WHITE PAPER

Virtual Insurance Protection™
based on distributed ledger
technology

SAGITTAE
Note: Sagittae white paper is a living document. We are constantly upgrading our white paper to answer all your questions and provide all information you could possibly need. If you miss any kind of information, please reach out to us at info@sagittae.eu.

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ABSTRACT

The insurance industry has become an increasingly cost-inefficient market sector. Large proportions of policyholders' premiums are spent on many other things than paying claims to policyholders.

Sagittae introduces a new model of risk protection based on blockchain technology. It is a decentralized and revolutionizing alternative to traditional insurance, simple and transparent – putting the customer in control and, where desirable, eliminating the need for expensive and bureaucratic insurance conglomerates and costly middleman (broker) structures.

We have decomposed the insurance value chain and created an entirely new system for risk-sharing. We call it "Virtual Insurance Protection™". In this system:

- affinity groups can organize their own financial protection through digital mutual contracts for risk-sharing;
- service providers and incumbents have the opportunity to do business with these groups; and
- real value, protection and financial stability is offered through Sagittae Foundation.
Throughout our history people have been looking for ways to protect what is important to them. In small communities they took care of each other by agreeing to put some of their earnings aside to provide for financial help for those who were confronted with an unexpected loss event. For instance, a farm that went on fire or crop being destroyed. The rules were simple and democratically established. These mutual structures were the first and most basic form of risk sharing.

As society grew, developed and became more complex, the need for risk protection increased accordingly. The role of the early mutual funds was taken over by large insurance companies that were able to raise enough capital to keep up with this continuously increasing demand for financial risk protection.

This also meant the introduction of a new group of participants into the system. Namely, shareholders. As providers of the capital of the insurance companies, their major concern was a maximum return on their investments.

The insurance company making a profit was therefore essential, and paying claims to policyholders didn't help much to realize this goal. Obviously the interests of the insurance company's major stakeholder groups – shareholders and policyholders – did not match.

The natural alignment between all participants as it used to exist in the early mutual funds, ceased to exist. Also the cost-effectiveness of the mutual funds, that was driven by the common goal of all participants to keep contributions as low as possible, vanished.
This situation, unfortunately, is still today's reality. People that are looking for risk protection, hand over their premiums to large and powerful insurance conglomerates to buy an insurance product. Globally an immense amount of USD 4.5 trillion on an annual basis¹.

A substantial part of these premium payments is however spent on many other things than paying claims to the policyholders. Typically insurance companies spend a substantial part of their premium income on their immense labor force, multiple (redundant) management layers, legacy IT systems and costly middleman structures.

As far as the value of the insurance products offered is concerned, policy contract wordings are exclusively developed and drafted by the insurance company, and contain not surprisingly many conditions, exclusions, and participation restrictions.

The policyholders the reason that the company exists in the first place - have little or no influence on these terms and conditions. The beneficial consensus model of the early mutual funds seems to have gone forever.

1) Source: OECD Stat, 2017
INTRODUCING SAGITTAE

Virtual Insurance Protection™ Platform

Sagittae allows and helps affinity groups to create or join digital contracts for mutual risk-sharing. These insurance programs:

- don’t require any profit-driven central organization such as an insurance company;
- have no shareholders; and
- can function without expensive middle man firms or interact on desired terms.

Instead:

- they only govern the mutual relationships of their participants;
- fund their own capital needs;
- work with fair terms and conditions based on participants’ input and consensus; and
- are open to anyone that seeks financial protection worldwide, even in developing countries.
Introduction

We have been analyzing the traditional insurance market’s value chain, and think that the solution to the many (cost) inefficiencies, lies in decomposing and rebuilding it in a decentralized way. This is exactly what we did, and the key building blocks of the ecosystem that emerged include:

- Risk-sharing affinity groups
- Service providing businesses and professionals
- Program Promoters
- Sagittae Foundation

Decomposing the Value Chain
Risk-sharing groups are the core elements of the system. These groups basically fund their own capital needs and function autonomously. The value-add of this optimizing this simple observation is hard to overstate. The Sagittae platform lists all risk protection programs that have been created for risk-sharing groups. Each program addresses and covers a specific type of risk and defines the terms and conditions, as well as the contributions that participants have to make to cover this risk. There can be an unlimited number of programs.

