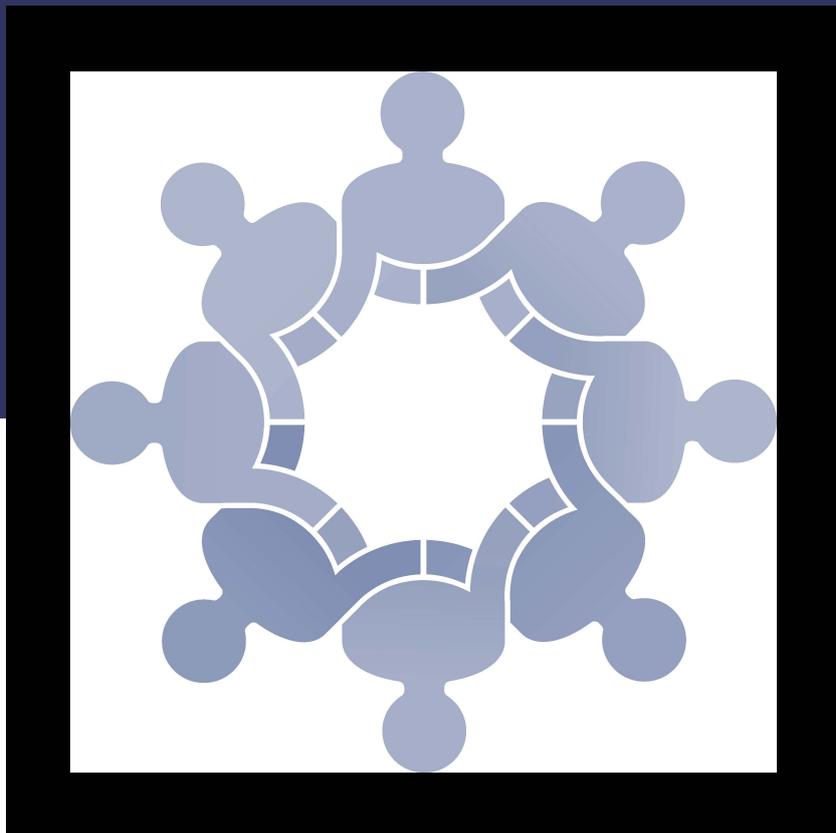


# White Paper

Peer-to-Peer Financial Protection based on Blockchain Technology



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](mailto:info@sagittae.eu).

Version: 1.5

Updated: 27 June, 2019

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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.

Sagittae introduces a new model of risk protection based on blockchain technology. It is a decentralized and revolutionizing alternative to traditional insurance, completely 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. In this system:

- affinity groups can organise their own financial protection through digital peer-to-peer contracts for risk sharing;
- service providers have the opportunity to do business with these groups; and
- real value, protection and financial stability is offered through Sagittae Foundation.

# Introduction

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 caught 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.

# Insurance Market Today

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 basis<sup>1</sup>. 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.



## Insurance Premium Spending

- Claim payments to policyholders and change in outstanding loss reserves **56%**
- Expenses, commissions and margins before investment **44%**

1) Source: OECD.Stat, 2017

And, 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.

## The Opportunity

However, we are on the verge of a major and disruptive change in the insurance industry. New technology allows us to reinstate these favourable and cost effective mutual fund structures, but this time on a global scale and open to everyone.

# Introducing Sagittae

## P2P Platform for Risk Protection

Sagittae allows and helps affinity groups to create or join digital peer-to-peer contracts for risk sharing.

These peer-to-peer risk protection schemes:

- don't require any profit driven central organization such as an insurance company;
- have no shareholders; and
- function without expensive middle man firms.

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.

