of blockchain technology and digital assets in the context of the practice of law. It is also uniquely placed to leverage both its status as a regulated blockchain company, as well as its location in Europe, to gain an advantage, differentiate itself from the competition and carve out its own market niche.