People can search and browse the list of programs to find the one that fits their needs, or affinity groups can create a new program themselves.
In case of a new program, guidance is given on important elements of the program such as terms and conditions and the financial contributions needed to cover the risk. In this way all programs comply with pre-defined technical underwriting rules and standards that ensure proper functioning and continuity of our programs.

Peer groups can range from small to very large and they can be local or span several countries, all depending on the initiator’s preferences. Technically there are no restrictions as the blockchain technology that we use, facilitates unlimited worldwide access and participation.

**Service Providers**

Although our programs can run autonomously, in many cases services are needed and wanted from a third party to function properly. These can be hands-on services like claims handling, but also financial services such as providing an excess layer of risk protection to a program (e.g. coverage to a catastrophic risk event) or even a more basic insurance wrapper for the group.

When a risk-sharing group decides to use these outside services, the group enters into a direct relationship with the (financial) service provider. Sagittae facilitates this process and safeguards the quality of the services provided, continuously.

The creation of risk-sharing programs encompasses a great business opportunity for many service providers, but high standards of service are needed to protect the overall integrity of our system. All service providers therefore need to go through an accreditation process before getting access to the Sagittae platform.
Depending on the complexity and size of the program, the following service providers might be involved:

- Claims adjusters
- Technical risk consultants
- Insurance advisors
- Insurance carriers or syndicates (e.g. as providers of excess of loss contracts)
- Loss control experts
- Object valuators
- Actuaries
- Medical advisors

Program Promoters

Promoters are persons or organizations that take on the role and responsibility to initiate, support and develop risk-sharing programs. As our platform is open, any affinity group can create a program, and start promoting it. But most commonly this is done by a professional organization that is able to allocate some time, expertise and resources to it. In many cases the promoter is also a trusted member of the affinity group (e.g. an independent insurance consultant that is a well-respected member of a classic car club).
**Sagittae Foundation**

Sagittae Foundation is another important building block of Sagittae's financial ecosystem.

At the core, Virtual Insurance Protection™ programs are technically smart contracts on the Ethereum blockchain. This ensures unconditional global access to these contracts and provides a completely neutral and immutable source of information for all participants. Importantly, no personal information is stored on the distributed ledger. In this sense, the Sagittae ecosystem is a best-of-both-worlds setup.

Ethereum smart contracts use digital tokens or 'coins' to record financial transactions. Sagittae Foundation buys and sells these coins in exchange for fiat currency. Our tokens are so-called ‘stable coins’ pegged to the fiat currency that the risk-sharing group decides to use (EUR, USD, GBP, etc). They are compliant with the widespread ERC-20 standard.

On our platform, users only see their transactions in fiat currency which makes the user experience comparable to making a transaction through a regular banking app. Blockchain token transactions run in the background. The Sagittae Foundation manages the background processes of changing the digital tokens to fiat currency and vice versa.
How can the Foundation guarantee a stable coin?

Sagittae Foundation buys and sells the tokens that are used on Sagittae's platform. When the Foundation sells tokens, the proceeds (fiat currency) are held by the Foundation until the moment that a token holder exercises his or her right to convert tokens back into fiat currency.

The tokens that are taken in by the foundation at this exchange transaction, can obviously be sold again. In that case a new reservation is made, to guarantee another exchange of these tokens in the future. This revolving mechanism ensures that the fiat currency reserves of the foundation are exactly and continuously aligned with the supply of tokens that circulates in the system.
THE TECHNOLOGY BEHIND

Smart Contracts

Each Virtual Insurance Protection™ program that is published on the Sagittae platform, links to a smart contract on the Ethereum blockchain. This smart contract runs the protection program exactly as programmed without any possibility of downtime, censorship, fraud or third-party interference.