## How it all works

### Introduction

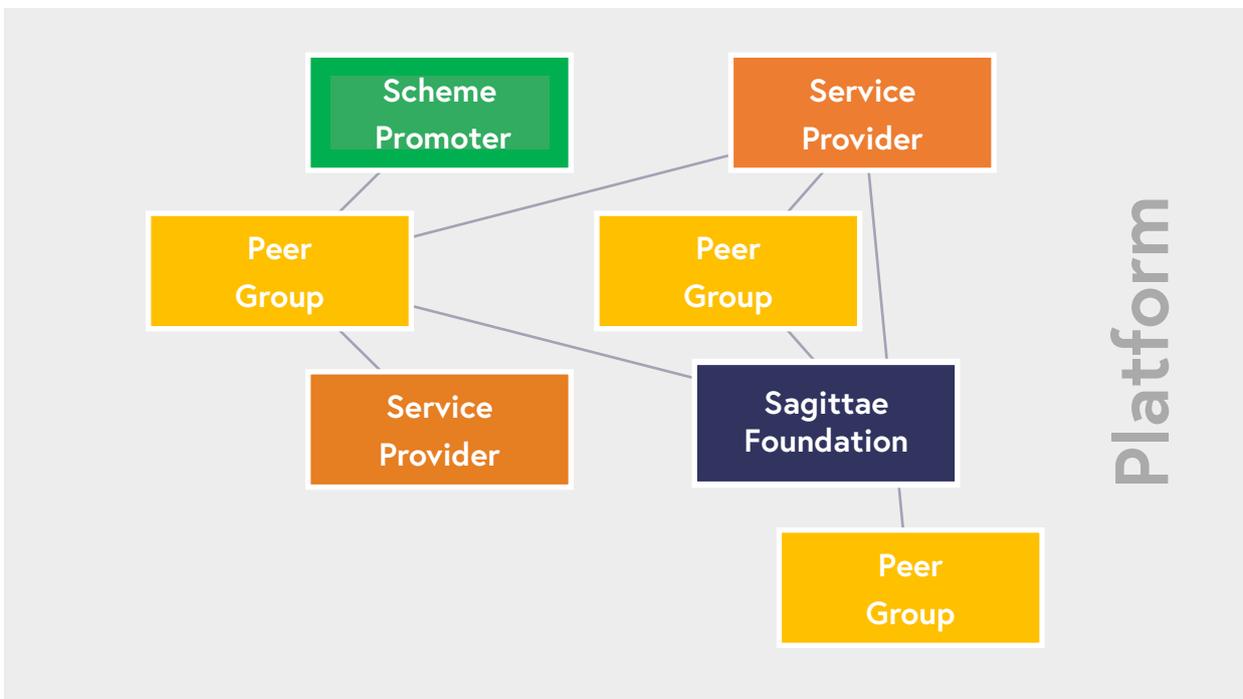
We have been analysing the traditional insurance market's value chain, and think that the solution to the many (cost) inefficiencies, lies in decomposing and rebuilding it in a decentralized way. This is exactly what we did, and the key building blocks of the ecosystem that emerged include:

- Peer-to-peer risk sharing groups (P2P groups)
- Service providing businesses and professionals
- Scheme Promoters
- Sagittae Foundation

# Decomposing the value chain

*Traditional insurance value chain*

	(R/I) Capital and funding	Product design, underwriting and pricing	Marketing & Sales	Policy administration and servicing	Claims handling
Peer Groups	✓	✓	✓	✓	
Service Providers	✓	✓		✓	✓
Scheme Promoters		✓	✓	✓	
Sagittae Foundation	✓				



## **P2P Groups**

P2P groups for risk sharing are the core elements of the system. These groups basically fund their own capital needs and function autonomously. The Sagittae platform lists all risk protection schemes that have been created by P2P groups. Each scheme 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 schemes.

People can search and browse the list of schemes to find the one that fits their needs, or can create a new scheme themselves. In case of a new scheme, a sophisticated web based tool provides smart guidance on important elements of the scheme such as terms and conditions and the financial contributions needed to cover the risk. In this way all schemes comply with the pre-defined technical underwriting rules and standards that ensure proper functioning and continuity of our schemes.

To facilitate team collaboration and communication, the website includes a user forum and a system to vote on product features. Peer groups can range from small to very large and they can be open or closed, 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 P2P schemes can run autonomously, in many cases services are needed 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 scheme (e.g. coverage to a catastrophic risk event).

When a P2P 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 P2P schemes 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 scheme, the following service providers might be involved:

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

## Service providers



## Scheme Promoters

Promoters are persons or organizations that take on the role and responsibility to initiate, support and develop P2P schemes. As our platform is open, any member of an affinity group can create a scheme, 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 the Sagittae ecosystem.

To facilitate the recording of user transactions on the Ethereum blockchain, we have created multiple ERC-20 tokens (STAE-Coins). STAE Coins are stable coins pegged 1:1 to the fiat currency that the P2P group decides to use (STAE-USD, STAE-EUR, STAE-GBP etc.).

Users on our platform only see the transactions in fiat currency which makes the user experience comparable to making a transaction through a regular banking app. Blockchain transactions always run in the background of the platform. Sagittae Foundation manages the background process of changing back and forth from digital tokens to fiat currency.

Sagittae Foundation is explicitly not a public accessible crypto exchange. It is exclusively tied to the Platform operated by Sagittae Financial Services. Sagittae Foundation is a separate legal entity, holding fiat currency reserves. Even if Sagittae Financial Services would cease to exist, the Foundation would still be able to fulfil its obligation to exchange all STAE Coins that are in circulation.

## How can the fund guarantee this?

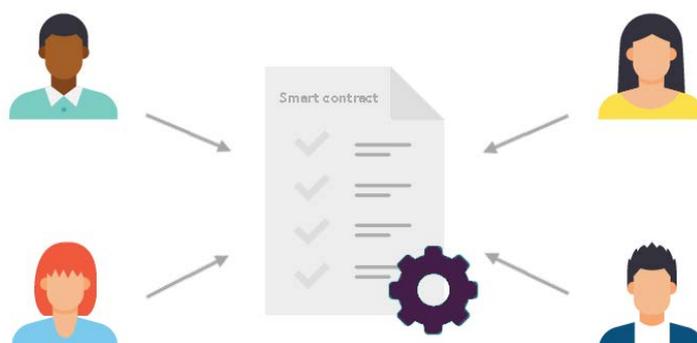
Sagittae Foundation buys and sells STAE tokens on behalf of P2P scheme participants. The proceeds of sales are kept safely in the Foundation until the moment that a token needs to be converted back into fiat currency.

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 continuously aligned with the supply of tokens that circulates in the system.

# The Technology behind

## Smart Contracts

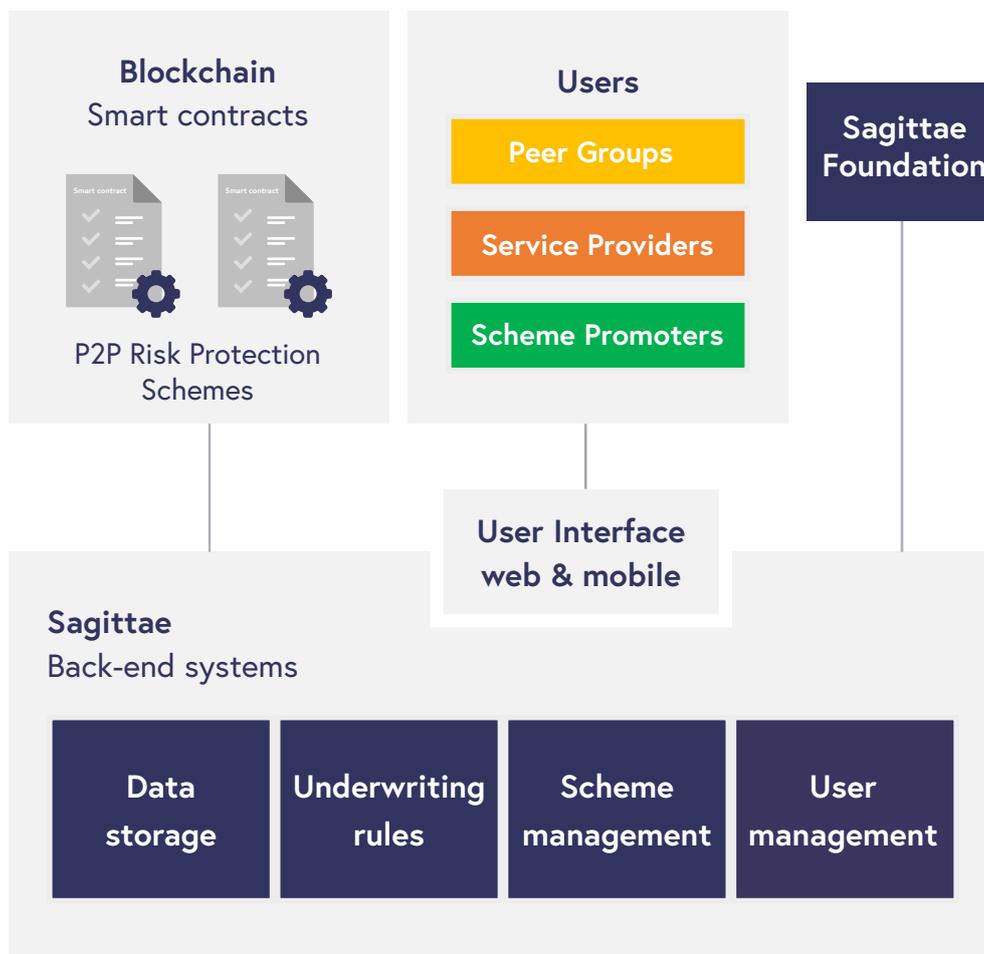
Each peer-to-peer protection scheme that is published on the Sagittae platform, links to a smart contract on the Ethereum blockchain. This smart contract runs the protection scheme exactly as programmed without any possibility of downtime, censorship, fraud or third-party interference. When peers enter into this contract, Sagittae takes care of exchange of the user's contribution and puts an amount of STAE Coins 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. Peers only pay when a claim is made and nobody carries an exposure greater than the amount they put into the contract.