When peers enter into this contract, Sagittae takes care of exchanging the user's contribution into stable coins and puts this amount into the smart contract. It remains in the contract to be called upon if anyone else in the team suffers a loss and makes a legitimate claim.
In that case the smart contract automatically executes the predefined rules to move the money around the peer group to reimburse the one that has suffered a loss. Nobody carries an exposure greater than the amount they put into the contract.

The contract is completely transparent and without any cost loadings other than fees for services that the team itself decides to outsource to a service provider. The contract runs completely autonomously and is funded upfront, which ensures guaranteed payment of approved claims to participants that have suffered damage or injury.

Technical Architecture & Infrastructure
Web Wallet

User's funds are kept safely in a digital wallet that is created automatically when a person or organization creates a user account on our platform. No technical knowledge or skills are required.

This wallet is linked to Sagittae Foundation and the process of changing back and forth from digital to fiat currency is done automatically in the background. Our web wallet is secured by two factor authentication.
MARKETING STRATEGY

Target Audience

Affinity groups can - and we believe should - be defined very broadly as a specific group of people who have something in common. Globally there are thousands of such affinity groups. People in a specific profession, students, small business owners, golfers, dog owners and so on. We strongly believe that these groups are the perfect candidates for our Virtual Insurance Protection™ programs.

Reasons Why

1. Affinity groups have specific needs, and our system allows them to design their risk protection programs themselves. With the right structure and tools at its hand, no one other than the group itself, is in a better position to make decisions on the type of risk coverage and terms and conditions. A product created in this way really meets customer needs, unlike traditionally top-down developed insurance policies.

2. As group members can see that a real value proposition has been created, they are very well prepared to spread the message. Through the power of social networks, this can be done easily and rapidly.

3. People are more likely to do business with people they know, like and trust. Our platform provides this trusted environment and facilitates mutual transactions. This common ground also contributes to higher customer retention and loyalty.
Marketing expenditures can be specifically targeted at niches. This is far more effective than the huge general marketing campaigns that traditional insurers deploy to push their products into the market.

*Even with the obvious advantages, it is clear that “kick-starting” the process and faith in the system are vital components. Thus, every effort is made to minimize the hurdles for adoption, while also extending the concept of Virtual Insurance Protection™ from B2C to B2B, where initial adoption may be simpler.*

**Program Promoters**

In many cases, affinity groups have established some kind of organizational structure, or are affiliated through commercial institutions such as banks, large retailers or airline companies. Also, insurance consultants may have special access to an affinity group, most likely as a trusted member of that group. All of these different organizations and persons can act as Virtual Insurance Protection™ program promoters.

These promoters initiate, support and develop risk programs for their member or customer base. Setting up and developing such a program requires time and effort. All group members will benefit from this, so we recognize that promoters could be rewarded for this by the peer group.

Our platform, therefore, includes an option to pay a fair fee to the program promoter. This fee amount is however subject to strict rules and limitations, as we want to avoid programs that carry excessive and unrealistic fees for promoters. Our mission is to provide a system that is beneficial to all participants, and we don’t want to return to the disproportionate cost loadings of traditional insurance programs.

We also extend the concept of promoters to large corporates that maintain their own captive structures. These are essential pure risk sharing vehicles that can also benefit significantly from the Sagittae platform. In this case, the members are simply the subsidiaries of the large corporation.
Business Development

The first P2P programs in 2020 will be initiated as proof of concept by Sagittae, in close cooperation with representatives of the selected affinity groups. There are two main categories being explored under the banner of Sagittae's Virtual Insurance Protection™ programs:

- Virtual Mutual
- Virtual Captive

For both of these, future development will include targeting of major global affinity groups - be the "traditional" affinity groups or large corporates. For instance, for the Virtual Mutual, the feasibility of a worldwide program for pilgrimage participants to Mecca is currently being studied. This massive event is undertaken by 2 to 3 million people each year. For the Virtual Captive, corporate insurance programs are currently being studied. Several sources suggest that 20-30% cost savings can be achieved with distributed ledger technology. Using the Sagittae platform, we think cost savings can potentially be much greater.
We are in the business of risk-sharing, and this undoubtedly works best if the risk is spread over a large number of people in different geographical locations. For this reason multinational insurance programs may perform very well, but are also likely to face serious challenges such as multiple jurisdictions, legal systems and currencies. The use of digital coins and smart contracts solve these problems to a great extent and ensure truly global and unconditional access to our risk protection programs.