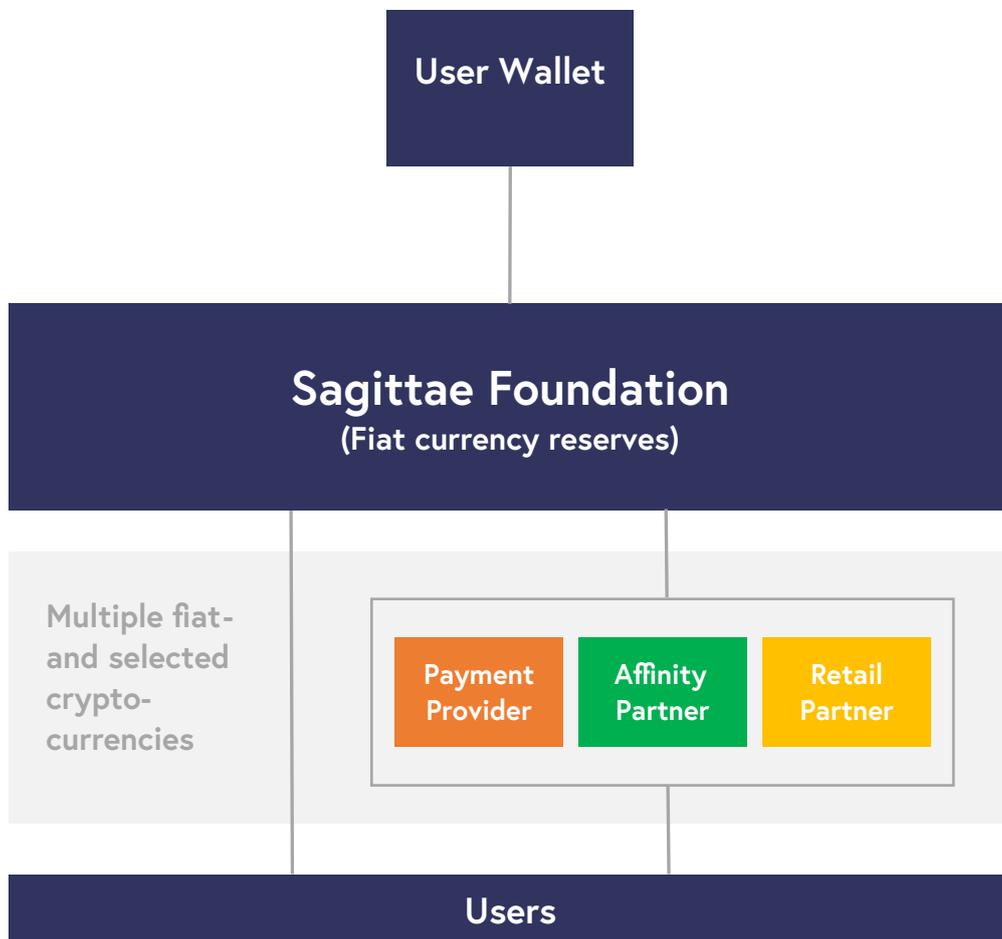
The contract is completely transparent and without any cost loadings other than fees for services that the team itself decides to outsource to a service provider. The contract runs completely autonomously and is funded upfront, which ensures guaranteed payment of approved claims to participants that 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 P2P protection schemes.

## Reasons why

- Affinity groups have specific needs, and our system allows them to design their risk protection schemes themselves. No one other than the group itself, is in a better position to make decisions on type of risk coverage and terms and conditions. The product created in this way really meets customer needs, unlike traditionally top down developed insurance policies.
- 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.
- People are more likely to do business with people they know, like and trust. Our P2P schemes provide this trusted environment, and facilitate 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.

## Scheme Promoters

In many cases affinity groups have established some kind of organisational 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 organisations and persons can act as P2P scheme promoters.

These promoters initiate, support and develop risk schemes for their member or customer base. Setting up and developing such a scheme 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 scheme design tool, therefore, includes an option to include a fair fee for the promoter. The fee amount is however subject to strict rules and limitations, as we want to avoid schemes 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 policies.

## Business Development

The first P2P schemes will be initiated as proof of concept by Sagittae, in close cooperation with representatives of the selected affinity groups. One of Sagittae's strategic launching partners is Memorial International, the largest international funeral assistance Corporation with offices in 19 countries and a global network of more than 30,000 subsidiaries. After successful deployment of the proof of concept schemes, a major promotion campaign will be launched to roll out the concept globally.



Future development will include targeting of major global affinity groups. For instance, the feasibility of a worldwide scheme for pilgrimage participants to Mecca is currently being studied. This massive event is undertaken by 2 to 3 million people each year.

## Token Model & Economy

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 schemes 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 schemes.

For this reason we have created STAE Coin. It is a pure utility token, created on the Ethereum blockchain, that complies with the widespread ERC20 standard. The Coin is used exclusively on Sagittae's platform. STAE Coins have no other rights or functions attached. The Coin is not tradable on any crypto exchange worldwide. It is bought and sold only at Sagittae Foundation which is exclusively tied to the Sagittae platform.



STAE Coins are exchangeable to and from fiat currency at a fixed rate. For this purpose the STAE Coin is pegged to selected fiat currencies at a rate of 1 to 1. STAE Coins therefore completely lack the excessive volatility in price as seen with many other crypto currencies.

# Project Plan and Funding

## Project Stages

This overview only provides a brief summary of the project stages. Full details and financial plan are available for investors upon request.

### Stage 1 (Start-up)

February 2018 - November 2019

Funds raised will be used to build the first version of the IT platform, and to establish . We will work with 2-3 selected affinity partners to create and test the first proof of concept P2P risk schemes. Asia Pacific and Latin America are the first focus areas for business development in this stage. We will also sign up the first service providers.

### Stage 2 (Rollout)

December 2019 – December 2020

In the 4th Quarter of 2019, we are raising additional funds for further development of the IT platform, coverage of operating expenses and the launch of a major promotion campaign in Q1 2020. Sagittae Foundation is now fully up and running and new P2P schemes will be added monthly. We will add dedicated business development managers for Latin America and Africa to the team.

### Stage 3 (Grow)

January 2021 and beyond

In this stage we are a full blown organisation and ready for worldwide expansion. New P2P schemes will be added almost daily. The number of service providers will grow significantly. Large P2P schemes emerging on the African continent will contribute substantially to our results. During this stage another investment round is foreseen to fund the accelerating growth.

# Roadmap

**May 2018**

- Investment Round 1
- Global team kick-off meeting Amsterdam
- Agreements launching affinity partners

**January 2019**

- Beta testing IT Platform
- Sign up first Service Providers

**December 2019**

- Investment Round 2
- 2 POC schemes up and running

**September 2020**

- Investment Round 3
- Global marketing campaign and rollout

**March 2018**

- Incorporation Sagittae Financial Services B.V.
- Website launch
- White Paper 1.0

**September 2018**

- Alpha version IT Platform

**May 2019**

- Release version 1.0 of IT Platform
- Sagittae Foundation established

**May 2020**

- Release version 2.0 of IT Platform

**December 2021**

- 1.5 million users on platform
- 4000 service providers active

# Company

## Revenue Model

The building blocks of our revenue model are:

### Platform Access Fee

Users pay a fee for accessing and using the platform. Business users will pay substantially more than individual users, as they are generating income through the platform.