For this reason we have created a proprietary digital coin. It is a pure utility token created on the Ethereum blockchain. The Coin is used exclusively to facilitate transactions on our platform. The Coin has no other rights or functions attached to it and is not tradable on any crypto exchange. It is bought and sold only at Sagittae Foundation which is exclusively tied to the Sagittae platform.

Our Coins are exchangeable to and from fiat currency at a fixed rate. For this purpose our Coins are pegged to selected fiat currencies at a rate of 1 to 1. Sagittae's digital Coins therefore completely lack the excessive volatility in price as seen with many other crypto currencies.
Solidarity is often misunderstood to mean that each party pays the same. This is of course possible, but often something more nuanced is desired as with more traditional underwriting exercises of insurers – whether the risk is corporate or individual. Of course, this is always subject to local laws and regulations, but within those environments, using the Sagittae Virtual Insurance Protection™ platform, the group or organization has the ability to decide for itself how it works and what makes sense. Even if an outside excess of loss protection or insurance wrapper is established, this setup will still work and can be considered explicitly by the external service provider.

In determining a member’s contribution, Sagittae can put forth structural solutions to facilitate this assessment – or external partners can be connected to provide this as a service in line with what was described earlier.
PROJECT PLAN AND FUNDING

1 Develop

February 2018 - December 2019

Seed funds raised will be used to build the IT platform, and to establish Sagittae Foundation. We will also close agreements with launching partners and recruit team members.

2 Proof

January 2020 - December 2020

We will work with 2-3 selected partners to create proof of concept Virtual Insurance Protection™ programs. In the 4th Quarter of 2020, we are raising funds (series A venture capital) for further development of the IT platform, coverage of operating expenses and the launch of a major sales and promotion campaign in Q1 2021.

3 Grow

January 2021 and beyond

In this stage we are a full-blown organization and ready for worldwide expansion. In addition to Europe, Asia Pacific, Latin America and Africa are the main focus areas for business development. During this stage, another investment round is foreseen to fund accelerating growth.
ROADMAP

2018
- Incorporation Sagittae Financial Services B.V.
- White paper 1.0
- Seed capital investment
- Global team kick-off meeting Amsterdam
- Alpha version IT platform
- Extended seed capital investment

2019
- Incorporation Sagittae Foundation
- Beta Version IT Platform
- Agreements launching partners
- Release version 1.0 IT Platform

2020
- Extended seed capital investment
- Virtual Mutual (B2C) pilot launch
- Virtual Captive (B2B) pilot launch
- Series A investment round

2021
- Global marketing campaign and rollout
Revenue Model

Platform Access Fee
Risk-sharing groups pay a percentage of the funds they have accumulated in their smart contract. Service Providers pay an annual fee to offer their services on the platform. Service Providers will pay substantially more than individual users, to the extent they are generating income through the platform.

Special Projects
Larger and more complex affinity or corporate organizations may have specific needs and requirements. Fees will be generated from developing bespoke (IT) solutions for these organizations. In case of white labeling, also licensing fees will apply.

Big Data
Our Platform will process enormous amounts of data on risk and loss related monitoring events, which can be used for predictive and statistical modeling. This increasing data collection will prove to be a huge income opportunity over time - always with full transparency and as a service to the real owner - our customers.

Company Ownership and Structure
Sagittae Financial Services B.V. is incorporated in the Netherlands as a limited-liability company. Ownership lies with the founders and private investors. Sagittae Foundation is a Dutch 'Stichting' (Foundation).
TEAM

Robert Volkert
CEO & Founder

Insurance executive with an astonishing over 40 years of experience in the industry. Held multiple senior management positions in Europe and Asia.