### Sagittae Foundation

Significant funds will be accumulated in this Foundation. Income will be generated through smart asset management

### Special Projects

Larger and more complex affinity organisations may have very specific requirements. Fees will be generated from developing and delivering these bespoke (IT) solutions.

### Big Data

Our underwriting algorithms work with enormous amounts of data for predictive statistical modelling. This increasing data collection will prove to be an enormous income opportunity in the future.

## 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



**Ton Wennekendonk**  
COO & Founder

Sagittae is founded and led by Robert Volkert and Ton Wennekendonk. With their many years of experience in the international insurance industry at senior management positions, they have built a team that is ready and capable to take this next step in the evolution of the insurance industry.

They bring vast expertise in the field of affinity group insurance, which is a crucial element of this concept. In the very early days of the world wide web, Ton developed a huge global affinity scheme for international exchange students, being one of the first real use cases of distributing insurance over the internet globally. In Asia, Rob worked with the National Girl Scouting Association of the Philippines, and successfully implemented a massive accident & health insurance scheme with over 600.000 members.



**Ching Wen Wong**  
Business Development  
Director Asia

Ching Wen is a seasoned insurance professional based in Singapore. Many opportunities to roll out our concept have been identified in the Asian region. Ching Wen is strongly committed to capitalize on these.



**Egbert van de Coevering**  
IT Director

Egbert combines major technological expertise with in-depth insight in the insurance business. He initiated and managed several successful innovative projects in this sector.



**Gert-Jaap Glasbergen**  
Software Developer

Gert-Jaap is a software developer specialized in blockchain technology. He has gained a broad experience in the wide variety of technologies that are available in this field today.



**Vincent Volkert**  
UX / Visual Designer

Vincent's background is in communication and multimedia design. His strength is to turn ideas into a visual concept. He is dedicated to design intuitive user journeys for Sagittae's complex processes.



**Esther de Krijger**  
Graphic and Web Designer

Esther is a creative professional whose main aim is to create the most outstanding visuals for all kinds of projects. She has skills in all kind of design from web, print and advertising.



**Michiel van Eersel**  
Legal Advisor

Michiel is an experienced attorney dedicated to solve regulatory and legal matters in connection with blockchain based financial innovations. He has a background as lawyer as well as legal and management consultant with De Brauw, EY Law and Korn Ferry.



**Randi Cigelnik**  
Legal Advisor

Randi is a well respected attorney with a demonstrated history in the international insurance market. She served as general counsel for Property Casualty Insurers Association of America and general counsel for AXIS Capital. Prior to that, she spent 12 years with the ACE Group in Bermuda and London.



**Javeria Ghuman**  
Compliance Officer

Javeria is a highly skilled young professional. She guards essential elements of the project such as AML/CDD/KYC. She also acts a project lead for the establishment of Sagittae Foundation



**Jan Hooper**  
Actuary

Jan has a wealth of experience in the actuarial field. She worked for major financial institutions such as ING, Aegon and Achmea. Jan plays a crucial role in the development of the platform's underwriting models and algorithms.

# Legal and Compliance

Sagittae is not a licensed insurance company, and we have no aspirations to become one. We are an organization that facilitates the creation of digital P2P contracts for risk sharing, and allow insurance related businesses to offer their services to these structures. The 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 P2P 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 schemes - will make utmost efforts to guide and advise our users on legal aspects during scheme creation. Being aware of the complexity of this matter, we have allocated sufficient funds to legal advice.

## Conclusion

Our system allows people to organise 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.



**We are Sagittae, named after the constellation 'Arrow'. It is pointing at the future. We go for this opportunity, and we gladly invite you to join us.**

## Disclaimer

This document is a technical whitepaper setting out the current and future developments of the Sagittae P2P Platform by Sagittae Financial Services B.V. (Sagittae) and the release of the STAE Coins for use on the Sagittae P2P 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. Sagittae disclaims all liability for any loss or damage of whatsoever kind (whether foreseeable or not) which may arise from any person acting on any information and opinions relating to Sagittae, Sagittae P2P Platform, the issue of STAE Coin or any other information contained in this paper or any information which is made available in connection with any further enquiries, notwithstanding any negligence, default or lack of care.

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