Ton Wennekendonk
COO & Founder

Business builder with a fascination for technology driven innovation. Worked for global insurance firms such as AON, Chubb and Cigna International.

Chris Madsen
Board Member

Insurance executive and visionary with 30 years global experience in both start-ups and incumbents. Co-founded Aegon Blue Square Re and being one of the initial drivers behind B3i.

Ching Wen Wong
Business Development Director Asia

Seasoned insurance professional based in Singapore. Strongly committed to capitalize on the many opportunities to roll out our concept in the Asia Pacific region.

Michiel van Eersel
Legal Advisor

Experienced attorney dedicated to solve regulatory and legal matters in connection with blockchain based financial innovations. Worked for De Brauw, EY Law and Korn Ferry.

Randi Cigelnik
Legal Advisor

Well-respected attorney with a demonstrated history in the global insurance market. Served as general counsel for Property Casualty Insurers Association of America.
Guarding essential elements of the project such as AML, CDD and KYC. Also project lead for the Sagittae Foundation.

Combining major technological expertise with in-depth insight in the insurance business. Initiated and managed serveral successful innovative projects in this sector.

Software developer specialized in blockchain technology. Has gained a broad experience in the wide variety of technologies that are available in this field today.

UX specialist that is able to turn ideas into a visual concept. Dedicated to design intuitive user journeys for Sagittae's complex processes.

Creative professional whose main aim is to create the most outstanding visuals for all kinds of projects. Skilled in all kind of design from web, print and advertising.

Actuary with a wealth of experience. Founder and owner of Arcturus actuarial consultants. Previously worked for leading financial institutions including ING, Aegon and Achmea.
Sagittee is not a licensed insurance company, and we have no aspirations to become one. We are an organization that facilitates the creation of digital risk-sharing contracts, and allows insurance-related businesses to offer their services to these structures.

Service providers are independent entities and have an individual responsibility to comply with all relevant regulations in their respective jurisdictions. We on our side take responsibility by implementing an accreditation process for service providers.

The risk-sharing contracts themselves are created on the Ethereum blockchain, and people that enter into these contracts typically originate from many different nations and hence legal systems. Notwithstanding everyone’s personal responsibility, we - as the facilitator of these programs - will make utmost efforts to guide and advise our users on legal aspects during program creation.

We also have implemented a strict KYC-procedure when signing up new customers. This process is completed online in less than 2 minutes and uses face recognition and artificial intelligence to verify ID documents.

We take privacy seriously and our platform ensures all privacy regulations are observed.

Being aware of the complexity of this matter, we have allocated considerable resources and funds for legal advice. A legal memorandum is available upon request.
CONCLUSION

Our system allows people and organizations to organize their own financial protection, at a fair price and with simple rules. It is accessible for anyone worldwide and it opens up new possibilities for businesses to offer their services. Sagittae Foundation ensures overall value, protection and stability. We are an open ecosystem that provides value to all users. It will naturally grow and evolve as all participants have a major say in its development.

Sagittae is an ancient constellation in the northern sky. It can be seen from almost every location on Earth. It is reminiscent of an arrow, and many cultures have interpreted it this way. For us, Sagittae is pointing at a big future opportunity. Can you see it?
Disclaimer

This document is a technical whitepaper setting out the current and future developments of the Sagittae Virtual Insurance Protection™ (VIP) Platform by Sagittae Financial Services B.V. (Sagittae) and the release of the ERC-20 tokens for use on the Sagittae VIP Platform. This paper is for information purposes only and is not a statement of future intent. Sagittae makes no warranties or representations as to the successful development or implementation of such technologies and innovations, or achievement of any other activities noted in the paper, and disclaims any warranties implied by law or otherwise, to the extent permitted by law. No person is entitled to rely on the contents of this paper or any inferences drawn from it, including in relation to any interactions with Sagittae or the technologies mentioned in this paper.

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